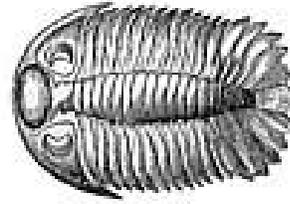


The Trilobite



Wisconsin Geological Society

March 2022

NEXT WGS MEMBERSHIP MEETING
Monday, March 14, 2022 at 7:00 PM

Immaculate Heart of Mary Church Hall
(Downstairs, Enter at back of building)
1212 South 117th Street (Just North of Greenfield Ave):
West Allis, Wisconsin

Please follow the CDC guidelines and wear a mask unless you are fully vaccinated.
Feel free to socially distance if you are not comfortable sitting near someone else.

]

Please check your e-mails before coming to the meetings. If the meeting has to be cancelled, we will send out a notice by e-mail to those that get an electronic copy of the Trilobite. For the few who still get a hard copy in the mail, we will attempt to notify you by phone.

If you would like to exhibit and reserve a display case for our show in May, please let me know. Paul Schmidt—Show Chairman. pvs@wi.rr.com

Election of officers will occur during the June meeting.

Pierre has served his maximum number of terms allowed. We will need someone to step up and take this job.

Kitty has been serving as temporary Treasurer. We also need someone to step up and take this job.

We can't run a club without people willing to take turns at these positions .
Please consider doing your share in operating the club.

If you would like to volunteer or learn more about the responsibilities of these offices, please contact Pierre or Kitty.



**Happy
St. Patrick's
Day!**



WGS Minutes February 14, 2022
Mother of Perpetual Help Parish Hall/Online Zoom Meeting

Zoom/Phone Members: John Hammetter

The business meeting was called to order at 7:06PM by our President, Pierre Couture.

The minutes of the December 13 meeting were printed in *The Trilobite*. Paul Schmidt made a motion to accept the minutes as published. Several members seconded. The minutes were approved.

New Memberships: none
Guests: None

Treasury Report: Kitty Klein read the Treasurer's Report for December and January. Jody Rymaszewski made a motion to accept the January Treasurer's Report for audit. Another member seconded. The motion was approved. Paul Schmidt made a motion for accept the February Treasurer's report for audit. Another member seconded. The motion was approved.

Committee Reports:

Show:

If anyone need space at the show, please let Paul Schmidt know. Paul is looking for volunteers to chair committees. If anyone who is exhibiting needs a case, let Paul know.

Newsletter:	no report
Lapidary:	no report
Mineral & Fossil Study Groups:	no report
Field Trips:	no report
Junior Rockhounds:	no report
Sunshine:	no report

Unfinished Business:

We will need someone to fill the Treasurer, Show, and Website positions. Chris Nohl will work with anyone who wants to learn the website. Kitty Klein will train anyone who wishes to fill the Treasurer's position. Paul Schmidt is also willing to train anyone – perhaps several people, who are interested in running the Show. John Hammetter agreed to help Paul out where needed.

New Business:

We need to get Nominations going for elections. We will need a new president and treasurer .
If you are willing, please speak up at the next meeting.

Announcements:

We got the Midwest membership cards, but the package got damaged in the mail, so some of the cards were lost; however, there were enough cards for anyone present. The Kettle Moraine Show is looking for volunteers for Security on Saturday March 12 from 10 AM to 5 PM and on Sunday March 13 from 10 AM to 4 PM.

Door Prizes:

Prizes were donated. Winners: Anyone who wanted prize got one.

Adjournment:

Several members made a motion to adjourn. Several members seconded. The motion was approved. The meeting adjourned at 8:00 PM.

Barbara Brown, WGS Secretary

CALENDAR OF EVENTS

Our WGS Show will be returning to our Hart Park location May 14 and 15, 2022

March 12th & 13th 2022: Kettle Moraine Geological Society Show

Washington County Fair Park and Convention Center,
3000 Hwy PV (exit 65 off Hwy 45) West Bend WI
Sat 10 to 5, Sun 10 to 4

March 26th and 27th 2002: Badger Lapidary & Geological Society Show

Rock County Fairgrounds, Craig Center Building,
1301 Craig Ave, Janesville, WI 53545
March 26 9-5, March 27 9-4: Free-will donation and free parking
Show Contact: Laurie Trocke glowyrocks@gmail.com 608-935-0597

May 7 & 8, 2022 : Heart of Wisconsin Gem and Mineral Society Show

Marshfield High School Field House , 1401 E. Becker Road, Marshfield WI
Sat 10-5, Sun 10-4
Contact: Cynthia Kelman, (715) 387-8783; kelman@tenet.com

May 14 & May 15: Wisconsin Geological Society Rock and Gem Show

Muellner Building, Hart Park Wauwatosa WI. (enter at 72 and state Street)
Sat 10-4:30, Sun 10:4:30
Contact: Paul Schmidt pvs@wi.rr.com

**WGS Members, Please Note:**

Your Membership Dues are renewed in November.

\$15.00 Single Membership, \$20.00 Family Membership

Please remember to send your check to:
Kitty Klein 2477 S. 73rd St. West Allis, WI 53219

If you have paid your dues through our new website, let me know via e-mail.
pvs@wi.rr.com

Forces of Nature that Change Earth's Geology and Geography — by Sue Eyre

Rain:

As we turn the last few pages of the calendar each year, the sky opens over the Amazon River basin. Twenty percent of the earth's fresh water comes from the Amazon. It's the 2nd largest river in the world in length, over 4,000 miles long with over 1,000 tributaries as it traverses Brazil, Columbia, Peru and Ecuador. It is the widest river in the world. The Amazon ranges from 1 mile to 6.2 miles wide during the dry season and up to 30 miles wide by the end of the wet season. At its mouth, the Amazon delta is over 200 miles wide and it discharges an average of 7,831 cubic feet per second of water into the Atlantic Ocean.



(L) In November, the sky opens and rain falls from the sky as water from the city of Manaus gushes into the river from a storm pipe in the harbor.

(R) By April, the sky is primarily blue, but scattered thunderstorms still loom over the rainforests of Brazil. By this time of year, the Amazon river bed has filled to capacity.



(L) Alter Do Chao boasts one of the 10 best beaches in Brazil during the dry season.

(R) In April, that beautiful beach rests far below the top of the Amazon's surface.

The fish market in the city of Santarem also changes dramatically.



(L) In November, local fishermen use the facility to clean their catch before taking them to sell at the actual market across the street.

(R) In April, however, this building is filled by locals and tourists who frequent the facility to feed and watch the fresh water pink dolphin. Local Amazonians consider it bad luck to harm this rare breed of dolphin

Snow:

Most of us consider snow a beautiful sight, the medium needed to ski down a mountain, or an annoyance we have to shovel or drive in during the winter months, but snow can become dangerous. When it accumulates and packs down on mountain tops, it can suddenly discharge in a scary and life-threatening avalanche. Many skiers are trapped or killed by avalanches every year. The power of these snow slides is hard to imagine.



The force of these avalanches outside of Silverton, CO during the winter of 2019 were still evident in late June of that year. The avalanche took everything in its path down the mountain with it. Avalanches change the geology of the mountains and often uncover minerals once hidden by those mountains. They also bring minerals, such as gold and silver down to the valleys. Many 4X4 roads in the Silverton area were closed most of that summer because of snow that remained on the roads.

Glaciers:

Sometimes when snow accumulates on mountain tops year after year in places that are not prone to avalanches, the snow becomes a glacier. These beautiful creations of nature can survive hundreds of years. These forces create yet another beautiful sight. The force of all that snow can form solid ice with features of their own.

Jungfrau, better known as 'The Top of Europe' lures visitors to walk through ice caves and sculptures that were first carved in the 1930s. Inside these caves, the ice is near zero degrees (F), but still melts ever so slowly every year. It takes several hours to get to the top of the Jungfrau by train from Interlaken, Switzerland, but the rewards are worth the ride. Upon exiting the train, you can enter the ice caves, sometimes called the Ice Palace. But when you exit the caves, the views are spectacular--snow covered mountains with no clue of the solid ice that lies below. It's hard to imagine the forces that result in this magnificent sight.



Public domain photo of the Jungfrau Observatory and the glacier below as seen from the air.



(L) A tunnel of ice inside the Ice Palace at the Top of Europe. As the floor is ice, the handrails are essential—hold on!



(R) One of the many ice carvings inside the Ice Palace at the top of Jungfrau.



- (L) The Jungfrau taken with a telephoto lens from the town of Interlaken, Switzerland. The iconic observatory is hardly visible from this distance.
(R) Hubbard Glacier, Glacier National Park, Alaska

Ice Burgs:

Ice burgs can form in two ways. One, huge pieces of ice can break off from a land-based glacier and fall into a body of water. This process is called calving. There is usually a loud, cracking sound like thunder as the chunk of ice breaks away from the main glacier. This is followed by a huge splash into the water below. On the other hand, both the North and South Poles are made up of large formations of solid ice. When sections of either of the Polar Ice Caps break off from the main body of ice, ice burgs, some the size of a small state in the US, form very large ice burgs.



- (L) Ice burgs the size of houses dot the waters at the Western entrance of Prince Christian Sound, in Greenland.
(R) Public domain photo of a calving glacier in Glacier Bay National Park, AK.



A seal floating on a small ice burg near the Northern Polar Ice Pack off of Svalbard, Norway

Bench Tips by Brad Smith

BradSmithJewelry@gmail.com

MAGNETIC TOOL BAR

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 bench top. 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.



SILVER DISCOLORATION Brad Smith

Working with jewelry involves an ever increasing number of skills. Chemistry is one of them that comes into play when dealing with a discoloration on the metal caused by a chemical reaction between it and the environment.

In the case of Sterling silver, there are three discolorations we typically encounter: a tarnish, a firescale, and a firestain. Each is different in its cause, in its cure, and in its prevention. All three have to do with components of the Sterling alloy (92.5% silver and 7.5% copper) and how they react with oxygen and the heat of soldering or with pollutants in the air over the long term. Firescale and firestain also occur in 14k or 18k gold because of the copper content.

Tarnish is a grayish coating that builds up slowly on the surface as a result of a reaction of the silver with sulfur-based compounds in the air. Typically these are pollutants from the burning of petroleum fuels, but they can come from other sources as well. I once tarnished all the silver in my display case by putting a pretty specimen of iron pyrite in with the jewelry. Turns out pyrite has sulfur in it!

Sulfur from air pollution or any other source combines with the silver to form a grayish silver sulfide film on the surface. Preventing tarnish involves keeping sulfur away from the metal. Plastic bags will help, and anti-tarnish strips are available from jewelry supply companies to pack near your items. Tarnish is easily removed by hand polishing with a jeweler's cloth or with one of the products sold for cleaning the good silverware for holiday dinner.

Another way is to remove it chemically. Put a piece of aluminum in the bottom of a dish large enough to contain your piece. Heat enough water to cover the silver. Mix in 2 tablespoons of sodium carbonate per cup of water and pour into the dish. Be sure the silver touches the aluminum. Sodium carbonate is the main ingredient in washing soda. Read the labels in grocery and hardware stores.

The second type of tarnish is called firescale. It is the dark gray to charcoal colored film that forms on Sterling or other copper alloys like brass or bronze when we heat it with a torch. The copper in the alloy reacts with oxygen in the air to form a dark cupric oxide coating on the surface. Luckily, the oxide is easily removed by dissolving it in a mild acid - generally called a pickle. It's important that we not let firescale form on a solder joint because it will block the flow solder over the joint.

There are two ways to prevent firescale. Most common is to use a flux, a borax-based solution applied to the metal before soldering. When melted, borax forms a thin glassy layer that keeps oxygen away from the metal. A second way is to do your soldering on a charcoal block. Together with the flame, charcoal greatly reduces the amount of oxygen in the area being soldered. In either case, oxygen is prevented from reaching the metal, so no cupric oxide firescale is formed.

A second oxide can also be formed when soldering copper or a high copper content alloy like bronze or brass. It's called cuprous oxide and is reddish in color. That's why a black looking piece you put in the pickle sometimes comes out red. Problem is that while the black cupric oxide is dissolved by a pickle, the red cuprous oxide is not. The discoloration can be sanded or polished off, but an easier way is to use a "super pickle". This is a mixture of fresh pickle with a healthy shot of hydrogen peroxide from the local store.

I've saved the worst form of discoloration, firestain, for last. Think of firescale (above) as like getting dirt on your shirt that you have to wash off. Firestain is like getting ink on it. The discoloration is not just on the surface, it seeps down and stains the material. Firestain happens when we heat a piece of silver too hot, too long, and/or too many times.

Firestain occurs when the oxides start to build up below the surface of the metal. You generally don't notice it until after polishing. It appears as a darker area of the surface and is easy to spot when viewed under light bounced off a piece of white paper. Because firestain is below the surface, there's no easy bench tip solution. Depletion gilding may work for some pieces. Otherwise, removing it calls for sandpaper and aggressive polishing.

A much better approach for a piece that will require a large number of solderings is to protect the metal from developing firestain by applying liberal amounts of a firecoat. Regular soldering flux will provide some protection but is not as effective as preparations made specifically for the task. Jewelry supply companies offer several commercial solutions, but my favorite is the Prips mixture. I use it every time I intend to do more than two solderings on a piece.

Smart Solutions for Your Jewelry Making Problems



See all of Brad's books on Amazon

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The Purpose of the Wisconsin Geological Society, Inc is to:

Create an interest in the study of Geology

Provide a means for personal development in Geology.

Disseminate knowledge concerning all phases of Geology.

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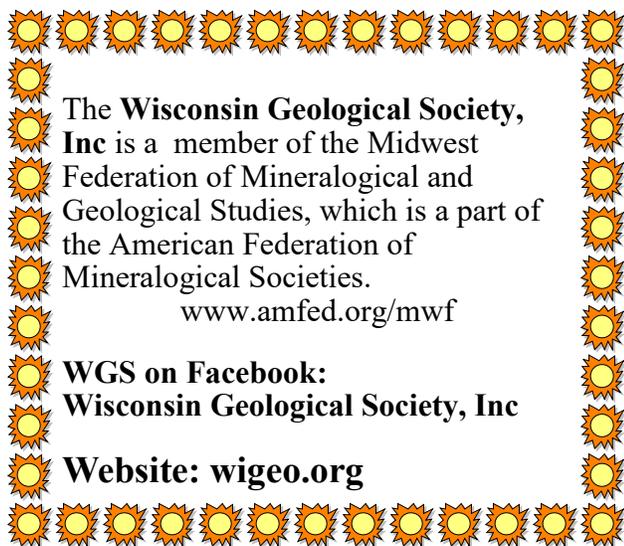
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www.amfed.org/mwf

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FIRST CLASS

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March 2022

General Membership meetings are held each month (except July and August) on the second Monday of the month at 7:00p.m. in the Parish Hall (lower level) of the Immaculate Heart of Mary Catholic Church, 1212 South 117th Street; West Allis, Wisconsin.

All news, articles, and pictures to be included in the Trilobite should be forwarded to the editor by the 15th of the month. They can be mailed or e-mailed to:
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8213 Red Arrow Ct.
Wauwatosa WI 53213
pvs@wi.rr.com

WGS Members, Please Note:

**Your Membership Dues are renewed
in November.**

\$15.00 Single Membership
\$20.00 Family Membership

Please remember to send your check to:
Kitty Klein
2477 S. 73rd St. West Allis, WI 53219

The check should be made out to WGS

**The Wisconsin Geological Society, Inc
is now in it's 85th year**