



# *THE CONGLOMERATE*

## *FEBRUARY, 2020*

THE NEWSLETTER OF  
THE RENO GEM AND MINERAL SOCIETY

*WEDNESDAY, February 5, 2020, 7:00 P.M.*  
*RGMS General Meeting*  
*Baldini's Casino, Second Floor*  
*Webb Varnum, RGMS honorary life member*  
*Subjectr*

*“WEDNESDAY, February 12, 2020 7:00 p.m.*  
*RGMS Board Meeting*  
*480 S. Rock Blvd. Sparks, NV*  
*Open to members*

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**Have you renewed your dues? If not, this is your last Conglomerate.**

### *CONGLOMERATE* *SUBSCRIPTIONS 2020*

- Digital edition:** no charge to members
- Shortened edition by USPS:** \$1 per copy or \$12 annually, in advance
- Full edition by USPS:** \$1.75/ copy or \$21 annually, in advance
- Full edition copies** at the meeting: \$2 except to guests. Free to guests.

### *PRESIDENT'S MESSAGE*

*Dean Sizemore*

Happy February to everyone. We had a great kick-off to the New Year with a packed room at the first general meeting, which was on a Monday instead of a Wednesday—the date had to be changed after the December Conglomerate went out. Thank you to **Rachael Carroll** for sending out email blasts every week and to her and **Renee Samuels** for their Social Media efforts. We had a large number of guests in January, and that could only be attributed to word getting out via social media and through members.

We had the first Board meeting of the year at the Rock Building and welcomed in our new Officers and Board-at-large. As you can imagine, we all got right down to business as we have a busy year ahead. We have some new ideas and changes ahead of us as we grow. For those who have been members for a long time, some of the changes will be significant, and I ask for your patience as we implement a new website, welcome new Directors who will bring with them new ideas, and as we use social media in hopes of reaching new prospective members. Our growth as a Society is dependent on attracting new members and new ideas while keeping ourselves rooted in our foundation. I look to new members to provide new ideas and long-time members to offer feedback to me and the officers and board members on things you would like to see or do in the long term.

The next few months will go quickly with the Jackpot of Gems, Used Equipment Sale and Craft Fair coming up. **Dan Ellis** will be asking for many volunteers this month and next for the Jackpot of Gems to fill all the spots needed for a successful event, as will **Denise Sizemore** for the potluck. This is our first year at the Convention Center which means new challenges during setup and the event. I can't stress enough how much we need everyone's help. For new members there isn't a better way to meet other members and make new friendships than by volunteering. I believe the Jackpot of Gems was one of the first events I volunteered for and it was a lot of fun.

I'll see you all at February's meeting and can't wait for better weather so Denise and I can enjoy the field trips, summer picnic and opportunities to spend time with all the members. You may reach me anytime at [rgms.president@gmail.com](mailto:rgms.president@gmail.com).

MEMBERSHIP NEWS

Donna Durham

The New Year brought us a great group of new members! I would like to extend a very warm welcome to the **Barron sisters – Priscilla and Jill**; Lynne Liebelt; **Ryan and Sabrina Eller**; **Russell and Sandra Hicks**; **John Avants**; **Gene and Patricia Garry**; **Wes Michels Ratliff and Jim and Laurie Aldrich**. A great big Reno Welcome to you all!

Membership renewal is going strong! If you have not had the chance to renew yet it is really easy! Just fill out the membership application attached and mail it with a check to the rock shop or make it easier still and save the postage by coming by to see me at the meeting. Cash, Checks and Charge cards are now accepted in person and you will get a great big smile in the bargain. I just love meeting you all!

Thanks to our outstanding group of members for your friendship and continued support for the Reno Gem and Mineral Society!

See you at the February meeting!

RGMS LIBRARY REPORT

Juliet Hitchcock, Library Director

Our library is a beautiful selection of books and reference materials for your reading pleasure. We are always interested in donations to add to our library. The library will be open by appointment only, as I am still recovering from knee surgery and a strained MCL. You may contact me to arrange a time to visit our library; either text my cell: or email: "\*\*\*\*\*"

Due to all the robo calls coming to my cell phone, please text me, stating that you are a member of the RGMS so that I may return your call. Thank you!

RGMS, INC. MISSION STATEMENT

The **mission** of the **Reno Gem and Mineral Society** is to create, develop, and encourage interest in the Earth Sciences and to locate and identify various material through field trips. As a **501C(3)** corporation RGMS qualifies for donation write offs of cash and materials. Donation receipts are available at the society's headquarters.

A General Meeting, open to the public, is held usually the first Wednesday of each month at 7 PM at Baldini's Casino, Second Floor, 865 S. Rock Blvd, Sparks, NV. Board meetings are open to all members and are held the second Wednesday of each month at 7 PM at headquarters. Annual membership dues: student: \$25, Individual: \$35, and Family: \$50. Digital editions of the newsletter are free to members. A full copy is available by USPS for \$21 annually. A shortened version is also available via USPS for \$12.

VOLUNTEERS

Renée Samuels, Director

Happy February, everyone! Because I failed to hit the send button last month, I'd like to take this belated opportunity, on behalf of RGMS, to thank all of our dedicated members who donated their time, energy, skills and talents to our society last year. Thank you for maintaining our building, our library, our shop and equipment. Thank you for sharing your knowledge, for the classes and field trips. Thank you for keeping our books, paying the bills, filing our tax returns, keeping our records, and taking care of our tenants. Thank you for organizing our speakers and meetings. Thank you for educating students in our community. Thank you for representing us locally, regionally, and nationally. Thank you for keeping our members and the community informed through our newsletter, our website, social media and public relations. Thank you for taking care of our membership, greeting our guests, and reaching out to members in need. Thank you for the donations and the fund raising. Thank you for planning, organizing, and bringing our events to fruition. Thank you for the time spent at meetings, and taking responsibility for budgets and decisions affecting our members. 2019 was a great year for us, and we owe it all to you. You make us proud. We absolutely could not do it without you!

I'm happy to report that several members have recently stepped up to fill some of our vacant positions. Our current President, **Dean Sizemore**, has taken on the Assistant Show Director position. Thanks, Dean! **Steve Smith**, Vice President for 2020, is now our official Photographer. Thank you Steve! **Cathy Boyne** has taken on the Librarian position. Thank you, Cathy! We're still in need of a Dealer Director for the Jackpot of Gems Show, a Historian, a Facebook admin, and a Director of Security for our Building. Our annual show is coming up soon, and we'll need lots of help for that! Please contact **Renée Samuels** for details at .or, if you're interested in filling any of these positions, or if you would like to serve as an assistant to any Chairperson or Director. I also need your volunteer hours, especially if you have time for 2019 to report. . Keep in mind that **any time spent helping out counts**, including travel time. Thanks again for all you do! Keep in mind that **any time spent helping out counts**, including travel time. Thanks again for all you do!

OFFICERS' REPORTS

The Board minutes are posted on the bulletin board at headquarters monthly. Treasurer's reports are available to any member on request. **Steve Norman** , Secretary; **Robyn Howard**, Treasurer

SUNSHINE

Lori Connel, Sunshine Director

RGMS members- Well, can you believe it? January is almost over. The weather for most of us in the surrounding area has been good. I don't know about you all, but I hope we have a good snow storm soon to give us the needed water, and leave April and the upcoming months to some good rock hounding days. I want to let you know that I spoke to **Bobbie White**. She wanted me to share she had an unfortunate fall and damaged her hip. She is hopeful a good strong brace will help her avoid surgery and get her up and going. Another one of our members, **Virginia Keeley** had some surgery and we are wishing her a speedy recovery. **Sue Webb** is having carotid artery surgery Feb. 7. I also received an update on **Tamela Germano**. She is doing better and very hopeful she has beaten the odds and very excited for the days to come. **Sam Macaluso** also needs your digital hugs. Please keep Bobbie, Virginia, Sue, Sam, and Tamela in your prayers. I wish you all a great February. If you happen to know anyone that needs a special call, please let me know right away. My phone number is Health and happiness to all. Let's continue to ROCK this society!!!

FEBRUARY 5<sup>TH</sup> 2020  
GENERAL MEETING:  
DIFFERENT HOUSING OF THE  
PAST

Steven Smith, VP

Please join us for a special presentation by RGMS Member and past President Webb Varnum. Webb will present his findings of non traditional housing in the southwest and beyond.

USED EQUIPMENT SALE

John Peterson, Sale Coordinator

Our annual 'Used Equipment Sale' will be held at the Rock Building (480 S. Rock Blvd., Sparks) on Saturday, March 21, 2020, from 10 a.m. to 2 p.m. If you have material (equipment, gems, minerals, etc.) you want to sell, I will have the doors open at 8 a.m. on March 21. The material you bring to sell should be related to our hobbies (lapidary, beading, wire wrap, silversmithing, etc.). Some items will be sold by silent auction which will run from 10 a.m. to 1 p.m. Sellers, this is one of our annual fund raising events and we hope you'll donate 10% of your sales to RGMS.

If you have material you want to donate, please let me know and I'll arrange to pick it up.

If you're not selling --- bring \$\$\$ so you can buy !!

A MEMBER OF CFMS AND AFMS

FIELD TRIP REPORT

Rob Kendrick, Trip Director

Hello fellow rockhounds. I hope everyone had enjoyable holidays and a great start to the new year! I also hope you have washed and sorted all the rocks that you collected on the field trips last year so we can start collecting more rocks on the field trips planned for this year!

Our first trip will be a day trip led by **Alan and Bobbi Metzger** to Wonderstone mountain near Fallon NV. This trip will be after our jackpot of gems show in April, probably the second or third weekend of the month. See next month's article for date and meeting location.

Another day trip will take place on June 6th, this time to Lovelock Nv. I'll be leading this trip and I will put more details and the meeting spot in future Conglomerates.

Another trip to the Black Rock desert has been scheduled as well. It will be led by **John Peterson** and will take place on August 14th-16th. See future issues for more details and camping location.

I am still working on scheduling more trips, both day and overnight ones. If you are interested in leading a trip or have suggestions for trips that you would like to see available, see me at the general meeting or you can email me at our new field trip email: [rgms.fieldtrips@gmail.com](mailto:rgms.fieldtrips@gmail.com). That's all for now. Happy hounding!

These are photos I took of the field trip table at the last general meeting with examples of materials collected on last year's field trips.



*A CONGLOMERATE*

*Jim Wood*



A few months ago, **Steve Norman** participated in the Rock Exchange that was happening. As it turns out, his exchange was with **Jim Wood** of Colfax, CA. Mr. Wood sent Steve a large ovoid rock which is a conglomerate. Because our newsletter is called The Conglomerate, Steve passed the rock on to me, and I will be donating it to RGMS. But we thought you might like to hear some of what Mr. Wood had to say about it.

The rock is “a river cobble that [he] picked up on the gravel bars along the Yuba River upstream from Daguerre Dam in Yuba County.” . . . I recognized the source of this rock immediately as . . . derived from one of several iron oxide ‘ferricrete’ horizons in the legendary Early Tertiary gold-bearing gravels of the Sierra Nevada foothills. . . .

Two . . . Early Tertiary gravel deposits along the route of the Ancestral Yuba River . . . are located immediately upstream along the modern Yuba River. One is a hydraulic mine at Smartsville and the other at French Corral. However, other hydraulic mines eroding this . . . sediment lie further upstream. . . . Due to the strong induration of the iron cement on this otherwise weak sandy sediment, this cobble could have been transported many tens of miles from its original place of origin.

The principal feature of this rock that identifies it as originating from the Early Tertiary unit is the dominance of quartzose clasts including white vein quartz, darker quartzite, and iron stained chalcedony, i.e., yellowish-brown jasper. . . .

The prevailing global climate during this time was tropical. The soils . . . were formed by chemical weathering producing thick soil profiles dominated by kaolinite and smectite and up to 100 feet thick. These are typical in tropical areas in the world today. As a result of the intense chemical weathering, the only resistant minerals remaining in the soil from the original rock is Quartz (and gold). Hence, when the rivers eroded these thick clayey soil profiles quartz, clay and gold were the principal clast constituents transported in the ancient rivers. Thus, the sediments of these Early Tertiary deposits are composed of little more than chemically resistant quartz (and quartzose minerals), clay minerals, and gold.

Hydraulic mining in the 1800s eroded these sediments on a massive scale. Most of the sediments were weakly cemented, if at all, and the force of the water stream from the monitors would completely disaggregate the sediments such that they could be funneled in to the long sluices to collect the gold. The exception . . . was when the miners encountered horizons of sediment cemented with iron mineral cement.

This lithology was very resistant to the force of the hydraulic water stream and largely remained intact as boulders or slabs. The miners probably made little effort to process this iron cemented sediment if the material was of minor occurrence. But if the layers were of significant occurrence then disaggregating this cemented sediment was profitable in order to extract additional gold. The rock is so tough or indurated that the only effective way to disaggregate it was to import a stamp mill into the diggings.

The main layer that was most lucrative for gold was at the bottom of the river channel or thalweg. Here, below the water table, iron was in the reduced state and iron sulfide (pyrite) and iron carbonate (siderite) crystallized to form a strong cement. Below the water table, the sediment has a deep blue cast/ Above the water table, iron precipitation was in the form of iron oxide minerals such as hematite and goethite. Hence, the cemented sediment was reddish. . The reddish . . . layers . . . also had lower gold content. Miners were not so eager to deal with this . . . material and much of it escaped the hydraulic pits as boulders or cobbles.

One final detail of this story pertains to the popular belief that the gold in the Early Tertiary sediments was principally derived from the erosion of lode gold veins along the river channel . . . upstream of the gold bearing sediment deposits. This is probably false. There is considerable evidence to show that most of the placer gold in these ancient Sierran rivers was transported from gold hosting terrains in Nevada. See the paper by Christensen, et. Al, 2015, for more if your are interested:

Since I was a co-author of this paper, I believe that much of the white quartz cobbles (and gold) . . . that made California rich in the . . . 1800s actually came from your neck of the woods or even farther to the east in central Nevada where disseminated gold deposits are abundant.

P. S. It’s possible there could be a gold flake or nugget embedded in this rock. I didn’t check to see wit my metal detector. If there is one, it’s an added bonus!”

*TRUE POLAR SHIFT? WANDERING MAGNETIC POLE COULD POINT TO UNSETTLED EARTH CORE*

Earth's protective magnetic field is acting erratically, throwing the magnetic north pole off-kilter. But the cause could be far worse.

Jamie Seidel, AP



The Arctic's melting ice may be having a far deeper impact than expected. We're seeing large, unexpected shifts in the magnetic north pole. And this could be symptomatic of changes deep within the Earth's core. But could it also throw the entire planet off balance?

As with everything else about the biosphere that is our planet, Earth, the magnetic field is part of a subtly balanced and interlocked system. And a series of studies has [shown the amount of ice lost off the Greenland landmass was 267 gigatons](#) in 2017. In 1996, it was 97 gigatons. To put that in perspective, a single gigatonne is an ice-cube 1km wide, 1km tall and 1km long.

This change has been measured by satellites. Some photograph the melt, others use lasers to measure the height of the ice. Some sense the minute decrease in gravity caused by the loss of mass.

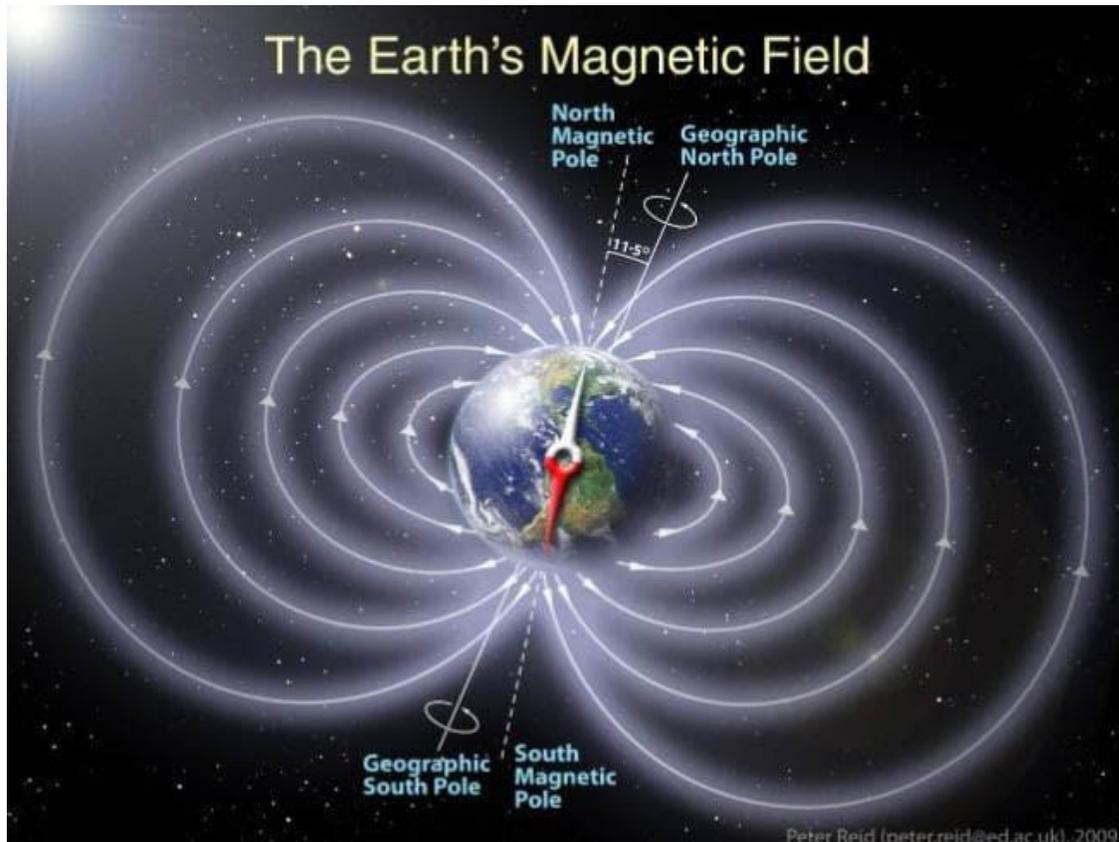
**RELATED:** [Weird thing happening to Earth's 'shield'](#)

As this ice retreats, ocean currents are changing course. New shipping lanes are being opened to Canada's north. The salinity of the surrounding sea is being reduced. But it now appears there is more going on. Greenland isn't as heavy as it was. This means the pressure it applied to the veins of magma pulsing deep below the Earth's surface has reduced. And this swirling mass of molten iron is shifting. Faster. In new directions. [This could account for the highly erratic shift in the position of magnetic north.](#) But it also could give the whole planet an unexpected shake-up.

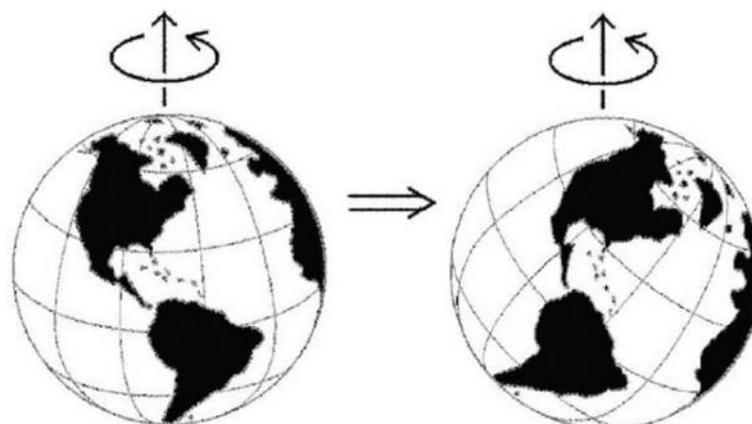
Earth's magnetic field is roughly aligned with the spin of the planet's axis, as it is generated by the swirl of molten iron beneath the surface. Picture via NASA *Source: Supplied*

**'TRUE POLAR WANDER'**

This pale blue dot wandering through space is locked in an internal feedback loop. What happens to one aspect of this little world affects another, which — in turn — affects another. A 2018 [study in the science journal \*Geophysical Research Letters\*](#) examined fossil signatures found deep in ocean sediments around the Hawaiian Islands. It suggests the Earth's magnetic field isn't the only thing to occasionally undergo a dramatic shift. The same can be said of the Earth's surface.



While the spin of the Earth remains at the same angle it is against the Sun, like a ball - exactly which part of the globe that spin centres on depends on centrifigal force balancing out its weight distribution. *Source: Supplied*



“The Hawaiian hot spot was fixed, relative to the spin axis, from about 48 million years ago to about 12 million years ago, but it was fixed at a latitude farther north than we find it today,” [said Daniel Woodworth, a graduate student of Rice University.](#) “By comparing the Hawaiian hot spot to the rest of the Earth, we can see that shift in location was reflected in the rest of the Earth and is superimposed on the motion of tectonic plates. That tells us that the entire Earth moved, relative to the spin axis, which we interpret to be true polar wander.” Essentially, the Earth’s surface was thrown off-kilter. And that was probably caused by a magma ‘blob’ in the mantle beneath the crust.

Generally, everything is kept relatively consistent by the balancing effect of Earth’s rotational centrifugal force. But not always. Magma flows can shift. Its consistency in certain places can change.

“Imagine you have really, really cold syrup, and you’re putting it on hot pancakes,” Gordon, the W.M. Keck Professor of Rice University’s Earth, Environmental and Planetary Science said. “As you pour it, you temporarily have a little pile in the center, where it doesn’t instantly flatten out because of the viscosity of the cold syrup. We think the dense anomalies in the mantle are like that little temporary pile, only the viscosities are much higher in the lower mantle. Like the syrup, it will eventually deform, but it takes a really, really long time to do so.”

If these magma blobs are big enough, they can unsettle the planet’s spin. While the Earth’s angle relative to the Sun doesn’t change, the position of the continents does. Essentially, centrifugal force pulls this ‘blob’ of magma closer to the equator. From the perspective of the continents, the equator appears to shift.

The study said the last time this happened about 3.2 million years ago, it moved Greenland and parts of Europe and North America further north. “That may have triggered what we call the ice age,” Professor Gordon said.



Guests explore inside the magma chamber of Thrihnukagigur volcano, Iceland. Rapid and erratic shifts in the magnetic north pole suggest the balance of the Earth’s core is shifting. *Source: Supplied*

**GEOLOGICAL PRESSURE COOKER**

Less than 100 years ago, the idea that the Earth's continents could shift position was considered ludicrous. But the discovery of plate tectonics changed that virtually overnight. The Earth's outer crust is a system of solid plates floating on a mantle of highly pressurized, superhot rock beneath. These cycle constantly, as do the continents they contain, through the tectonic forces expressed through volcanoes and earthquakes. It may just be a matter of a few centimeters each year. [But it's already been enough for the GPS network to have to be reset to avoid navigational errors.](#) It's easy to forget the driving force for all of this as it is far, far out of sight. The ebb and flow of the molten metals of the Earth's mantle and core. As our planet rotates around its axis, this liquid iron is churned. And that's a good thing.

The constant interaction of iron on iron generates electric currents that power the magnetic field that shields the surface of the Earth. This 'bounces' the worst of the Sun's radiation, and even powerful cosmic rays. Likewise there is a constant interaction between the molten core and the solid crust. Magma can pool, shift and cool as the crust above changes.

**RELATED: [Greenland impact crater could explain mammoth extinction](#)**

It can result in areas becoming more--or less-- dense in magnetic material. And it can affect the circulation of molten magma around it. Such changes could account for mysteries such as the powerful South Atlantic magnetic anomaly that has claimed several satellites in recent years. [It](#) also changes the 'balance' of the Earth's magnetic field, causing the location of the North and South poles to 'wander'. They can even 'flip'. "In other words, if you were alive about 800,000 years ago, and facing what we call north with a magnetic compass in your hand, the needle would point to 'south'," [A NASA commentary reads.](#) But the implication now is the balance of the Earth's crust itself can be unsettled if the magma below shifts and changes in unexpected ways.



This file NASA image shows an iceberg floating in Antarctica's McMurdo Sound. - Global warming is melting ice in Antarctica faster than ever before--about six times more per year now than 40 years ago. Picture: NASA. Source: AFP

## **ANTARCTIC WILDCARD**

Just as the tectonic plates react to shifts in Greenland's weight, so too will they be affected by Antarctica. And ice is melting in Antarctica faster than ever before--about six times more per year now than 40 years ago.

As this ice sits on land, the run-off is leading to increasingly high sea levels worldwide. Already, Antarctic melting has raised global sea levels more than 1.4 centimeters between 1979 and 2017, a report in this week's edition of the science journal Proceedings of the National Academy of Sciences (PNAS).

### **RELATED: [Something weird's happening deep beneath the South Atlantic](#)**

A rise of 1.8 meters by 2100, as some scientists forecast in worst-case scenarios, would flood many coastal cities that are home to millions of people around the world, previous research has shown. It would also greatly reduce the weight of ice sitting on Antarctica, and redistribute that weight on the ocean floor--and the magma beneath.

For the current study, researchers embarked on the longest-ever assessment of ice mass in the Antarctic, across 18 geographic regions. Data came from high-resolution aerial photographs taken by NASA planes, along with satellite radar from multiple space agencies.

Researchers discovered that from 1979 to 1990, Antarctica shed an average of 40 billion tons of ice mass annually. By the years 2009 to 2017, the ice loss had increased more than sixfold, to 252 billion tons per year.

### **EXPLORE MORE: [Why we are obsessed with apocalypse](#)**

Even more worrying, researchers found that areas that were once considered "stable and immune to change" in East Antarctica, are shedding quite a lot of ice, too, said the study.

The total amount of ice in the Antarctic, if it all melted, would be enough to raise sea level 57 meters. By far, the most ice in Antarctica is concentrated in the east, where there is enough sea ice to drive 52 meters of sea level rise, compared to about 5m in the entire West Antarctic ice sheet. The latest research shows that East Antarctic melting deserves "closer attention," according to the PNAS report.

JANUARY BOARD REPORT*Steve Norman, Secretary*

Board meeting report: Jan 8, 2020. **Steve Norman**, Secretary. This is a brief summary, my full report can be viewed on the bulletin board at the Society's facility or contact me for information.

President **Dean Sizemore** reported that as a non-profit Society our members could volunteer to help out in the general and primary elections in Washoe County. A stipend would go to the Society in exchange for volunteering. Let Dean know if you are interested. If enough members volunteer we could earn up to a \$1,000!

Membership: **Donna Durham** announced 8 new memberships: **Priscilla Barron & Jill Leland; Ryan & Sabrina Eller, Russell & Sandra Hicks, Gene & Patricia Garry and Wes Ratliff** of Reno, NV. **Lynne (Jennea) Liebelt, John Avants** and **Jim & Laurie Aldrich** of Spark, NV. Memberships were approved. Welcome to the Reno Gem and Mineral Society!

**Sue Webb** Conglomerate Editor, has an assistant: **Logan Alexander**, contact him at: \_\_\_\_\_

**Renée Samuels** Volunteer Director requests that anyone doing Society work in any way send the number of hours to her for her report. The Society has positions open. Please consider helping out. Display Case organizer for the Show in April, Dealer Chairman for next year 2021, Beginning Silver-smithing instructor and also, Librarian, Historian, and Facebook facilitator. **Steve Smith** has volunteered to take photographs of Society events. Thanks Steve and help him out by forwarding photos to him.

**Denise Sizemore** Social Director reports next event will be the Jackpot of Gems potluck where Vendors and volunteers get together for some good food and fun. Please come and get to know our vendors and Society members. The potluck will be Friday, April 3 starting at 5:30 with dinner at about 6 PM.

**John Peterson** announced Equipment Sale at The Rock Building on March 21, 2020 from 10 AM till 2 PM.

**Julie Hilsabeck**, School Director announced silver fabrications classes starting in January. See Conglomerate calendar for details.

**Dan Ellis** Show Director, has volunteer sign-up sheets with many ways to help out. It is a great way to meet people, have fun and help out the Society. There is a free t-shirt to thank you for your service. **Eric Fendelander** appreciates rock and mineral donations for the silent auction, and he can also use some plastic 5 gallon buckets with lids. If you have something to donate give him a call:

**Past President Nichols** discussed the website which is scheduled to launch in February.

The program for the next General Meeting will be Society member Webb Varnum showing and sharing mining homes in Nevada on Wed. Feb. 5, at **Baldini's** on the second floor in the **Sierra Room** at 7 PM.

JACKPOT OF GEMS EXHIBITS

SET UP: APRIL 3 NOON TIL 8PM

APRIL 4 AND 5, 2020

*Theresa Langhans, Exhibits Chair*

I want to thank those of you who have already signed up to exhibit at our annual show!

We have 44 exhibits to fill for this Show. I encourage you to complete the attached form to reserve your case!! Please return to me by March 1.

If you need assistance, I am happy to help. If you feel that you may not have enough material to fill a 4' x 2' case, then you can share space with another individual. Please note that someone doesn't have to be a member to exhibit. Our exhibits are generally related to our hobby, but individuals have put in some great displays of antique glassware, stamp collections, etc. It truly is a lot of fun to exhibit your collection(s)!! And how rewarding to hear the comments of appreciation from individuals who come to the show and see your work! You may win our "people's choice award," where favorite cases are voted on by the general public and receive awards.

New to exhibiting? I will help.

Stay tuned next month for more details and reminders on exhibiting. AND if you would like to enter a competition case, our show is the only show I know where you can practice prior to the Regional and National Shows. Great way to get feedback and go through the judging experience prior to competing in other shows.

SPRING 2020ARTISAN CRAFT FAIR*Theresa Langhans, Coordinator*

If you are interested in participating as a vendor in our Spring Show (held the second Friday May 8th, Saturday 9th, and Sunday 10th), please complete a registration form. For a three-day event, the cost is extremely reasonable: \$65 for the first space and \$35 for each additional space. In addition, if you do not already have a City of Reno business license, there will be an additional \$20 charge from the City. I have included registration forms with this issue of the Conglomerate. For those of you who would just like to place a couple of items for sale, there is a consignment table available for a charge of 10% commission to the Society. Again, reach out to me for more information.

*2020 JACKPOT OF GEMS POTLUCK*

*Denise Sizemore*

As we move into 2020 and the Jackpot of Gems approaches, mark your calendars:

April 1 st 5 P.M. \*RGMS Load Truck/Setup Building\*

April 3 rd , 6 P.M. \*JPOG Potluck @ RGMS Building\*

and don't forget....

April 5 th , 6 P.M. \*JPOG Leftover Feast @ RGMS Building\*

This gives you a great chance to meet and catch up with JPOG vendors and your fellow RGMS peeps.

Signup sheets will be available starting at the February General Meeting at Baldini's and at the Society Board Meeting at the Building to bring your favorite Snack, Side Dish, Main Dish or Dessert.

Bring your table setting, beverage, and favorite dish and join us!!!

*RGMS MEMBERS PREP FOR JPOG SILENT ACTION*

*Steve Norman*

On January 11, several RGMS members met at Eric Fendelander's home to sort and label donations for the silent auction that takes place at the JPOG. Here are some pictures Steve Smith took:



I would like to thank everyone for their support & donations to Door Prizes in 2019. All donations will be used at meetings and other appropriate events. Please continue to help support our RENO GEM & MINERAL SOCIETY. I am open to any special requests for door prizes. Don't forget to wear your badge to the General meeting to get a FREE ticket.

3 tickets \$1.00  
15 tickets \$5.00  
30 tickets \$10.00

Thank you,  
Laura Jackson

*Laura Jackson*

*DOOR PRIZES THANK YOU*

CLIMATE CHANGE:  
SOME INCONVENIENT FACTS

D. W. Webb Varnum

I am not trying to make a political statement. With this short article, I am going to state some facts.

Most people agree that humans are affecting the climate of the earth, generally for the worse. But that's not the whole story. Our beautiful earth is sometimes at fault. For example, in 1991 Mount Pinatubo erupted, ejecting some 17 tons of SO<sub>2</sub> and thousands of tons of dust, vapors and other particulates. This event affected the earth's temperature 0.5-0.6 degrees Centigrade in the Northern Hemisphere, and 0.4 degrees world wide. In 1883 Krakatoa ejected 45cu K meters of dust with a 1.2 degree temperature change over 5 years. #1

Another cause influencing climate change is the deforestation of the Amazon rain forest and all the fires in Australia, New Zealand, and California.

Indeed, humans have put out 60 times more pollutants than the earth itself, mostly improperly scrubbed exhaust gases from, autos, electric plants, and industry. However, there may be other, less apparent reasons for the changes. Consider that the Carboniferous and the Ordovician Periods were the only geological periods during the history of the earth that global temperatures were as low as they are today. To the consternation of global warming proponents, the Late Ordovician Period was also an Ice Age while at the same time CO<sub>2</sub> concentrations at the time were nearly 12 times higher than today-- 4400 ppm. According to greenhouse theory, Earth should have been exceedingly hot. Instead, global temperatures were no warmer than today. Clearly, other factors are involved.

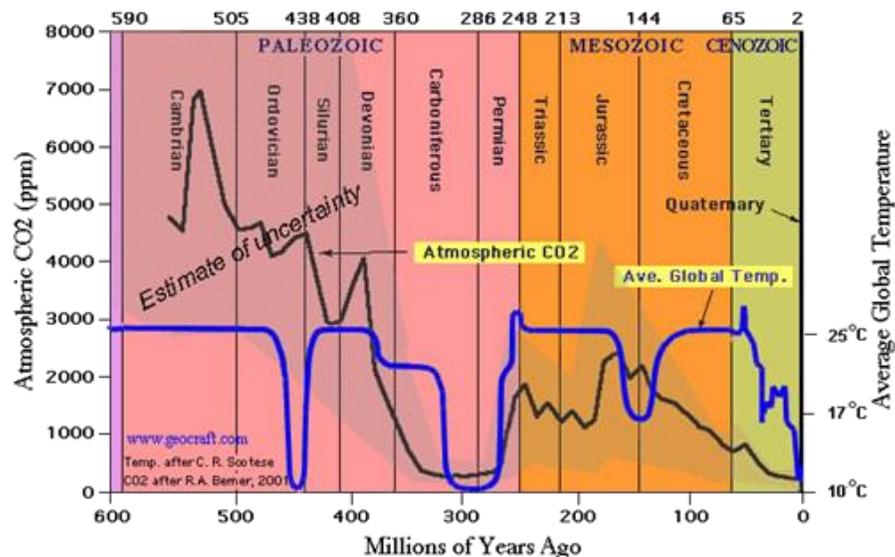
Or is our beautiful blue ball doing some of this itself? Let us review the Carboniferous period using paleobotany, paleontology, paleoclimatology, and paleontomology.#4

During this period ( 64 my) earth's climate was very different but at times the same. It fluctuated from about 20 degrees Centigrade at the beginning, but 32my later it was at 10 degrees Centigrade, the same as today, rather quickly in a geologic context. Then climbed in only 36my to a high of 27degrees Centigrade. At the same time the CO<sub>2</sub> level went from 2200ppm to the same as today, then rose some and then went back down ~~back~~ to today's level of about 250ppm. The high during the Cambrian was about 7000ppm .

During this period (the Carboniferous) the earth continued to drift from 1 continent (Pangaea\*) toward nearly the way it is today.

The very high CO<sub>2</sub> levels caused the plants to grow into massive sizes and dense forests. The conditions being right, the plants changed into coal and oil when they died. Oddly those things that are being condemned for causing climate change today. High CO<sub>2</sub> in the atmosphere also meant high O<sub>2</sub> levels in the atmosphere. This enabled insects to grow much larger #5

We are actually in an ice age climate today. However, for the last 10,000 years or so we have enjoyed a warm but temporary interglacial vacation. We know from geological records like like ocean sediments and ice cores from permanent glaciers that for at least the last 750,000 years interglacial periods happen at approximately 100,000 year intervals, lasting about 15000 toocean sediments and ice cores from permanent glaciers that for at least the last 750,000 years interglacial periods happen at approximately 100,000 year intervals, lasting about



## THE CONGLOMERATE

to 20,000 years before returning to an icehouse climate. We are currently about 18,000 years into Earth's present interglacial cycle. These cycles have been occurring for at least the last 2-4 million years, although the Earth has been cooling gradually for the last 30 million years.

What will our climate be like in the future? That is the question scientists are asking and seeking answers to currently. The causes of *global warming* and *climate change* are today being popularly described in terms of human activities. However, as we have seen, climate change is something that happens constantly on its own. If humans are in fact altering Earth's climate with our cars, electrical power plants, and factories, these changes must register larger than the natural climate variability in order to be measurable. So far the signal of a discernible human contribution to global climate change has not emerged from this natural variability or background noise. #2

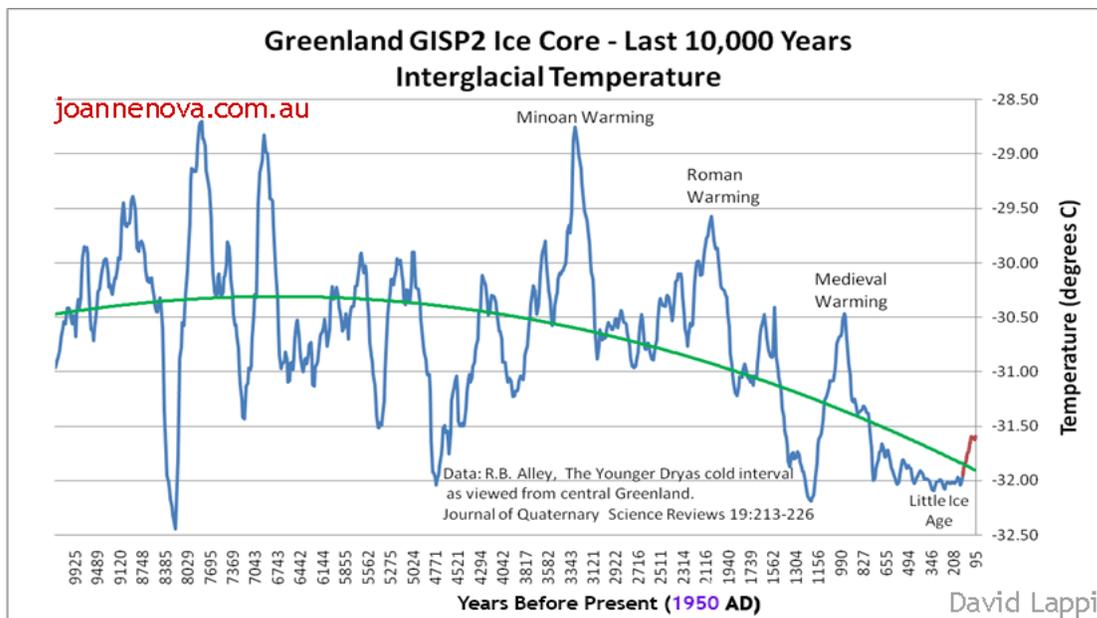
Another interesting chart shows the last 1000 years as recorded in Greenland ice, revealing a fluctuation from -32.5 to almost -2.

My conclusions are that with climate change as with magnetic reversals and the changing of earth's axis THE EARTH WILL DO AS IT PLEASES! despite our intentions for good or bad.

Thank you

- #1 Internet Krakatoa and Mt Pinatubo, "Life Science"
- #2 University of West Virginia "Climate During the Carboniferous Period"
- #3 Joannehova.com
- #4 1st chart relevblogspot.com
- #5 The Carboniferous Period Coal and Giant Insects

Editor: This is a subject that draws a great deal of controversy, and it should be noted that the conclusions drawn in this article are those of Webb Varnum and not of the Reno Gem and Mineral Society.



School Report, continued

### MINERAL IDENTIFICATION

Must sign up. See Julie at the meeting. 3rd and 4th Wed. in April and October. For a small fee, identification kits are available for purchase ahead of the class.

### LOST WAX CARVING

Next class will be in March 8

Potential for **faceting** classes, **enameling**, and **precious metal clay** if there is enough interest. Speak to Julie at the General Meeting if you are interested.

*SCHOOL REPORT*

*Julie Hilsabeck, Director*

**If a class must be cancelled, each Instructor or Host will post a cancellation notice to the RGMS Facebook page. If you do not see a cancellation post, the class will be held as scheduled.**

Want to take or teach a new class? Have any ideas or suggestions? E-mail **Julie Hilsabeck** or talk to her at the general meeting! All official information regarding scheduling and class details is published in *The Conglomerate*. Register and pay for classes at the general meeting. We accept cash or check made out to RGMS!

Children may register for classes only at the discretion of the teacher. Wear protective shoes or boots to work in the shop—NO open toe shoes, sandals or slippers. **Please Note: To register for classes you must either be a member or have \$1 million of liability insurance naming RGMS as the certificate holder. If you are not a member, unless you present a valid insurance certificate at registration, you must wait until the next general meeting after you join to register for classes. Your insurance is included in the membership fee.**

BE NICE! Each class using headquarters is responsible for leaving the premises clean and tidy. Any tools belonging to RGMS should be put away securely and headquarters locked.

***MONDAY OPEN HOUSE***

Make your own projects! You must take at least 2 months of lapidary classes before you will be cleared to attend open house and must have your name on file as approved to work on your own in the shop. Speak to the lapidary instructors to be added to the list. Please be sure to follow shop safety rules. **At 8:45 please start clean-up so chaperones can go home.** Supervised by **Daniel Ellis**. 6-9 PM Shop fee \$5/hour.

***BEADING***

**Beading** in 2020 may be offered quarterly on a **Saturday** from 10-2. Next class will be offered in April. Class is taught by **Sue Webb**. \$2.50/hour payable at class or the meeting.

***CASTING***

**Casting is currently on hiatus until an experienced instructor is found.** When offered and weather permitting, casting is taught in two classes held on Friday evenings. Classes enroll a maximum of 4-6 students. Sign ups will be taken at the general meeting when classes resume.

***KNOTTING AND STRINGING***

Learn to string natural stones and beads beading wire, use silk for knotting pearls and craft wire for wire linking as well as stretchy for bracelets. The different tools involved in each project as well as different gauges of craft wire will be explained. You will be supplied with all you need to make bracelets. \$20.00 material fee. First and third Mondays, 7-9 PM. \$5 course fee. Taught by **Laura Jackson**

***LAPIDARY***

Lapidary is limited to 4 new students, but a **daytime class** is now available. **For shop safety, an absolute limit of eight people may work in the shop at one time.** First time students **must** attend a one-time **shop safety seminar (11/12) on the Tuesday following the general meeting at 10:30 am or 6:30 pm.** Drop-ins are welcome on a first come, first served basis. Registered and pre-paid students always take precedence over drop-ins. Materials for your first two projects are included in your class fee. Evening class taught by **Lloyd Raymond & Barbara Hartman, 7-9 pm**; daytime class taught by **Barbara Hartman and Julie Hilsabeck. 11am -1pm**, Tuesdays, \$5/hr.

***SILVER FABRICATION***

Beginning classes are structured classes. The first two projects are specifically designed to teach you the fundamentals of silver fabrication (making jewelry). Therefore, you will not be able to do other projects until you complete the two projects. RGMS provides tools to use on your first two projects. There is a \$20-\$25 fee for the silver which we provide for the first project. Stones are not included; however, we do have some for sale. For these two projects, **only oval stones** will be used. Suggested size for the first project is 18 x 13mm, and 30 x 32 mm for the second project. The stone size does not have to be the exact size but should be very close. You can purchase silver from the instructors for the second project, or you can use our own. Upon completion of the two projects, if you wish to continue, you will need your own basic set of tools. **The tools that RGMS provides are for new students only.** Before purchasing any tools, talk with your instructors. Instructors: Jay Logue, **Jill Atkins** and Al Bolshazy.

***WIRE ART***

Drop in to work with wire the second and fourth Monday. Classes vary by the month, so check at the general meeting to see what will be offered for April. Brass wire only and tools available to lend in class to new students. Taught by **Jennifer Rhodes** and **Sami Ellis**. 2nd and 4th Monday, . 6-8 PM \$2.50/hour (\$5/class), payable in class.

Continued, page 13



# FEBRUARY 2020

Sun

Mon

Tue

Wed

Thu

Fri

Sat

						1 Beading 10-2 Bezel for Cab
2	3 Open House 7-9 PM	4	5 General Meeting 7 PM Baldini's Second Floor	6 Silver Fabrica- tion 6-9pm	7	8
9	10 Open House 7-9 PM Wire Art 7-9 PM	11 Lapidary 10:30 Safety 10am-1pm 7pm-9pm 10:30 Safety	12 Board Meeting 7 PM RGMS facility	13 Silver Fabrica- tion 6-9pm	14	15
16	17 Open House 7-9 PM	18 Lapidary 10am-1pm 7pm-9pm	19	20 Silver Fabrica- tion 6-9pm	21	22
23	24 Open House 7-9 PM Wire Art 7-9 PM	25 Lapidary 10am-1pm 7pm-9pm	26	27 Silver Fabrica- tion 6-9pm	28	29

**EARLY PALEOINDIAN STONE TOOL  
BEAUTIFUL CHIPPED STONE CRESCENTS  
IN THE FAR WEST GREAT BASIN**

Lorraine Hoss

Crescents are generally thought to be diagnostic to the terminal Pleistocene and early Holocene periods approximately 12,000 to 8,000 years before present. They are found near water, marshlands, and on the shores of lakes that have dried up. The Great Basin's climate was cooler and wetter than today with marshes and lakes that likely drew hunters and gatherers over the centuries. The most common materials crescents are made of include cryptocrystalline including chert, chalcedony, and jaspers which are all strong and durable lithic materials that are not as brittle as obsidian. However, some are made of obsidian.

They are symmetrical and carefully pressure flaked on both sides; typically, the wing tips are pointed, and the edges are ground smooth. They maintain the lunate shape or moon shape. No consensus has been reached among scholars for the purpose of crescents. Many surmise that they are all-purpose tools. Some crescents are exquisitely

chipped out of outstanding stone while others are not.

Pictured are stone crescents from the L. Hoss collection.

