



PICK & SHOVEL

May 2019, Volume 61, Issue 9

Editor: Sharon Marburger

MEETINGS AND ACTIVITIES

General Meetings:

Monthly meetings are held on the **third Thursday** of the month during February, March, April, May, September, October, and November. The January meeting is held on the **fourth Saturday** and also includes the Mid-Winter Rock Swap followed by a Club Supper. The December meeting is held on the **first Sunday** and includes the annual Awards Presentations and Potluck Christmas Party.

Youth activities begin at 6:00 p.m. and adult meetings begin at 7:00 p.m. at the Bethany Park Shelter House.

Next General Meeting

**May 16, 2019: Program by Shane Tucker,
UNL Highway Paleontology Department**

Board Meetings:

Most Board Meetings are on the first Wednesday of the month at the home of Vera Lyman, beginning at 6:30 p.m.

Exceptions: If the first day of a month falls on Thursday, the meetings will be changed to the **last Wednesday** of the **previous** month. This allows a minimum of 10-days public notice of the meetings, per Corporation rules.

Next Board Meeting: September 4, 2019

**HAPPY
BIRTHDAY**

Noah Van Butsel

Rock Party



**Sunday, May 19, 2019
5:00 p.m.**

Wooldridge Residence

(see your Who's Who for address, or
contact a Board member for information)

**Wooly to provide hotdogs and brats
Bring your potluck items. Lapidary equipment
is available; bring your projects!**

PRESIDENT'S MESSAGE

by Charles "Wooly" Wooldridge

May is here and it looks like Spring is going to stick around for a while. The flowering plants and trees are spectacular! The sap is flowing through our rock hound veins and it is finally time to get out there and see what treasures winter has left behind. I am planning a trip to a Nebraska river as I write this. Hopefully my excitement will come through without being too disjointed.



Jackie and I recently returned from a trip to Oaxaca in southern Mexico. We had a wonderful time exploring the mountains, ruins, and especially the culture. I won't spend time on our trip here, but ask me about our many adventures, especially my 56 hour ordeal getting myself back without a valid passport.

I would like to thank Robert Diffendal for the April program. I hear it was an especially good one. Thanks to Jim Marburger for leading the meeting in my absence. Shane Tucker from the UNL Highway Paleontology Department will provide the May program. Be sure to bring bones and fossils for him to identify. This will be the last meeting before we take our summer break. We don't have general meetings during June, July or August.

We do have activities during the summer including rock parties and field trips. Jackie and I will be hosting a rock party at our home on Sunday, May 19th. It will begin at 5 p.m. We will provide a fire (weather permitting), hotdogs, brats, buns, condiments and coffee from Oaxaca.

Thank you, Sharon, for your research and article pertaining to our June field trip to southwestern Wyoming. The May meeting and the Rock Party will be the time to firm up details. If you are planning on going, be sure to read Sharon's article and attend the two meetings. See you soon.

President's Field Trip to Wyoming

**June 15, 2019
See article on page 4.**

BOARD OF DIRECTORS

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Board Member

Ed Dvorak, 402.946.3041
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Board Member

Brett Jurgens, 402.850.3256
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Board Member

Ed Ridge, 402.805.8248

MEMBERSHIP INFORMATION

Membership dues for the Lincoln Gem & Mineral Club are as follows:

- Adults (age 16 and over) - \$20 per year or \$30 per couple (within the same household)
- Juniors - \$3 per year (with a responsible adult)

All new memberships must be accompanied by a written application. Prospective members must gain Board approval and attend one regular meeting before paying dues. Applications are available on the website: <https://www.lincolngemmineralclub.org/about/> membership, or you may contact Treasurer Vera Lyman for a printed copy.

ADVERTISING INFORMATION

Advertising by rock / hobby business or interest is permitted with the approval of the Board of Directors. Contact the Editor with your proposed ad. The rate is set at \$20.00 per full page; \$10.00 per 1/2 page; \$5.00 per 1/4 page (minimum) per issue, paid in advance to the Club treasurer. Ads will be placed throughout the newsletter as space permits.

2019 SHOW COMMITTEE

Chairman:.....Jayne Beer
 Dealers: Vera Lyman
 Demonstrators: Vera Lyman
 Displays:Jayne Beer
 Ed Ridge
 Event Center Liaison..... Vera Lyman
 Finance & Ticket Sales:Jim Atkins
 Vera Lyman
 Floor Chairman:Ed Dvorak
Jayne Beer
 Fluorescent Booth: Ed Dvorak
 Forms Sharon Marburger
 LGMC Club Booth: Charles Wooldridge
 Nebraska Gem Dig:..... Charles Wooldridge
 Plants:..... Ed Ridge
 Printed Program:Sharon Marburger
 Publicity & Promotion: Jim Marburger
 Ribbons & Recognitions: .Sharon Marburger
 Security: Vera Lyman
 Show FlyerJayne Beer,
 Sharon Marburger
 Silent Auction: Sharon Marburger
 Special Features:
 Web Master:..... Jim Marburger
 Sharon Marburger
 Youth Activities:Carolyn Ashmore,
 Cindy Ramey

STANDING COMMITTEES

Audio/Visual:

Jayne Beer

Audit:

Ed Dvorak, Jayne Beer
James Marburger

Christmas Party:

Edward Ridge

Door Prizes:

Corey Beer, Brett Jurgens, Charles Wooldridge

Facebook:

Andrew Tiedje, James Marburger,
Brett Jurgens

Field Trips:

James Marburger

Historian:

Sharon Marburger

Legislative Liaison:

Susy McMahan

Membership Record:

Edward Ridge

MWF Liaison:

Vera Lyman

Programs:

Charles Wooldridge, Brett Jurgens

Property:

James Marburger

Recognition/Awards:

James Marburger, Ed Dvorak,
Jayne Beer

Refreshments:

Vera Lyman

Scholarship:

Vera Lyman

Show—2019:

Jayne Beer

Swap—2019:

Sharon Marburger

Website:

Jim & Sharon Marburger

Youth Activities:

Carolyn Ashmore, Cindy Ramey

LONG RANGE PLANNING & BY-LAWS COMMITTEE

Jayne Beer, Chairman

1 year: Vera Lyman
Jim Marburger

2 years: Pat Dvorak
Robert Gruit

3 years: Charles Wooldridge
Sharon Marburger

NOMINATING COMMITTEE

Jayne Beer, Chairman

1 year: Jim Atkins
Andrew Tiedje

2 years: Linda Guenter
Vera Lyman

3 years: Brett Jurgens
Sharon Marburger

PICK & SHOVEL STAFF

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REPORTERS:

All members are encouraged to submit features, articles, poetry, or drawings.

APRIL BOARD MEETING MINUTES

By James Marburger, Secretary

Lincoln Gem and Mineral Club, Inc. Board of Directors Meeting, April 3, 2019. Meeting held at the Lyman residence.

Meeting Called to order by President Charles Wooldridge at 6:34 p.m.

Charles Wooldridge	President	Present
Jayne Beer	1 VP	Present
Carolyn Ashmore	2 VP	Present
Vera Lyman	Treasurer	Present
James Marburger	Secretary	Present
Corey Beer	Board	Present
Ed Dvorak	Board	Present
Brett Jurgens	Board	Present
Ed Ridge	Board	Present

In attendance: Sharon Marburger, Pat Dvorak.

Minutes of last meeting were handed out. Motion to accept the minutes by Vera, second by Jayne. Passed 8 yes.

Treasurer report given out. Motion to accept by Ed D., second by Corey. Passed 8 yes.

Old Business:

New tires for the club trailer have been purchased and the rent on the storage has been paid.

Carolyn offered to contact the Center for People in Need to obtain information for Community Outreach.

Report from Wild Adventure Day at Pioneer Park; had great attendance and many show flyers were given out. Thanks for all that helped.

Programs set up for meetings as follows:

April will be Robert Diffendal – Geology of the High Plains. New Book.

May will be Shane Tucker State Highway Paleontologist – bring fossils for ID.

Report from the Omaha Swap was that it was a great venue and well attended.

New Business:

The President's Field trip has been scaled back to only western Wyoming. Starting June 15 for a week. More will be published in the May Pick and Shovel.

Plans for a Kentucky agate trip in September starting on the 20th is in the making with more information coming also in the Pick and Shovel when it is firmed up.

The fourth floor at Morrill Hall is now open and would be a good field trip for the club this summer.

Motion to adjourn at 8:00 p.m. by Vera, second by James. Passed 8 yes. Meeting adjourned.

APRIL GENERAL MEETING MINUTES

By James Marburger, Secretary

Lincoln Gem and Mineral Club, Inc. General Meeting, April 18, 2019. Meeting held at Bethany Park Shelter House.

Meeting called to order by Secretary James Marburger at 7:10 p.m.

Attendance: 20 members, 10 juniors, 4 visitors.

Minutes of last meeting were published in the Pick and Shovel. Motion to accept the minutes made by Ed Dvorak, second by Gene Mulinex. Passed.

Treasurer's Report was read by Vera Lyman. Motion to accept the report as read by Ed Dvorak, second by Paul Ashmore. Passed.

Old Business:

Show Report: Ed Dvorak thanked everyone for all the great help with the setup and tear down of the show. We had a good turn out and they all seemed to have a great time. Vera reported that all the dealers were happy and requested to return for our next show.

Please start making plans for next year's show. Jayne Beer is interested in any new ideas that will help with the show. A complete report will be coming after all the bills are in.

Carolyn Ashmore has information on the volunteering for the Peoples in Need. The Board will go over the requirements and will present the finding and dates that will work for our club.

Announcements:

President is out of the country, 1st Vice is attending a funeral out of state, 2nd Vice is nursing a broken bone in her foot, so the Secretary will run the meeting.

Gem and Mineral Show at Wichita, Kansas April 26 to 28. Nice show to visit.

May Pick & Shovel will have information on the President's Field trip with a June 15th start date.

May 19th Rock Party at the Wooldridge residence; more information coming in the Pick & Shovel.

New Business:

None.

Motion to adjourn to refreshments and program by Ed Dvorak, second by Vera Lyman. Program by Dr. Robert Diffendal on The GEOLOGY OF THE GREAT PLAINS. Passed. Meeting adjourned.

PRESIDENT'S FIELD TRIP

By Sharon Marburger

If you have been paying attention, you have heard about the 2019 President's Field Trip. The original plan was to go to western Wyoming and dig fossil fish and visit the Blue Forest, then go on to Delta, Utah to hunt for trilobites and red beryl, and finally head for Plush, Oregon to find a variety of materials. Unfortunately, those plans have now changed. The directed field trip will now be only to western Wyoming. However, if you wish to continue on to the other sites, feel free to do so, but you will have to conduct your own research to plan your trip.

It is approximately 700 miles from Lincoln to Rock Springs; 715 miles from Lincoln to Green River; 740 miles from Lincoln to Farson; 760 miles from Lincoln to Fontenelle; and 785 miles from Lincoln to Kemmerer. Depending on your destination, travel time ranges from 9 hours to 13 hours, plus stops along the way.

Wooly would like to meet around the Farson area for the evening meal on June 15. There will be more information available at the May General Meeting and in the June Pick & Shovel.

At this time, thirteen people have expressed interest in going. You have a choice as to where you would like to stay. Wooly and Jackie plan to camp below the Fontenelle Dam. The Ashmores and the Marburgers plan to stay at Sitzman's Motel in Farson. There are several hotels in Rock Springs, Green River, and Kemmerer, should you choose to stay at one of those locations.

For those staying at Farson, there are two restaurants: Mitch's Cafe and Country Burgers. Being larger towns, Green River, Rock Springs, and Kemmerer have many restaurants.

Below is an article written for the *Jade State News*, Volume 2018, Issue 1; published by the Wyoming State Mineral & Gem Society, Inc.; which contains great information for our field trip. Many thanks to that club for providing this useful information.

WYOMINGS'S BLUE FOREST PETRIFIED WOOD

THE FORMATION OF EDEN VALLEY PETRIFIED WOOD

Wyoming is a state rich in fossil wood and has several petrified forests. The petrified wood that marks the existence of one of these ancient prehistoric forests is known to collectors as the Eden Valley Wood Collecting Area which is named after the town of Eden, Wyoming. Eden is located in the southwest part of Wyoming and is in an 80 mile long area where petrified wood can be found.

A. TYPES OF EDEN VALLEY WOOD

In the Eden Valley in southwestern Wyoming, petrified wood is found over a wide area around Farson. Most of the petrified wood resembles ordinary weathered wood and has an opaque cream colored coating of silica covering a silicified black to brown central core. On the Figure #1

map, three (3) common collecting areas are located: Oregon Buttes, Big Sandy Reservoir, and the Blue Forest:



1-Eden Valley Wood Collecting Areas

(1) The Big Sandy Reservoir collecting area is located 10 miles north of Farson in the Big Sandy State Park Recreation Area which includes Big Sandy Reservoir. The area one or more miles east of the recreation area is known for petrified cluster palm wood, cluster palm (formerly known as cane), and surface wood collecting areas. (T27N, R105-106W). Recommended map - U.S. Geological Survey, Farson 1:100,000 topographic quadrangle).

(2) On the eastern end of the deposit, fossil wood is found around Oregon Buttes just east of South Pass, Wyoming. Oregon Buttes was a major landmark on the Oregon Trail. Near Oregon Buttes, the Bridger Formation contains petrified wood. This wood, known as the Bridger-type, consists of partially silicified black wood. Where the wood is completely replaced by silica, it ranges in color from brown, tan to green. In addition to the wood, some clear chalcedony and vein moss agates are found in this region. ((T26-27N, R100-101W).

(3) The Blue Forest collecting areas are located near the west end of Eden Valley and about 30 miles west of Farson. The fossil wood found in this area is well known for the light blue chalcedony encased by fossilized algae that can be associated with many of the specimens. (sections 28, 29, 30, 31, 32 and 33, T24N, R110W).

Blue beds petrified wood (T23N, R109W). The Cheyenne Mineral and Gem Society (1965) described the south half of this township as a source of several types of petrified wood, which are found in the "blue beds" that cover much of the area. These "blue beds" appear to be within the Bridger Formation (Sutherland, 1990), and are located a short distance to the southeast of the Blue Forest agate area (recommended map - U.S. Geological Survey, Rock Springs 1:100,000 topographic quadrangle).

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PRESIDENT'S FIELD TRIP - continued

(Continued from page 4)

B. LAKE GOSIUTE AS THE SOURCE OF EDEN VALLEY PETRIFIED WOOD

Modern-day travelers on Interstate 80, traveling west of Rawlins, cross the Continental Divide twice. Southwest of Rawlins, the divide splits to encircle a low lying basin called the Great Divide Basin. This area is also called the Red Desert Basin for the red soil derived from Eocene formations that cover the surface of the Great Divide Basin today. The Great Divide Basin, along with the neighboring Green River Basin to the west, were covered by Lake Gosiute during the Eocene Epoch.

Over 50 million years ago, during the Eocene Epoch, volcanoes in what would one day be the western United States were erupting and depositing ash in western Wyoming. At this same time, the Rocky Mountains began to form as the earth buckled and uplifted. Heavy rains which drained off of this new mountain range created Lake Gosiute.

Over a four million year period, Lake Gosiute expanded and contracted in response to changes in the region's climate. When Lake Gosiute reached its maximum surface area of 15,500 square miles (39,000 km²), it would have been slightly larger than the state of Connecticut today. At its smallest, the lake is estimated to have encompassed 4,000 square miles and could be compared as slightly smaller than the Island of Hawaii. Lake Gosiute was estimated at its maximum to be 60 feet deep.

Lake Gosiute began to form in the Great Divide/Green River Basins for the first time in the early Eocene Epoch. During this time, the climate was warm and moist. Under these conditions, hardwood trees, pine, fir, magnolia and other types of trees flourished in widespread heavily forested swampland cut by numerous braided streams. These streams fed into the Great Divide/Red Desert Basin, which filled to form ancient Lake Gosiute. Subsequent climate and tectonic activities during the lake's life span of

4 million years, saw repeated patterns of rising and falling water levels.

Lake Gosiute expanded and contracted in response to periods of increased precipitation followed by dry periods. The fluctuation in the lake level alternately allowed expansion of the forests around the lake, or drowned the timber as the lake rose. Lake Gosiute's ancient shoreline would also have been littered with driftwood, which became the source for Eden Valley Wood.

During the Eocene, sediment from the surrounding high areas was eroded by streams into Lake Gosiute.

These sediments were then covered over by ash deposits from volcanic eruptions. As Lake Gosiute became full of eroded sediment and volcanic ash, the driftwood and the drowned timber along its shoreline was also covered up. As the level of water in Lake Gosiute decreased, the original area to the west—the Green River Basin—remained as a fresh water lake as it became separated by a ridge from the original Lake Gosiute.

As the climate changed with the periods of drought and reduced precipitation, Lake Gosiute continued to shrink in size and migrated to the southeast into a deeper basin—the Washakie Basin—where it became a dying lake with a high mineral salt content. These original deposits of saline materials and deep primal ooze of organic matter, over millions of years, produced today's highly valued mineral trona, while the latter created coal-bed methane gas, coal, and the world's largest known oil-shale deposit. Energy demands have also made the original Gosiute Lake area the epicenter of today's natural gas boom in Wyoming.

With geological time, the original Lake Gosiute sediments and ash deposits subsided and compacted to form layers of rock. The types of rocks formed in Lake Gosiute were sandstones, mudstones, siltstones, oil shales, coal beds, saline evaporite beds (trona), limestones, dolostones, and tuff (volcanic ash). Incorporated within these rock layers were the original driftwood and trees that formed along Lake Gosiute's shorelines.

Eden Valley Petrified Wood formed when the original trees and branches were rapidly buried under sediment and were initially preserved due to a lack of oxygen. Petrification occurs when water that contains inorganic minerals, such as calcium carbonate or silica, passes slowly through the organic wood. As the original wood's lignin and cellulose decay away, its original cellular structure is duplicated and replaced by these inorganic minerals. Elements such as manganese, iron and copper in the water and sediment during the petrification process give petrified wood a variety of color ranges. Pure quartz crystals are colorless, but when contaminants are added to the process the crystals take on a yellow, red or other tint.

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Lake Gosiute During Early Eocene

PRESIDENT'S FIELD TRIP - continued

(Continued from page 5)

BLUE FOREST PETRIFIED WOOD

A. THE UNIQUE FORMATION OF BLUE FOREST PETRIFIED WOOD

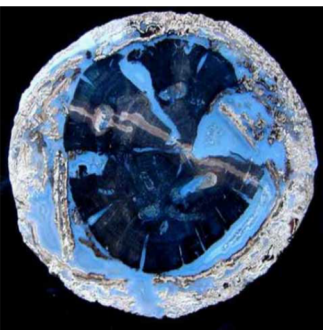
Of the three Eden Valley petrified wood types, the Blue Forest petrified wood is the most unique because of its color and its algae coating. Some parts of Lake Gosiute were shallow and supported thick layers of algae. It was this algae that helped to create the Blue Forest Petrified Wood. The driftwood and trees in these shallow water areas of Lake Gosuite became coated with this algae. As this algae and water (which had a high concentration of calcium) began to evaporate and dry, the calcium mixed with the algae to form a hard but porous coating on the wood. As the algae dried it shrank away from the wood, leaving a space that was later filled with minerals. It is thought that the element Tin, if present in the groundwater, caused specimens of Blue Forest petrified wood to exhibit blue crystalline quartz or microcrystalline chalcedony.

As mineral laden water moved downward through the layers above, the water also seeped through the algae coated wood which had been buried by sediments and volcanic ash. As the wood decayed, the wood was replaced, cell by cell by silica and calcite leaving petrified replicas of the original piece of wood. As the minerals coated the inside surface of the algae cast, perfect impressions of the outer surface of the wood were duplicated and preserved features not found in fossil wood anywhere else in the world. Some specimens of Blue Forest petrified wood have been found that preserve worm holes, insect borings, woodpecker holes, rare lichen fossils and small clam shells.

B. THE LOCATION OF BLUE FOREST PETRIFIED WOOD

Historically there is some confusion about the location of the Blue Forest Petrified Forest collecting site.

From the previous information presented, the wood along the shoreline was covered with algae and mixed with the sediments that filled Lake Gosiute. Over geologic time, this wood became petrified within layers of sedimentary rock. As this entire region of approximately 100 miles by 100 miles was subject to erosion, only a few locations become known to rockhounds where the Blue Forest Petrified Wood could be collected within reach of the surface.



3-BLUE FOREST –EDEN VALLEY PETRIFIED WOOD (NOTE WORM BURROWS)

The following 4 travel descriptions allow rockhounds to start at a location and arrive at a single historical collecting site that is on public land and easily accessible by car. Please note the Computer Rockhounding Video that follows that offers visual clues to keep you from getting lost! If all else fails, consult the GPS readings that also follow! Certainly there are other locations where the petrified wood can be collected but are guarded secrets shared by only a few rockhounds.

#1 Farson Route: Drive State Highway 28 southwest for about 22.5 miles; turn right onto County Road 8 traveling northwest for about 11.25 miles to the ridge east of the Green River; then turn right/north from County Road 8 onto gravel road; then traveling on the gravel road for one mile north, one mile east, and one mile north will put you into the Blue Forest Petrified Wood digging area.

#2 Rock Springs Route: Drive U.S. Highway 191 north 40 miles to Farson; turn left onto Highway 28 traveling southwest for about 22.5 miles; turn right onto County Road 8 traveling northwest for about 11.25 miles to the ridge east of the Green River; then turn right/north from County Road 8 onto a gravel road; then traveling on the gravel road one mile north, one mile east, and one mile north will put you into the Blue Forest Petrified digging area.

#3 Green River Route: Drive west 2.25 miles; turn right onto WY State Highway 372 traveling northwest for about 43.4 miles; turn right from Highway 372 at Fontenelle (only a gas station & few buildings) and travel north 1 mile; then turn right/east to cross the Green River bridge (passing by the Dripping Springs Campground); travel County Road 8 for 4.5 miles then turn north toward the Blue Forest collecting area.

#4 LaBarge Route: Drive south on State Highway 189 about 24 miles to junction with Wyoming Highway 372; turn left onto 372 and travel east for about 5.6 miles to Fontenelle (just a gas station and a few outbuildings); turn left at Fontenelle and travel north 1 mile; then turn right/east to cross the Green River bridge (passing by the Dripping Springs Campground); travel County Road 8 east for 5 miles then turn left/north on a gravel road for about 5 miles toward the Blue Forest Petrified Wood collecting area.

Start looking for all the holes and dirt mounds. Many times there will be campers parked there.

For the petrified wood collector, get the Farson map if you intend on visiting. Maps at local BLM offices: Rock Springs, Pinedale, Kemmerer, Rawlins are closest offices but most all Wyoming BLM offices will stock this map) All areas have some petrified wood. Note the BLM map symbols: private (white), Bureau of Reclamation lands (orange), and yellow being public BLM lands. Blue sections are public State Lands. Please stay off private property without permission. Ranchers with public grazing permits expect you to respect their livestock and certainly look out for Energy Company vehicles traveling these backroads!

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PRESIDENT'S FIELD TRIP - continued

(Continued from page 6)

Blue Forest GPS Coordinates:

(42°1' 9.46"N, 109°53'34.10"W) 42°1'13"N, 109°54'40"W
or [Elevation 7,200 feet+] (42.019294N, -109.892805W)
42.02028 North, 109.91111 West

- Computer Rockhounding: Video Directions to Locate Blue Forest Collecting Area
<https://www.youtube.com/watch?v=jwE5AINP5CkBlueForestPhotos:petrifiedpalace.com>

C. COLLECTING BLUE FOREST PETRIFIED WOOD

1. Required Tools & Preparation: shovel, tiny camp shovel-trenching tool, whisk broom, wire brush, canvas to sit on, small pry bar, larger pry bar, trowel, specimen collecting box (a 10 quart pail is about 25 pounds of wood when filled, that's the daily limit as to Federal Law), newspaper to wrap specimens in, lunch and water, there is no store except the Fontenelle or Farson store, gas up in Rock Springs, Green River, Farson, or Big Piney. Camping is at the Dripping Springs Campground on the Green River, or dry camp at the forest. Realize the area is in a large natural gas development boom and it will provide sounds and some traffic 24/7.
2. Where is the Petrified Wood?: When you are in the right place you will see hundreds of holes and dirt mounds. Not much wood is found on top any longer, you need to dig to find it!! You can walk around looking on top and you can find chips of wood and agate but that's about it. To find the good stuff you have to dig and it's pretty hard work because most Blue Forest Petrified Wood lies about 2 to 6 feet down. And it's not just dirt but a thick layer of shale and you need a pick to get through it. Then when finally you get to it, it's encased in a hard white algae. Plan on 4-6 hours on site! [The source of this material appears to be the Laney Shale Member in the upper part of the Green River Formation, and the overlying Bridger Formation both of Eocene age. Laney Shale sediments consist of tuff (fused volcanic ash), marlstone (mixture of clay with calcium carbonate) and brown to grey shale.]
3. Where And How To Dig? That's the million dollar question! Some times you pick a spot and get lucky but the law of averages is against you. Several methods are used by rockhounds to find the Blue Forest:

Method A: Some rockhounds use long metal probes with handles to push the probe into the ground until they hit something hard and then dig down to it.

Method B: Some rockhounds use witching rods which are 2 brass wire pieces –each 1/8 inch thick and 2 feet long and then bent about 3 inches from one end for a handle. Just like you have heard about the water witching rods, these rods are used to find the petrified wood under many feet of dirt. Some persons say it works 4 out of 5 times?!

Method C: About anywhere you dig that hasn't been dug

yet is likely to be a good place to dig.

On average, about every third hole will produce very well and take the rest of the day to complete the whole specimen, or the pieces of the specimen as it commonly occurs.

Strange thing about the blue forest wood is that there aren't many small branches or twigs, most are larger branches or logs. The original lighter weight wood limbs may have just floated away while the heavier logs sank and stayed put near the original Lake Gosiute shoreline.

The Blue Forest digs have been producing fossil wood for many generations and the locality still continues to give up its treasures. Many rockhounds believe there is still tremendous collecting potential in the Eden Valley of Wyoming and the Blue Forest digs -- and if a collector spends enough time and energy exploring these deposits his efforts will surely pay off with great finds!!

4. IT IS THE LAW: I would like to remind visitors to the Blue Forest that the BLM did not had a reciprocal policing agreement with the Bureau of Reclamation (whose land it is located on), until a few years ago and thus the BLM Ranger didn't show up much...if at all. Now, expect to see a BLM Field Official enforcing the 25 pounds plus 1 piece per day collecting rule and enforcing filling in your holes. You can also expect a large fine for commercial digging if caught selling commercially.

Please read the Code of Federal Regulations Part 43, Sub part 3622. You are allowed to dig 25 pounds plus one piece per day. Not to exceed 250 pounds per year. Hand digging only. Not for commercial use. The largest risk to losing digging ability at the Blue Forest is from the BLM's monitoring the poor practices of not filling in the holes, and public littering.

- Computer Rockhounding: Collecting Blue Forest Petrified Wood <https://www.youtube.com/watch?v=08aChIwiHVM> + Google: "Blue Forest Petrified Wood Videos"

D. LAPIDARY PREPARATION OF BLUE FOREST AGATE

Most Blue forest Petrified Wood that is found by digging has an algae coating on them. This should be expected since it was the original algae coating that allowed the formation of the Blue Forest Petrified Wood. The algae surface can be polished but the prettiest pieces of Blue Forest Petrified wood pieces are algae free or require lapidary work to remove the algae coating.

1. Some rockhounds try to gently knock the outside algae layer off with a hammer and chisel, trying hard not to break the wood.
2. Other rockhounds try to grind the outside layer of algae off to show the Blue Agate.

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PRESIDENT'S FIELD TRIP - continued

3. Muratic acid is used to chemically remove the algae matrix which works really well on pieces that don't have too much algae on them. Another big tip: Do not leave your wood in the acid too long or it turns the blue agate a light gray color. It's still nice looking, just not blue any more.

I would recommend viewing the following computer video presentations for more complete and additional Lapidary Hints to make your Blue Forest Petrified Wood into beautiful specimens.

- COMPUTER VIDEO LAPIDARY HINTS for Cleaning Blue Forest Petrified Wood

- http://www.earthquestminerals.com/Blue%20Forest%20Prep/blue_forest_prep.html
- https://www.youtube.com/watch?v=TKH6S_OBqsM+ Goggle: "Cleaning Blue Forest Petrified Wood"

- ADAPTED REFERENCES UTILIZED:

- Blue Forest Wood Photo: http://rayerminerals.homestead.com/files/hout-blue_forest.jpg
- <https://thegemshop.com/pages/eden-valley-petrified-wood-location>
- Figure 2-Lake Gosiute During Early Eocene : <https://geology.utah.gov/map-pub/survey-notes/exploring-utahs-other-great-lake/>
- Eden Valley Petrified Wood Location Map: http://cdn.shopify.com/s/files/1/0159/6368/files/map_ev_large.jpg?527
- WSMGS Jade State News-May 2015.
- Figure 3- Blue Forest-Eden Valley Petrified Wood http://rayerminerals.homestead.com/files/hout-blue_forest.jpg
- Figure #4: Blue Forest Travel Map from Wyoming Department of Transportation Roadmap
- <https://pubs.usgs.gov/bul/1372e/report.pdf>
- <https://www.hmdb.org/marker.asp?marker=90093>
- https://en.wikipedia.org/wiki/Green_River_Formation
- <http://www.ebay.com/gds/Blue-Forest-Petrified-Wood-How-and-Where-to-Find-it-/1000000000756733/g.html>
- Figure 5- Blue Forest Petrified Limb Cast <http://www.mineraltown.com/Reports/28/holz5-gross.jpg>
- <http://www.ebay.com/gds/WHERE-IS-THEBLUE-FOREST-WOOD-AREA-LOCATED-/1000000003019228/g.html>

- http://www.earthquestminerals.com/Blue%20Forest%20Prep/blue_forest_prep.html
- <http://www.ebay.com/gds/BLUE-FOREST-WYOMING-in-modern-times-/10000000001900601/g.html>
- https://www.geocaching.com/geocache/GC17XNK_lake-gosiute
- [https://en.wikipedia.org/wiki/Red_Desert_\(Wyoming\)](https://en.wikipedia.org/wiki/Red_Desert_(Wyoming))

More information may be found in the following back issues of Lapidary Journal:

1950 April Page 16

1953 August Page 246

1968 May Page 330

1972 October Page 1078

1974 May Page 336

This is the end of the *Jade State News* article. Thanks again for that club sharing the foregoing information.

On the Way Home

Some of us will spend three nights in the Eden Valley area, then head for home. On the way home, we plan to make several stops at other collecting areas. Planned are an exploratory stop near Bitter Creek, Wyoming to see a new location for petrified wood; stops near Wamsutter, Wyoming for turrutella agate and stromatolites (petrified algae); Saratoga, Wyoming for agate and petrified wood; and possibly a stop in Sybille Canyon along Highway 34 for labradorite/spectrolite.

Other members will be adding other stops on their journey. Attend the May General Meeting and the May Rock Party at Wooly's house to find out all the plans.



5-BLUE FOREST PETRIFIED LIMB CAST

MINERAL MONKEYS

By Carolyn Ashmore

This is our last meeting before summer field trip season. I want to remind everyone of our field trip etiquette and the AFMS Code of Ethics, our rules of behavior when collecting in the field. Our trip to Wyoming on June 15th is coming up fast and I want all juniors to be familiar with what you can and can't do in the field when collecting. We also will be talking about Field Trip Safety and Supplies. A lot of you know already know this information, but it never hurts to review it. Safety in the field is always a #1 priority. Looking forward to seeing you all soon.

Rock on!



FAVORITE DINOSAUR ASSIGNMENT

EDITOR'S NOTE: My scanner is not working, so I have typed exactly what the Juniors have written, and have not included the pictures.

Stegosaurus

by Landon

Where it was found: North America

Where it lived: Forests

It ate: Plants

It lived 150 million years ago

T-Rex

By Aidan

My favorite dinosaur is a t rex. They have sharp teeth. They are big. They also are a carnivore, meaning they ate meat.

Ichthyosaurus

By Luke

- Name means: fish lizard
- Diet: fish and squid (found fossilized squid in stomach)
- Size: about size of dolphin, but also some types smaller and larger.
- Fossils found: North America, England, Germany
- Lived: Jurassic and Cretaceous
- Mary Anning found the first fossil in 1810 at 11 years old.
- Kept eggs inside the body until the eggs hatched and gave birth to live young.
- Did not have gills like fish, breathed like dolphins for air.
- Vary large eyes. One fossil found 10 inches wide.
- Streamline body and a fast swimmer.

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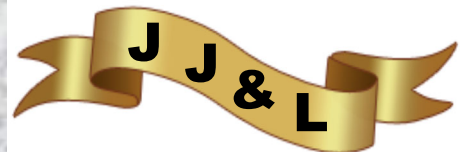
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MWF CONVENTION REPORT

By Jayne Beer

Corey, Ja-zeil, and I headed to Cedar Rapids, Iowa on March 22, then slept in our new van and got up and went to Ronneburgs Restaurant in the Amana Colonies for breakfast. Once we finished, we drove the short drive from there to show, showing up just as they opened the doors. They put on a very nice show. There was plenty of free parking, and the show had very good vendors and a great kids area. Also enjoyable is the sluice trailer where you buy a bucket of seeded gravel and you get to go through it like an old-time miner. The club members who ran the kids area did a very good job, and were a joy to talk with while Ja-zeil picked rocks out of the wooden boxes on the floor, for kids (young and old) to dig through.

After spending time at the show, it was time to go to the MWF meeting. I'll admit that it was warm in that room and I was tired from driving and sleeping in the van, so my attention was a little hard to hold. I find the way that they use Robert's Rules interesting and mostly a way to keep the meeting moving. However, I find them to be monotonous and somewhat annoying and too formal. So, it is good for me to see a meeting run with these rules. I do see how they give everyone a voice and keep discussion fair and civil. I will continue to get better at this.

Points from the meeting are as follows:

- There is a program competition. If you present a program, record it and send it to Daryl Watkins. You could win a prize. If you have Power Point programs, please send them to the library of the AFMS so that other clubs can check them out and use them for their own meetings. One of the programs in their library that they brought up was about collecting Kentucky agates, which might be of interest to our club.
- They mentioned members from the different clubs that had passed away since the last meeting. From our club, there were three; Aulden Stewart, Glenn Lyman, and Fred Holbert.
- Future MWF shows are as follows: September 19 and 20, 2020, Howell, Michigan. September 10, 11, and 12, 2021, Toledo, Ohio (their 50th anniversary).
- Then there was a vote and discussion to change a by-law, Article 5, section 4. It was decided that the Publications Committee would be replaced by the Technology Resources Committee.
- There was a presentation and discussion about American Lands Access Association (ALAA). You may visit their website at www.amlands.org for more information.
- At the end of the meeting, they auctioned off the traveling Endowment Fund bear named E-Bear.

We went back to the show and stayed until closing time, then went rock hunting around town, looking in landscaping beds. Corey and Ja-zeil found a couple lakers. As it was getting dark, we got dinner at a Mexican restaurant, then started the long drive home. This is a good show, if you haven't attended before, you should consider making the trip.



Silversmithing classes

Tuesday Evenings
7:00 p.m. - 10:00 p.m.

**The Jewelry Connection Ltd.
Indian Village Shopping Ctr.
13th & Arapahoe, Lincoln**

Tuition: \$150 plus \$30 supply deposit

Session 1: Jan 8 - Feb 26

Session 2: Mar 5 - Apr 23

Session 3: Apr 30 - Jun 18

Session 4: Aug 13 - Oct 1

Session 5: Oct 8 - Nov 26

**Contact: Jayne Beer 402-890-3307
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2019 ANNUAL SHOW

Photos by Jayne Beer



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P.O. Box 5342
Lincoln, NE 68505-0342



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PICK & SHOVEL

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