

Jade State News

Wyoming State Mineral & Gem Society, Inc.

Award-Winning WSMGS Website: wsmgs.org

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Wyoming Rocks

By Stan Strike

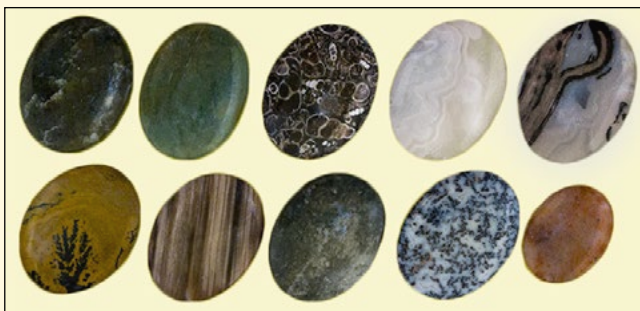
I grew up in Iowa, and as I was introduced to geology in college, I became aware that the rock types on the surface of that state were limited mostly to flat-lying layers of limestone, dolostone, and shale.

Iowa rocks are usually only visible in deep road cuts and rock quarries, because the bedrock was normally covered over by thick layers of soil and glacial deposits. Occasional isolated pieces of different kinds of rocks could be found. Those rocks were transported and deposited into the state by continental glaciers.

In 1972, I was introduced to the rocks of Wyoming as part of a six-week geology field class. I collected rocks every day, and my vehicle suffered several flat tires while returning to Iowa with them.

In 1977, the Iowa rocks and the Wyoming rocks that I had collected

came back to Wyoming via a moving van to Cody, where I accepted a job teaching earth science. Cody was a rock hound's dream location. Within a half day's drive, I could view and collect many



Many Wyoming rocks are suitable for lapidary work, as illustrated by these cabochons crafted by Gary Olson of Powell. See [Page 6](#) for a story about Gary.

JSN photo by Ilene Olson

(Continued on Page 2)

Table of Contents

Wyoming Rocks.....	Page 1
"A Smooth Touch".....	Page 6
Geology of Bear River State Park.....	Page 9
Forrest Fenn's Treasure has Come to an End?.....	Page 13
Explore Wyoming's Rocks on the Internet.....	Page 16
Lapidary Hint: Diamond Rock Saw Blades.....	Page 17
Club News.....	Page 18
WSMGS Electronic Meeting Minutes, September 2020.....	Page 21
WSMGS Rock Club List.....	Page 25

Wyoming Rocks

(Continued from Page 1)

different rock types that were exposed at the surface as a result of the interacting processes of weathering, erosion, deposition and the tectonic forces of folding and faulting.

As rock hounds, we are always searching for new and different kinds of rocks to add to our collections. We are indeed fortunate to live in Wyoming! Recently, the Wyoming State Geological Survey released a new postcard that illustrates the variety of rocks that can be found in our state.

“Wyoming has some of the most interesting and well-exposed geology of any state,” said Erin Campbell, WSGS Director and State Geologist. “We hope this simplified geologic map of the state will spark interest in our fascinating rocks.”

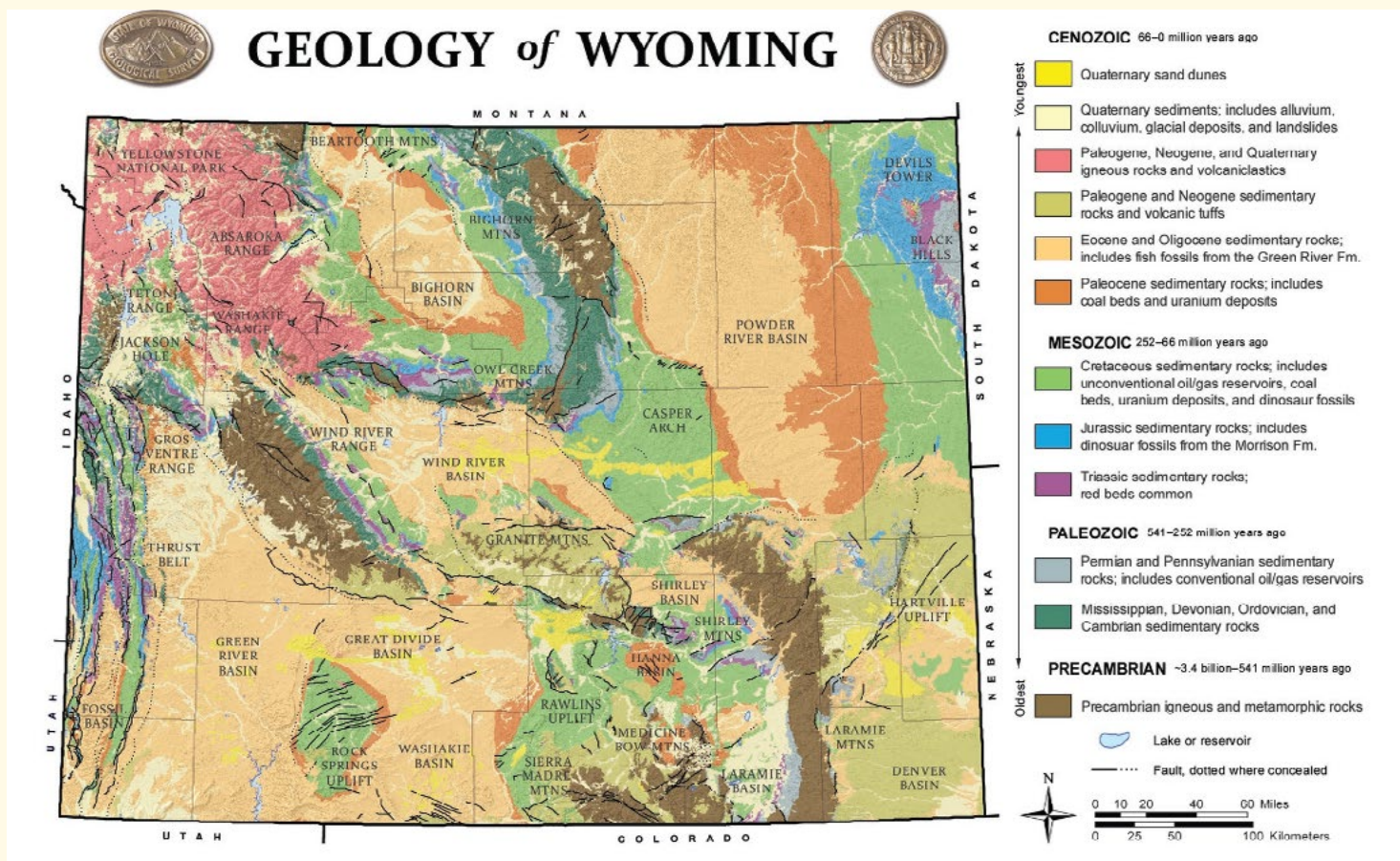
The map is modified from the Geologic Map of Wyoming, first published in 1985 by J.D. Love and A.C. Christiansen, and depicts map units from as young as active modern sand dunes to igneous and metamorphic rocks more than 3.4 billion years old. The map explanation

points out rock units that are important to Wyoming’s economic geology — coal, oil, and uranium — and also highlights certain units that contain fossils, such as fish and dinosaur fossils. Bodies of water, faults, and basins also are noted on the map, as are some mountain ranges, uplifts, and arches.

Most of us were exposed as students in elementary school to the three types of rocks: igneous, sedimentary, and metamorphic.

However, few secondary schools offer students an opportunity to learn more about the individual kinds of rocks that make up each of these three groups. Many individuals become rock hounds in Wyoming because rocks are everywhere, just waiting to be picked up! But then the questions become, “What kind of rock is this?” and “What is this rock’s name?”

The information that follows was prepared for the 2020 Wyoming State Mineral and Gem Show, held in June in Marbleton, to help the public learn about Wyoming rocks. A photo of the club’s showcase can be seen on [Page 20](#).



[Source: WSGS-Weekly Bulletin-November

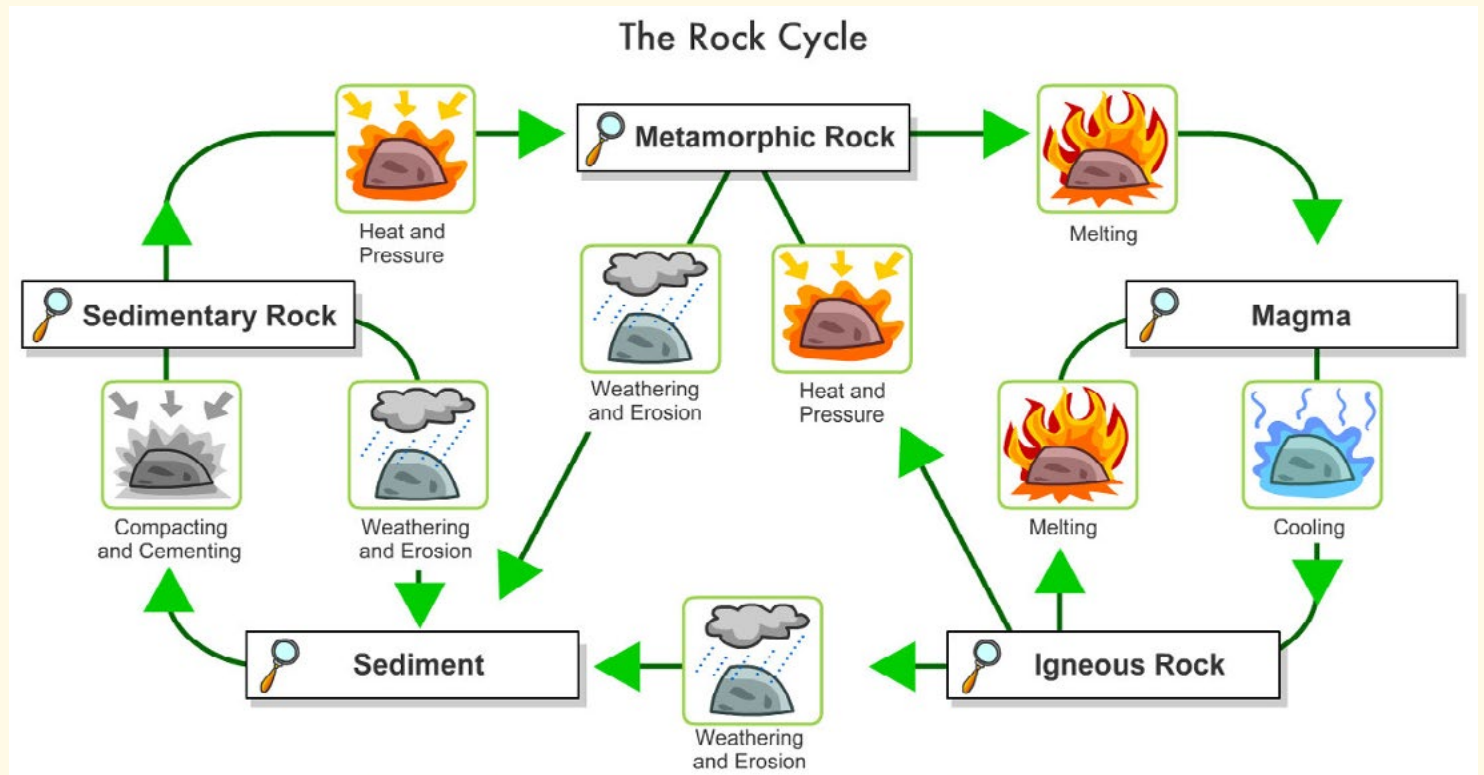
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Wyoming Rocks

(Continued from Page 2)

Rocks are mixtures of minerals. The same kind of rock may have different proportions of the same minerals because the environment in which it forms may be different. All rocks can be organized and classified as igneous, metamorphic or sedimentary, based on what geologic process formed them.

How these three rock types are formed by geologic processes can be illustrated by the Rock Cycle diagram.



Source: fitz6.wordpress.com, which credits the Geological Society of London

Igneous Rocks

Igneous Rocks are formed as liquid rock (magma) cools, interlocking solid mineral crystals form. Igneous rocks are classified according to the kind of minerals that make them up and their texture. Texture refers to the shape and size of the mineral crystals making up the rock and their relationship to each other.

If the magma cools deep in the Earth, it cools slowly and larger mineral crystals can form “intrusive” igneous rocks. If magma occurs closer to the Earth’s surface, it will cool more quickly and finer minerals crystals will form “extrusive” igneous rocks. Over geologic time, intrusive and extrusive igneous rocks can be exposed at the Earth’s surface by uplifting and erosional forces.

If magma reaches the Earth’s surface, it is called lava and cools so rapidly that very small mineral crystals form or a “glassy” igneous rock with no visible crystals forms. If lava contains gas bubbles and is cooled quickly a glassy “vesicular” igneous rock with the gas holes will be formed. “Pyroclastic” Igneous rocks are deposited by volcanoes.

If molten rock starts deep in the earth and cools slowly, some larger crystals will be formed. If it suddenly moves toward the surface, the remaining crystals that form are much smaller. This kind of rock with smaller and larger crystals is called an igneous “porphyry”.

(Continued on Page 4)

Wyoming Rocks

(Continued from Page 3)

Common igneous rocks in Wyoming:

Intrusive (large crystals)

- Granite
- Pegmatite
- Gabbro
- Iorite
- Syenite/Trachyte

Extrusive (small crystals)

- Andesite/Dacaite
- Basalt?Diabase
- Rhyolite
- Volcanic Tuff
- Volcanic Breccia

Extrusive (glassy)

- Obsidian

Extrusive (vessicular)

- Pumice
- Scoria

Igneous Rock Classification							
Texture	Composition				Interpretations		
	Felsic <small>> 5% quartz K-feldspar > Na-feldspar <15% dark minerals</small>	Intermediate <small>< 5% quartz Na-feldspar > K-feldspar 15-40% dark minerals</small>	Mafic <small>no quartz no K-feldspar >40% dark minerals</small>	Ultramafic <small>nearly 100% dark minerals</small>	cooling rate	depth of crystallization	other
coarse-grained	granite	diorite	gabbro	peridotite	slow	plutonic	-
porphyritic	porphyritic rhyolite	porphyritic andesite	porphyritic basalt	n/a	slow/fast	plutonic/volcanic	-
fine-grained	rhyolite	andesite	basalt	n/a	fast	volcanic	-
glassy	obsidian	obsidian	obsidian	n/a	very fast	volcanic	-
vesicular	pumice	pumice	scoria	n/a	fast	volcanic	gas-rich lava
pyroclastic	volcanic tuff & breccia	volcanic tuff & breccia	volcanic tuff & breccia	n/a	n/a	volcanic	explosive eruption

Source: Mesa Community College, via Pinterest

Sedimentary Rocks

Common sedimentary rocks in Wyoming:

Clastic









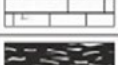

- Breccia
- Conglomerate
- Sandstone
- Siltstone
- Shale

Crystalline

- Rock Gypsum
- Bentonite
- Dolostone
- Tona
- Limestone
- Chert
- Travertine

Bioclastic

- Bituminous Coal
- Fossil Limestone

Scheme for Sedimentary Rock Identification					
INORGANIC LAND-DERIVED SEDIMENTARY ROCKS					
TEXTURE	GRAIN SIZE	COMPOSITION	COMMENTS	ROCK NAME	MIN P SYMBOL
Clastic (fragmental)	Pebbles, cobbles, and/or boulders embedded in sand, silt, and/or clay	Mostly quartz, feldspar, and clay minerals; may contain fragments of other rocks and minerals	Rounded fragments	Conglomerate	
			Angular fragments	Breccia	
	Sand (0.006 to 0.2 cm)		Fine to coarse	Sandstone	
	Silt (0.0004 to 0.006 cm)		Very fine grain	Siltstone	
	Clay (less than 0.0004 cm)		Compact; may split easily	Shale	
CHEMICALLY AND/OR ORGANICALLY FORMED SEDIMENTARY ROCKS					
TEXTURE	GRAIN SIZE	COMPOSITION	COMMENTS	ROCK NAME	MIN P SYMBOL
Crystalline	Fine to coarse crystals	Halite	Crystals from chemical precipitates and evaporites	Rock salt	
		Gypsum		Rock gypsum	
		Dolomite		Dolostone	
Crystalline or bioclastic	Microscopic to very coarse	Calcite	Precipitates of biologic origin or cemented shell fragments	Limestone	
Bioclastic		Carbon	Compacted plant remains	Bituminous coal	

Source: Hommocks Middle School Earth Science Department, via YouTube

(Continued on Page 5)

Wyoming Rocks

(Continued from Page 4)

Sedimentary rocks are formed at or near the earth's surface with the production of and compaction of sediment. They are classified according to their mineral content, grain size, and how they were formed.

Production of sediment can be the result of:

- Mechanical weathering breakdown, erosion and deposition

of previously existing rocks ("clastic" sedimentary rocks).

- OR the result of chemical reactions between elements, forming minerals that are deposited in water ("Crystalline" Sedimentary Rocks.)
- OR from the accumulation of organic (plant & animal) material ("Bioclastic" Sedimentary Rocks.)

Metamorphic Rocks

Metamorphic Rocks are formed as the result of previously existing rocks being partially melted and their minerals rearranged by environmental conditions that produce increased temperature and pressure. Metamorphic rocks can be the result of:

- The burial of pre-existing rocks that are affected by the resulting pressure and heat of overlying layers
- OR the movement and related changes in temperature/pressure caused by folding and/or faulting of previously existing rocks.
- OR as previously existing rocks are affected by hot igneous intrusions of magma or lava.

As metamorphic rocks are affected by heat and pressure, the previously existing minerals become rearranged. Metamorphic rocks are classified according to the degree in which the previously existing minerals are affected (flattened and separated into layers) and the parent material.

Foliated metamorphic rocks have minerals that have been flattened in one direction and if enough heat and pressure some minerals are separated into layers or bands. "Nonfoliated" metamorphic rocks have characteristics of their parent rock type but its minerals appear fused/melted together.

Common igneous rocks in Wyoming:

Foliated:

- Gneiss
- Schist
- Phyllite

Non-foliated:

- Quartzite
- Marble
- Amphibolite (variety — jade)

Scheme for Metamorphic Rock Identification

TEXTURE		GRAIN SIZE	COMPOSITION	TYPE OF METAMORPHISM	COMMENTS	ROCK NAME	MAP SYMBOL
FOLIATED	MINERAL ALIGNMENT	Fine	MICA QUARTZ FELDSPAR AMPHIBOLE GARNET PYROXENE	Regional (Heat and pressure increase with depth) ↓	Low-grade metamorphism of shale	Slate	
		Fine to medium			Foliation surfaces shiny from microscopic mica crystals	Phyllite	
		Platy mica crystals visible from metamorphism of clay or feldspars			Schist		
	BAND-ING	Medium to coarse			High-grade metamorphism; some mica changed to feldspar; segregated by mineral type into bands	Gneiss	
NONFOLIATED		Fine	Variable	Contact (Heat)	Various rocks changed by heat from nearby magma/lava	Hornfels	
		Fine to coarse	Quartz	Regional or Contact	Metamorphism of quartz sandstone	Quartzite	
			Calcite and/or dolomite		Metamorphism of limestone or dolostone	Marble	
		Coarse	Various minerals in particles and matrix		Pebbles may be distorted or stretched	Metaconglomerate	

Source: Lifesmith.com

[Back to Page 1](#)



A Smooth Touch

Wyoming Rock Hound is the Only Blind Lapidarist in the U.S.

Story and photos by Mark Davis
Powell Tribune, October 18, 2020

Reprinted with permission from the Powell Tribune

Gary Olson has rocks in his shop, rocks in the yard and an entire storage unit full of rocks across town. He swears he knows every single rock in his collection of tens of thousands.

"If I've seen it, I usually remember it," said the former two-term president of the Shoshone Rock Club.

Thing is, Olson has never seen a rock. He's been blind since shortly after birth and is one of the only lapidarists (artists who form stone, minerals and gemstones into decorative items) in the country. He trained the only other visually impaired lapidarists in the country; a former client of his. Olson spent

his career as a state outreach consultant for the visually impaired.

There's a blind lapidarist in England as well, he said. Otherwise, it's just him.

Olson wasn't born blind, but like many babies born prematurely in the 50s, he was placed in an incubator at birth and the level of oxygen killed his retinas. He suffers from retrolental fibroplasia, a condition discovered by Dr. Arnall Patz, a Johns Hopkins University physician, who died in 2010.

"It had become standard practice to put babies in incubators and crank up the oxygen," Patz said in a Baltimore Sun 2004 interview.

He could hardly blame the doctors

who used the treatment "because it turned struggling babies from blue to pink," he said. But, later Patz discovered too much oxygen caused blood vessels in the back of the eye to constrict. In a doomed attempt to compensate, the eye sprouted twisted vessels that would eventually bleed and destroy the retina, Patz discovered.

In 1956, Patz was awarded the Lasker Clinical Medical Research Award for his research, which was previously thought to be unscientific and possibly dangerous. He did the research on his own to prove his theory correct.

Helen Keller handed him his trophy for the award and he was later given the Presidential Medal of Freedom. Olson was born in 1953, just missing Patz's advancements.

Blindness has never bothered Olson. "It's frightening for a person to think about becoming blind because they don't know how they'd manage without their sight. But for me, since I've never seen, I don't miss what I never had," he said while inspecting a box of new finds.

He "sees" each rock by touch. He turns the rocks over and over in his calloused hands, running his fingers over each bump, ridge or fracture. He gets excited to check out each specimen, a broad smile accompanying his inspections for



Gary Olson gets a laugh while visiting with Dan Dalton in his Powell garage, which has been converted into a rock shop. Olson, who is blind, is one of the area's top lapidary experts.

(Continued on Page 7)

A Smooth Touch

(Continued from Page 6)



Above: Gary Olson grinds a cabochon fashioned from a small piece of jade from British Columbia. Right: Cabochons, produced from different types of rocks by Gary Olson, are the finished projects from the lapidarist's artwork. The cabochons are typically used in jewelry such as necklaces, earrings, brooches, bolo ties, belt buckles and even money clips.



weight, shape and characteristics. Then he hands the rock to his second set of eyes — those of the love of his life, his wife of 45 years, Ilene.

His constant companion inspects the rocks, reciting colors, cracks and inclusions. He demonstrated his craft for her on one of their first dates. She doesn't work rocks, but her decades of exposure to Gary's love of rocks has been a master's class in lapidary arts.

They met during a tour of the Wyoming State Capitol. Ilene was just 14, but while they were supposed to be exploring the dome, Ilene only had eyes for Gary. "He stood out head and shoulders above everybody else."

On her 16th birthday, Gary serenaded her with a song he wrote — inspired by their friendship over the previous two years. Outside of the rock hounding universe, Olson

is better known locally for his sweet songs and mastery of the guitar.

They were at a youth camp for the blind, Ilene reminisced. Her father, Kent Jensen, was an outreach consultant for Vision Outreach Services, the same state agency Gary would eventually lead, and she had tagged along. "He starts playing this song and the first words are "my song for angel" and all of a sudden everybody looked at me."

Yet, they didn't start dating until Gary's 21st birthday on July 5. Three months later he proposed.

Ilene has always known she was the second love of his life. Gary was introduced to rock hounding at an early age. When he was 8 a family friend let him pick some polished stones from samples he had tumbled and kept in cigar boxes. He loved the smooth feel of the rocks and soon had saved enough to buy his own tumbler.

His attention quickly turned to

obsidian, a naturally occurring volcanic glass formed as an extrusive igneous rock. Even before working the mostly black rocks, they were already somewhat smooth. Gary could feel the potential for the ultimate smoothness. After hours of cutting and grinding, the stones become perfectly smooth, without undercuts or fractures.

"It polishes just like glass," he said. "The rough rocks really aren't too appealing to me."

Recently he met another rock hound with a fondness for obsidian. Dan Dalton, of Powell, uses the slabs of translucent rock to make flint-knapped knives. He was looking for someone with a large rock saw to cut some slabs of obsidian from the Glass Buttes of Oregon, between Burns and Bend. While cutting the material Olson said he'd love to "see" the rivers of obsidian, so Dalton

(Continued on Page 8)

A Smooth Touch

(Continued from Page 7)



Dan Dalton of Powell and Gary Olson sort through some rock specimens in storage waiting to be cut. Olson, who is blind, says he knows every rock in his collection of by the way the feel.

arranged a trip.

The two became fast friends on the long drive and still travel together to local hounding haunts. “He’s always ready to go,” Dalton said.

They laugh like kids in a candy store while going through the tons of rock in Olson’s collection. Although of little actual value — obsidian is one of the most common rocks on earth — their collections are almost intoxicating to the lapidaryist. Dalton often brings the scraps from his knife making for Olson to tumble and the two devise plans on how best to cut new stones.

Olson makes cabochons, a gemstone or rock which has been shaped and polished as opposed to faceted, like a diamond. The finished products are used to make jewelry. Sunday he was shaping a small piece of jade from British Columbia. With

a money clip in one hand and the stone in the other, he sized the stone to fit exactly in the clip’s silver mount. It’s a messy process, but that may be the point.

From sitting in the dirt, preferring to dig for rocks rather than pick from what is available on the surface, to cutting on huge rotary saws with diamond-encrusted blades and polishing on whirling grinders — the process stimulates Olson’s senses. Interestingly, if done right, by the time he finishes a cabochon it’s hard for him to tell from what type of rock it has been made.

As a retirement gift, the couple’s five children (Carl, Mark, Julie, Alan and Dan) presented Olson with a new saw. None of the kids took up the craft. Nor has any of their 16 grandchildren. There is one nephew, Robert, who has been studying with Olson, but the family recently moved to Omaha for a

new job with Union Pacific.

The members of the Shoshone Rock Club, which has been meeting once a month for the past 70 years until the pandemic hit in March, is one of the few venues where Olson can finally talk rocks nonstop. He’s done many demonstrations for the club, the state rock show and is a favorite at both the Powell club and the Cody club, the Cody 59ers. “He is amazing. He doesn’t have to see to create beautiful cabochons,” said Dorine Strom, president of the Shoshone Rock Club.

“People need to know that no matter what’s going on with you, you can do what you set your mind to do.”

And there is no better time than now to get out and look for rocks, she said. “Talk about being obsessed; I’ve never rock-hounded so much in my life since [needing to practice social distancing],” the librarian said.

Until the club meeting schedule of the second Tuesday of the month can resume, Strom suggests checking out Wyoming Rockhouser on Facebook.

Gary Olson and his lapidary hobby were featured on an episode of Wyoming Chronicle, aired on Wyoming PBS on December 11. The show can be viewed on YouTube at

<https://m.youtube.com/watch?v=luATzmnLHNs>.

[Back to Page 1](#)



Geology of Bear River State Park

A publication of the Wyoming State Geological Survey

INTRODUCTION

Bear River State Park, in southwestern Wyoming, is part of a landscape shaped by ancient mountain-building processes and multiple episodes of faulting. More recently, erosion by the dynamic Bear River formed the topography you see today. Views from the park frame a portrait of the major events that formed the present-day Rocky Mountains.

GEOLOGIC HISTORY

Bear River State Park sits at the southern end of what geologists call the Wyoming Overthrust Belt, a 180-mile-long and 50-mile-wide corridor of mountains and narrow basins formed by tilted and faulted sedimentary rock. The Overthrust Belt is on the western edge of the Rocky Mountains, a chain of many different mountain ranges that form the backbone of the North American continent.

Two major mountain-building episodes, called orogenies, uplifted the Rocky Mountains through numerous large thrust faults (ruptures in the earth's crust caused by compression). The first of these orogenies, the Sevier orogeny, began about 120 million years ago with "thin-skinned" deformation that involved faulting and folding only in the relatively shallow sedimentary

rocks overlying crystalline basement rocks. The Overthrust Belt directly surrounding the park was part of the Sevier orogeny. "Thick-skinned" faulting, involving deeper basement rocks, is characteristic of the Laramide

orogeny, the second mountain-building episode that began about 70 million years ago. The Laramide orogeny uplifted the nearby Uinta and Wind River mountains.

During the Sevier orogeny, older



Wyoming's Bear River State Park is located in the southwestern area of the state.

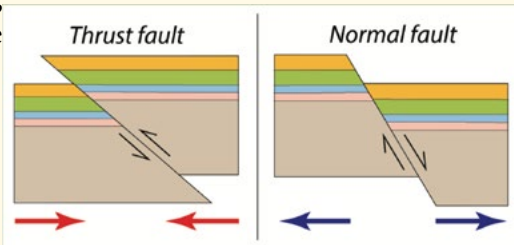
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Geology of Bear River State Park

(Continued from Page 9)

sedimentary rocks within the Overthrust Belt were thrust up and over younger rocks to the east. Faulting generally advanced eastward with time, beginning in eastern Idaho and northern Utah and extending about 20 miles east of Bear River State Park. The Medicine Butte thrust fault, which lies just outside the state park, is one such fault that displaced Jurassic and Cretaceous rocks above the younger Evanston Formation.

Faulting along the Medicine Butte thrust formed a mountain range to the west and a basin to the east. Sediment



Cross section comparison of two fault types. Thrust faults form due to compression (red arrows) while normal faults are the result of tension (blue arrows).

eroded from this mountain range was deposited in what geologists today call Fossil Basin.

Most of the mountain-derived sediment was carried by rivers into Fossil Basin and the surrounding region, leaving behind the Wasatch Formation, deposited between about 56 and 40 million years ago during the Eocene Epoch. The environment of southwest Wyoming during the Eocene was a semi-tropical savanna that supported an abundance of life. The Wasatch Formation in Fossil Basin consists primarily of red, yellow, brown, and gray mudstone and sandstone along with minor layers of conglomerate, marlstone

(a clay-rich freshwater limestone), and volcanic ash. The color variation in the Wasatch Formation is due to weathering of different minerals found in volcanic ash, as well as oxidation (rusting) of iron in sandstones and mudstones. Sandstone and conglomerate layers record deposition in river channels, whereas mudstone layers record flood-plain settings. The Wasatch Formation is exposed in the yellow-gray hillslopes on the east side of the Bear River in the park.

About 53 to 49 million years ago, an inland lake, known as Fossil Lake, occupied the center of Fossil Basin northeast of the state park. Silt and clay that settled in the calm waters of Fossil Lake were preserved as the Green River Formation. The Green River Formation is famous for containing fish and other vertebrate fossils, which can be seen at Fossil Butte National Monument and surrounding areas near Kemmerer, Wyoming.

After deposition of the Wasatch and Green River formations, beginning in late-Eocene time, the Overthrust Belt and much of western North America were subjected to tensional forces that began to slowly stretch the crust in an east-west direction.

In places, including along the Medicine Butte fault, older thrust faults became reactivated as normal faults (faults that form in response to tension rather than compression).

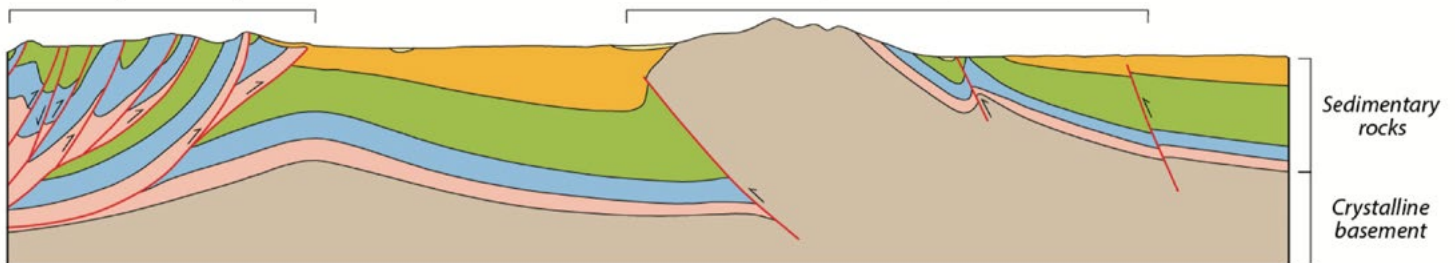
The Fowkes Formation, exposed near the town of Evanston, represents sediment deposited in valleys down-dropped by normal faults. Normal faulting largely shaped the modern landscape and present course of the Bear River.

Sevier-style thrust faulting

(thin-skinned)

Laramide-style thrust faulting

(thick-skinned)

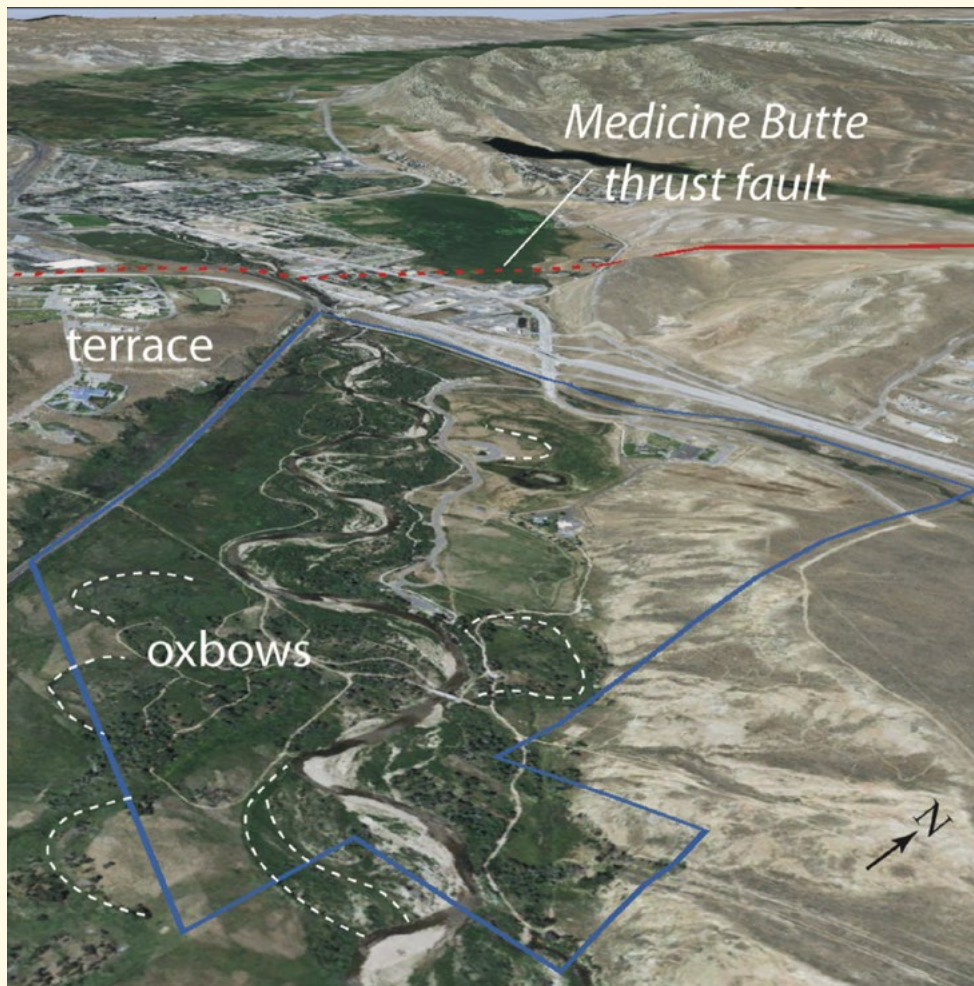


Cross section comparison of “thin-skinned” (Sevier) and “thick-skinned” (Laramide) thrust faulting. Mountain ranges uplifted by both styles of thrust faulting are visible from Bear River State Park.

(Continued on Page 11)

Geology of Bear River State Park

(Continued from Page 10)



Left: Oblique aerial view to the north-west looking downstream along the Bear River. The river's floodplain is marked by the extent of green vegetation. White dashed lines highlight oxbows and abandoned meanders, the red line shows the trace of the Medicine Butte thrust fault (dotted where concealed beneath river deposits), and the blue line outlines the state park boundary.

HYDROGEOLOGY

The Bear River originates in the Uinta Mountains, which are the high peaks visible to the south of the park. It flows northward through the park and crosses the Wyoming/Utah border twice on its way into Idaho. The river then turns back to the south and finally drains into the Great Salt Lake. Because the Great Salt Lake has no outlet, water passing through the park never reaches an ocean. The Bear River travels 350 miles on its winding route, yet ends a mere 75 linear miles from its source.

Within the park, the Bear River has a relatively low flow for most

of the year as it is fed by regional precipitation and groundwater from the surrounding bedrock and gravel. However, the river's discharge swells by roughly 40 times in late spring due to snowmelt in the Uinta Mountains. A portion of the high flows are stored for irrigation in local reservoirs upstream and downstream from the park (not shown in map extent).

The Bear River has a meandering channel pattern.

As the river progressively erodes its banks on the outside of bends and deposits sediment on the inside, the channel migrates, or meanders, back and forth across the floodplain, leaving behind numerous oxbow lakes

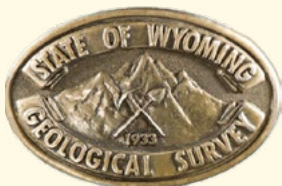
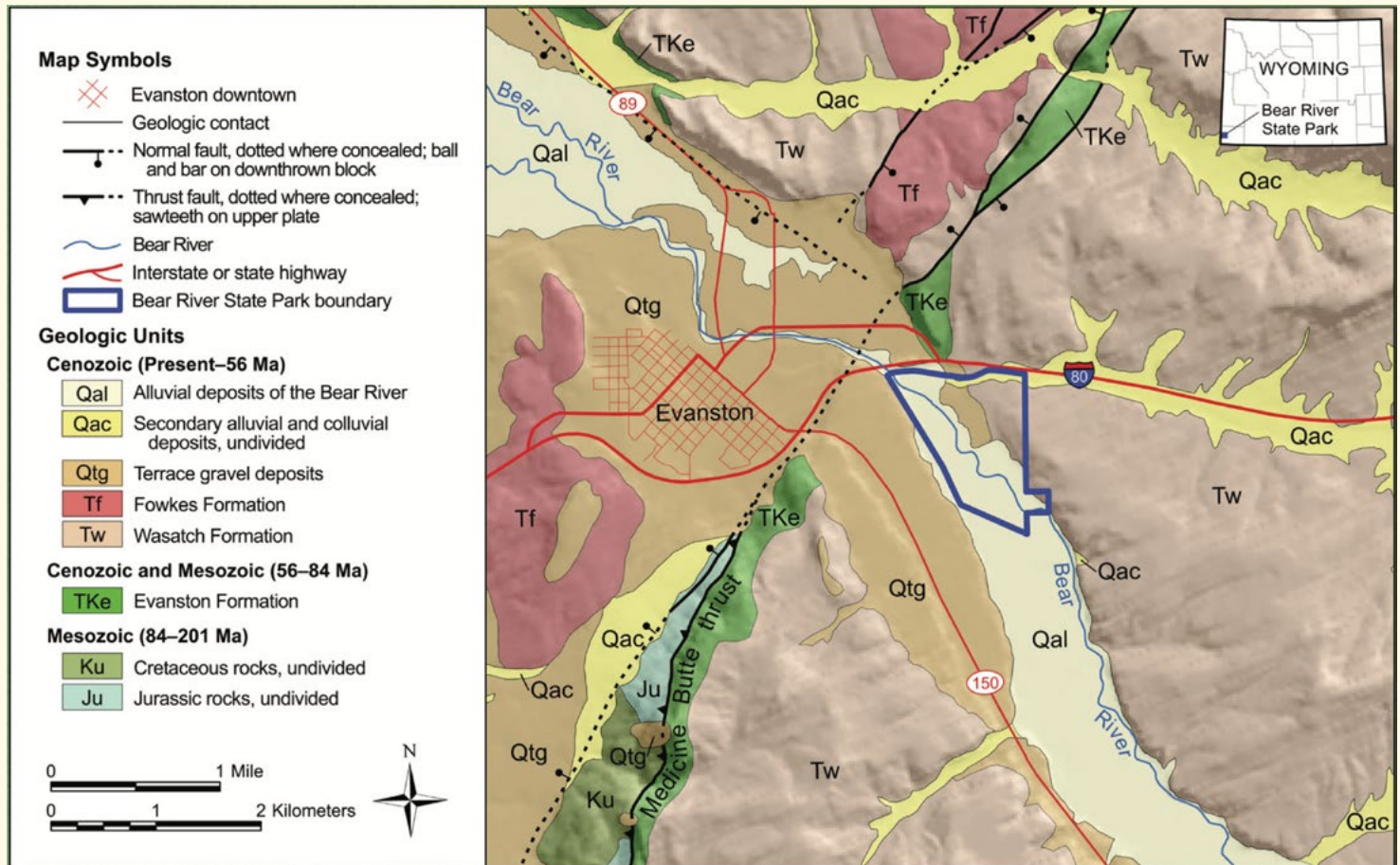
and abandoned side channels. An oxbow lake forms when a meander develops into a pronounced loop and the river cuts through the narrow neck of the loop, stranding the former channel as a small lake that may only recharge when the river is in flood.

Above the modern floodplain are terraces, flat landforms composed of gravel deposited by the Bear River tens of thousands of years ago and subsequently left behind as the river has cut down into the valley bottom. The town of Evanston is built on one of these river terraces.

(Continued on Page 12)

Geology of Bear River State Park

(Continued from Page 11)



For more information, visit: wyoparks.state.wy.us/index.php/places-to-go/bear-river

Wyoming State Geological Survey • P.O. Box 1347 Laramie, WY 82073-1347

www.wsgs.wyo.gov • phone: (307) 766-2286 • email: wsgs-info@wyo.gov



Is your rock club doing fun things?

Send us photos, a story and/or information about your club's meetings, members, activities or field trips, and we'll use them in the

Jade State News.

jsn@wsngs.org

[Back to Page 1](#)



Forrest Fenn's Treasure Hunt Comes to an End?

Editor's Note: The following three newspaper reports were adapted for use by Stan Strike for this educational article.

An article in the Wyoming State Mineral & Gem Society's August 2018 Jade State Newsletter was headlined, "When Rockhounding — Don't Overlook Fenn's Treasure!"

This article can be found on the WSMGS website [wsmgs.org] and describes Fenn's Treasure and Clues to help find it.

But the Treasurer Hunt may be over, with new headlines reporting that "The treasure has Been Found!" in our backyard — Wyoming?

Fenn Says His Treasure Was Found in Wyoming **by Mark Davis, Powell Tribune, August 6, 2020**

Though much mystery still surrounds Forrest Fenn's decade-long treasure hunt, the 89-year-old entrepreneur says the treasure was found in Wyoming. "Because I promised the finder I would not reveal who found it or where, I have remained mostly silent," Fenn recently penned on a blog dedicated to the 10-year search for the treasure. "However, the finder understands how important some closure is for many searchers, so today [July 22] he agreed that we should reveal that the treasure was found in Wyoming."

Fenn has said he hid a bronze chest filled with gold and jewels worth more than \$1 million in the Rocky Mountain wilderness. In late July, he gave up the state in which it was found on Dal Neitzel's "Thrill of the Chase" blog — after many hunters voiced displeasure with the lack of facts. Some searchers have turned on Fenn, saying the treasure hunt was a hoax or a friend was steered to the site. Fenn said he hoped that disclosing Wyoming as the location would "bring some closure to those whose solves were in New Mexico, Colorado or Montana." But comments are still being posted on various searcher sites. "I think if we are being honest with ourselves, true closure will only come with knowing the solve/final resting spot," wrote frequent commenter, Geysergirl. "And we have to come to terms that we may never know

that."

Another commenter said that, "Full closure will come when the finder publishes his book and documentary," adding that there was some speculation that the details will be released in a way he can capitalize on the information monetarily. Fenn is currently hawking a revised edition of his memoir, "Once Upon A While, Revised." "This revised third memoir showcases the original 39 mini-episodes in the life of Forrest Fenn, plus a new 40th story. Forrest corrected some text and included more of his stick-figure drawings," says an ad for the book at Fenn's company, the Old Santa Fe Trading Company.

Fenn hid clues in a poem he wrote as part of his 2010 autobiography. Thousands of people soon worked on "solves" for the riddle, searched the Rocky Mountains and purchased books and collateral material from Fenn in hopes of discovering more clues. "I do not know the person who found it," Fenn said after announcing the prize's discovery in early June, "but the poem in my book led him to the precise spot."

Many hunters targeted Wyoming in their searches, with a few running into physical danger or legal trouble. Between 2013 and 2016, Park County authorities assisted a pair of Virginia residents multiple times after they got lost and injured on the North Fork; in January, park rangers had to rescue an Indiana man who was convinced the treasure was stashed on the canyon floor. One treasure hunter from Illinois fell to his death while searching in Yellowstone in 2018. In total, five people reportedly died while pursuing the treasure.

Since Fenn's announcement that his prize was found in Wyoming, hunters have been speculating on where in the Cowboy State the treasure was found. More than one dedicated seeker posted on Neitzel's website that the treasure was found near the Sunshine Reservoirs outside of Meeteetse. "I congratulate the thousands of people who participated in the search," Fenn wrote, "and hope they will continue to be drawn by the promise of other discoveries."

Fenn has refused to comment further to the Powell Tribune and other media outlets.

(Continued on Page 14)

Forrest Fenn's Treasure Hunt

(Continued from Page 13)

Fenn Treasure Hunter Facing Charges After Digging In Fort Yellowstone Cemetery

By CJ Baker, Powell Tribune, October 27, 2020

A Utah man is facing federal charges after he was allegedly caught digging in the historic Fort Yellowstone Cemetery as part of a search for the infamous Fenn treasure.

Fenn was an art dealer and author from Sante Fe, New Mexico, who published a cryptic poem in 2010 that he said would lead the reader to a chest of gold and jewels somewhere in the Rocky Mountains. The publication of the riddle inside Fenn's memoir triggered a decade-long search that drew in tens of thousands, if not hundreds of thousands, of treasure hunters.

Some seekers ran into trouble, whether by putting themselves in perilous locations or by going places they shouldn't. For example, one man fell off a cliff to his death in Yellowstone in 2017 while earlier this year, a 55-year-old Indiana man illegally rappelled into the Grand Canyon of the Yellowstone after becoming convinced the treasure lay below. He had to be rescued by a ranger and received a week-long jail sentence.

Fenn expressed dismay at those who broke the law or took dangerous risks in their searching, but never called it off. Then in June, he announced the treasure had been found.

Thursday's news release from the U.S. Attorney's Office listed the discovery of Fenn's treasure as a matter of fact, though some treasure seekers have remained skeptical that the booty was actually found or even existed at all. Fenn refused to release any details about where it had been hidden or who found it, offering only that it was discovered in Wyoming. He (Forrest Fenn) died last month at the age of 90.

Fenn had announced the treasure's discovery through the website of Dal Neitzel, a seeker whose blog became a quasi-official hub for all things related to the hunt. In late July, following Fenn's revelation that the prize had been found in Wyoming, Neitzel asked his readers to guess where in the state the chest had been stashed.

Hours later, a commenter identified as Rodrick Craythorn responded, "Fort Yellowstone cemetery."

Art Dealer Fenn Had Cody Connections

By Leo Wolfson, Cody Enterprise, November 2, 2020

The late Forrest Fenn may be nationally renowned for his antique collecting and eccentric behavior, most notably creating a treasure hunt that captured a sense of purpose and adventure for thousands of participants. Less known is his connection to Cody.

Fenn, a New Mexico resident, befriended a number of notable Cody figures such as former U.S. Sen. Al Simpson, State Sen. Hank Coe and Naoma Tate. "He was one of the biggest movers and shakers in selling of Western art," Tate said.

Fenn was a donor to the Buffalo Bill Center of the West, donating the Joseph Sharp cabin, known as the Absarokee Hut, as well as a number of historic photographs. Fenn was a member of the board of trustees for the Center from 2004-2014 and he remained an emeritus member until his death in September.

In a 2018 interview with the Center of the West, Fenn said he came to the museum early on in his childhood while traveling to Yellowstone National Park with his family. "It was a summer pilgrimage for our family and the museum has always been a part of me," he said in the museum story.

In recent years, Fenn was known for his organization of a treasure hunt with millions of dollars of artifacts awaiting the finder. Most of the clues appear to have been given in his book "The Thrill of the Chase," but treasure hunters also cued into his other works as well, desperately grasping at straws to help in their search of the prize.

In June, Fenn announced the treasure had been found by an individual from "back East," but all other identifying details were kept confidential. Some doubted the validity of this find and some surmised it was Fenn's attempt at ending the hunt to avoid people committing more reckless acts and his possible legal vulnerability for facilitating or encouraging those acts by starting the hunt. Fenn later said he buried his treasure in Wyoming. Treasure hunters continued speculating as to the loot's whereabouts after it had been announced found.

In September, an anonymous writer known as "The Finder" took credit for finding the treasure on the

(Continued on Page 15)

Forrest Fenn's Treasure Hunt

(Continued from Page 14)

website Medium.com. He posted photos of Fenn with the found treasure and gave intimate details about his experience meeting with him after finding it. "He was completely open with me about anything I wanted to confirm or know when we met, but his emotions were a little perplexing," the writer said. "I could tell there was some eagerness in finally sharing these secrets with someone, but there was also melancholy."

The writer did not reveal any details about where they found the treasure or their identity beyond saying they will use the treasure as a way to pay off their student debt.

Many treasure seekers talked of how the hunt positively impacted their lives, despite not finding the proverbial pot at the end of the rainbow.

"Not only has Forrest's chase brought me seven years of the most incredible adventures of my life, it also has created friendships and bonds with folks I'd never have had the privilege to meet otherwise," wrote treasure hunter Cynthia Meachum on her blog chasingfenn-treasure.com.

Meachum organized a get-together of treasure hunters in West Yellowstone and on Fishing Bridge over Labor Day weekend to celebrate the completion of the quest. Fenn passed away on Sept. 8 at the age of 90. There have not yet been funeral services. Tate said she had her last communication with him on Aug. 20 through email after she sent him a photo of Fishing Bridge, one of his most cherished spots.

"He was just a wonderful, wonderful man and character, a wonderful character," Coe said.

Comments by Mike J, November 13, 2020

in response to preceding Cody Enterprise article

I feel like Forrest Fenn was a best friend. I never met him but I spent a year researching his life.

Yes, I was a treasure hunter. Like the searchers at Oak Island, I learned of Fenn's treasure from Readers Digest. This was May, 2019. I was late to the hunt. Fenn hid the treasure in 2010. As soon as I read his nine-clue poem,

I knew just where to start. A thousand hours of research and field searches later, I'd solved the last clue, "If you've been wise and found the blaze, look quickly down, your quest to cease." I was systematically "looking quickly down" in the area where Fenn's poem led when it was announced in June that the chest was found. I'd zeroed in on a location on the Northfork, between Cody and Yellowstone.

As a boy aged 4 to 19, Fenn traveled this road every summer for 15 years with his family who traveled from Texas to spend their summers in Yellowstone. Fenn absolutely loved the wilderness between Cody and West Yellowstone. It seemed likely that a chest hidden within four Rocky Mountain states would land near Yellowstone. It's since been announced the chest was found in Wyoming, but not exactly where.

This sounds trite but I wanted to solve the poem more than I wanted that chest. I felt like I was in Fenn's head. Had I found it, I'd have left the chest, half the treasure and a note for the next finder. I enjoyed the thrill of the chase so much I wanted it to continue for everyone else.

I was so inspired by Fenn's treasure hunt that I created one for my grandkids. I wrote a Fenn-like poem with a dozen clues that led the kids around my property to an ornate chest filled with toys, cash and a few silver coin treasures. They and their parents loved it! They experienced the thrill of the chase, just like me. And I got to feel a bit of the euphoria Forrest Fenn must've felt when he hid his chest.

In early August, I mailed pictures of the kids finding the chest, a copy of my treasure poem, and a letter of thanks to Fenn for his inspiration. He died in early September. I don't know how ill Fenn was in his last days. But I like to think that at the least, his family read him my letter and shared those photos. I hope so.

I didn't discover the chest — but I discovered the thrill of the chase. And I discovered Forrest Fenn. HE was the real treasure.

**IS THIS THE END OF
FORREST FENN'S TREASURE HUNT??**

[Back to Page 1](#)



Explore Wyoming's Rocks on the Internet

Winter is a good time to plan next spring's rock hunts. Several internet sites will help you explore virtually and learn more about rocks in Wyoming.

Google Earth: United States Geological Survey geological map overlays for Wyoming are available using Google Earth that will show detailed information about specific locations for all the surface rock formations in Wyoming. In order to find this internet site, copy and paste the following computer link into your computer's browser: <https://tinyurl.com/wyomingoverlays>

Wyoming State Geological Survey: This internet site provides geological information about eight

Wyoming locations that are representative of the unique geological features found in Wyoming.

In order to find this internet site, copy and paste the following computer link into your computer's browser: <https://www.wsgs.wyo.gov/public-info/tour-geology.aspx>

Learn about Yellowstone's geology with the WSGS's new interactive map.

Yellowstone National Park is perhaps the most famous attraction in Wyoming. The world's first national park, Yellowstone offers distinctive geology that can't be found anywhere else.

The WSGS developed a new interactive map that offers an opportunity to learn about the park's geology. Since its launching in May, there have been more than 7,700 views of the Geology of Yellowstone Map.

Scientists have found the new platform valuable in that it offers a single interface to view multiple geologic maps and datasets. General public users have expressed excitement about live data, such as webcams.

"We're pleased with the early feedback we've received on the map," says WSGS geologist James Mauch.

"Our goal was to compile the wealth of geospatial data that's been published on Yellowstone into a single interactive map that can be used by both researchers and the general public.

"We hope that it becomes a go-to resource for digital exploration of Yellowstone's geology, and we

look forward to incorporating additional data in future updates to the map."

Map features: Users can interactively pan and zoom to areas of interest on the map, search for specific locations, and turn layers on and off. Clicking on a feature leads to a pop-up window with more information, which can also be accessed in each layer's attribute table.

Key features of the map are the Layer Explanation and Data Sources menus, which provide users with links to the original data source for each layer.

The map includes several layers of bedrock and surficial geologic maps published by the U.S. Geological Survey and National Park Service.

Users will also find layers containing information on Yellowstone's geology, thermal features, hydrography, active monitoring programs, geomorphology and geologic hazards, and basic geography.

Wyoming State Geologic Survey Updates —Making Geologic Maps Easier To View

The use of cellphones and portable devices equipped with GPS-enabled applications has increased demand for digital map files with geospatial location information. This information allows apps and products to display the user's location on a map. Popular programs such as Google Earth have also led to requests for geologic maps in compatible formats.

The WSGS distributes geologic maps on its website as Portable Document Files (PDF), Geographic Information System (GIS) shapefiles, and as printed hard copies. The agency is working to offer two additional digital formats—the Georeferenced Tagged Image File Format and Keyhole Markup Language.

In addition to updating the available file formats, the WSGS plans to redesign its webpages and application for locating and retrieving map files.

All file formats will be made available in one location, allowing the user to choose the format suited to their needs.

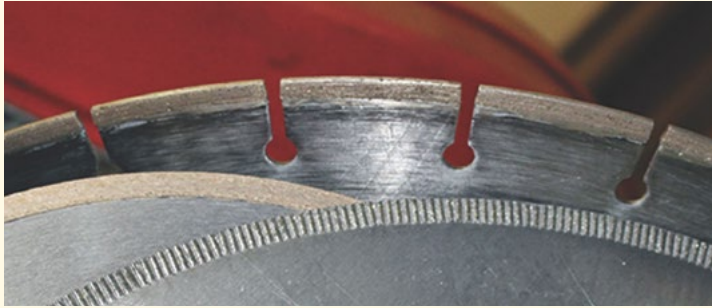
The project will be partially funded by the USGS National Geological and Geophysical Data Preservation Program and completed in summer 2021.

Visit Wyoming's geology!

[Back to Page 1](#)



Lapidary Hint: Diamond Rock Saw Blades



By Bob Rush

Rock and Gem Newsletter, November 21, 2019

<https://www.rockngem.com/diamondrockawsblades/>

Frequently, questions arise about the type of saw blades to buy for trimming or slabbing rock, and how to sharpen the blades.

There are three basic types of saw blades: notched rim, sintered rim, and segmented rim. In the past, the notched rim blades were the most common blades one would encounter. They are made by notching the rim of the blade blank and embedding the diamonds into the notches. These blades perform quite well.

Understanding Blade Performance

Advancements in blade manufacturing methods have resulted in a better performing blade. It is the continuous sintered rim blade. This type of blade is manufactured by mixing and bonding diamonds into a metal alloy and bonding that mixture together, under heat and pressure, to the outer rim of the blade core. This type of blade has superseded notched rim blades.

The final type of blade to consider is the segmented blade. These blades have notches manufactured into the rim. The notches consist of a slot into the rim with a round hole at the bottom of the slot. The slots provide a path for the coolant/lubricant to reach the rim more effectively and remove rock waste from the rim area. The blades are primarily utilized in larger sizes, beginning with 18 inches and larger.

Addressing Coolants

There also has been a lot of discussion about which coolants should be used on 10-inch trim saws. Many prefer to use water with additives because there is less mess during the cutting than when oil coolants are used. However, water isn't a good coolant, because the flashpoint is quite low compared to the oils that are commonly in use.

At the point of contact with the rock, the heat builds up, and for an instant, the water flashes to steam, which doesn't carry the heat away. Most blade manufacturers do not recommend using water because it causes premature blade wear. However, many people prefer the easy cleanup of water, and with it, they endure the need for more frequent blade replacements.

Resharpener Techniques

When it comes time to sharpen a dull blade, there are numerous methods. As a blade is used, the diamonds in the rim abrade and break down, leaving small holes in the sintered areas of the cutting surface. The friction of the rock deforms this sintered alloy and moves the metal around, where it shields the existing diamonds, and the cutting action slows considerably.

Suggestions for handling this have included cutting through obsidian, which is ineffective and cutting through an old silicon carbide grinding wheel, which is a better approach.

John Rowland of Highland Park Lapidary, suggests turning a very coarse file sideways and strike the cutting edge of the blade vigorously around the diameter of the blade. This method is very effective in sharpening the blade.

However, the above-mentioned method doesn't sharpen the sides of the cutting surface. By gripping the sides of the blade, you can feel the wider cutting portion on the sides of the blade.

If you can't feel the wider area, the blade is worn out regardless of the remaining area of the diamonds around the rim. This step-up is required, so the blade cuts a slot, called the kerf, which is wider than the blade.

This must occur so the rock, which is the focus of the cut, doesn't rub on the sides of the blade during the process. If the rock rubs the blade, the blade gets hot, the rock gets hot, and they both expand, binding the blade in the rock. These cutting surfaces do at least as much rock removal as the outer edge of the blade, thus they wear just like the outer rim.

My method to sharpen all the surfaces is to rub the outer rim vigorously sideways across the blade, with a piece of very coarse silicon carbide grinding wheel, followed by rubbing the sides of the blade vertically with the same grinding wheel piece.

[Back to Page 1](#)



Club News



Cody 59ers: Dryhead Agate Field Trip

The Cody Club did not conduct meetings during the summer or fall of 2020 because of the COVID-19 virus pandemic.

One of the field trip highlights for the summer was to the Dryhead agate location, approximately 35 miles NNE of Lovell, on a high plain between the Pryor and Bighorn Mountains.

The Dryhead agate layer is thought to run from 10 miles north of Barry's Landing into the Crow Indian Reservation in Montana.

One of our club members grew up in the area and was able to obtain special permission from a landowner, who normally does not grant access to this site.

The original Dryhead agate mine site was backfilled to discourage trespassers, but several surface exposures remain.

Dryhead agate usually is recognized by its orangish-brown fortifications, but can occasionally occur in other vivid colors such as pink, yellow, lavender, light gray,

dark gray, blue-gray, and white.

The fortification lines are accented with bands of white chalcedony and/or crystalline quartz.

A special specimen of Dryhead Agate will display isolated pockets of white chalcedony and/or crystalline quartz, surrounded by a border of colorful fortification lines.



A Dryhead agate collected by Grey Jones.

Many of the Dryhead agates will fluoresce green under shortwave ultraviolet light.

The best Dryhead agates are found as isolated nodules within the Embar

Formation (which may be included in some locations as part of the Phosphoria Formation). Normally the Embar is covered with 5- to 6-foot overburden consisting of limestone inter-mixed with shale, which was originally covered over with volcanic ash. Volcanic ash has a high silica content, which over geologic time was transported by precipitation into the underlying layers. As this groundwater reached the solid Embar limestone, its load of dissolved silica and locally colored impurities were deposited as layers within empty spaces in the limestone, forming the Dryhead agates.

Surface collectors should look for specimens that have an orangish-brown exterior with bumps and grainy texture. Surface finds with gray or greenish/yellow and smooth exterior surfaces usually do not contain good agate patterns or contain calcite crystals that does not lend itself to lapidary refinement. Only about 1 percent of surface finds contain quality exposures of Dryhead Agate. But collecting Dryhead Agate is like a box of chocolate — you never know what you are going to get, until you open it up.

[Adapted reference information by Stan Strike from Dryhead Agate – John T. Hurst Strike]

(Continued on Page 19)



Dryhead agate assortment.

Photos by Cindy Vaughn

Club News

(Continued from Page 18)

Cody 59ers continued: More photos



Dryhead agates collected by Cody 59ers. Above: Dorine Strom. Right: Greg Jones. Far right: Heather Baker. Photos by Cindy Vaughn



Sublette County Rock Hounds

The Sublette County Rock Hounds Club continues to expand, growing from 193 members in September to 208 in November.

• **The club met on September 19**, with 28 in attendance. Flint knapper Bill Ickles was the guest speaker.

Club President Jim Gray provided the dates of several upcoming shows in other states. He noted that the Timpanogos Gem and Mineral Show in Spanish Fork, Utah, will take place on March 29-31. It is a very good show, and Jim said he has used what he has seen at that show to help with state and Sublette County rock shows.

Jim suggested building a set of corn hole game boards to use for entertainment at Sublette County Shows. Members approved, and a set will be built with the club's logo on it in time for the 2021 show in June.

Jim encouraged members to provide photos for club history and for submission to the Jade State News. He also will forward any articles club members may choose to write for the Jade State News.

Linda DiGiro won the door prize

of a 42-inch treasure scoop, donated by Ed and Linda Trimmer.

• **The Sublette County Rock Hounds** met again on October 27, with 32 people attending. The guest speaker was Eddy Cole, who talked about agates and how they are formed.

All club officers have agreed to serve another year in their respective capacities.

Club President Jim Gray asked for and received permission to advertise the 2021 Sublette County rock show in the Quartzite Desert Messenger during the annual Quartzite rock show. Jim also was authorized by the club to buy a special door prize for the Sublette County rock show for \$500.00 or less.

Linda Trimmer won the door prize of a nice petrified wood slab with a stand, donated by Kermit and Debby Jess.

• **The final meeting of the year** took place on November 14, with 31 members in attendance.

The next meeting of Sublette County Rock Hounds is scheduled for March 13, 2021.

Club members were asked to submit names for the Club Rock Hound of

the Year by April 1. The successful candidate will be forwarded to the Wyoming State Mineral and Gem Society for consideration for the State Rock Hound of the Year award, which will be presented at the state rock show in Casper in the second week in July.

Club President Jim Gray said he and his wife, Leane, plan to distribute quarter-page flyers for the 2021 Sublette County Rock Show in June during the two peak weeks at the annual gem and mineral show in Quartzsite, Arizona, in January.

Leane Gray won first place in the Ugly Sweater contest, followed by Dianna McMannis in second, and Chrissie Zumpfe in third. The Best-Dressed Child contest resulted in a tie between Renaiah and Liam Glaze.

Chrissie Zumpfe also won a door prize of a pair of handmade mittens donated by Ed and Linda Trimmer, and Gwynn Kaiser won the door prize of a \$50 gift certificate for J L Gary Rock Shop, donated by Jim and Leane Gray.

(Continued on Page 20)

Club News

(Continued from Page 19)

Shoshone Rock Club

No meetings of the Shoshone Rock Club have taken place since March due to the COVID-19 pandemic. A meeting scheduled for November 10 was later canceled due to an increase in COVID-19 cases in Park County.

The Shoshone Rock Club board met on October 21 to conduct business and elect new officers.

Club President Dorine Strom called the meeting to order at 4:30 p.m., with Linda Thomas, Mary Vogel, Linda Jennings, Lynn Neale,

and Cheryl Thomas also in attendance. Because of the increase in cases of COVID19, future meetings are not anticipated; therefore, the board felt it necessary to take several actions. These are:

- Current dues-paying members will have their 2020 membership extended through 2021. First-time members will pay full dues as usual.
- New board officers and board members are: Dorine Strom, President; Mary Vogel, Vice President; Cheryl Thomas, Treasurer; and Linda

Thomas, Secretary.

Linda Jennings is a two-year board member, and Mandie Asay is a one-year board member.

Dorine Strom will take over as Field Trip Coordinator.

Possible new field trip locations were discussed.

Board members discussed work on the new yearbook and the need to recruit more members.

Linda Thomas provided refreshments, and the meeting closed at 6 p.m.

State Rock Show Leftover



Cody 59ers spent considerable time and effort to put together a club showcase for the 2020 Wyoming State Mineral and Gem Show in June. Unfortunately, due to the COVID-19 pandemic, no club member was able to take it to the show in Marbleton. A story about the rock cycle, rock classifications and rocks found in Wyoming as outlined and displayed in the case is available on [Page 1](#) of this issue.

[Back to Page 1](#)



WSMGS Electronic Board Meeting

September 2020

I. Electronic Meeting

Instructions to Board Members:

As a WSMGS Board Member, I ask you to read this Electronic Meeting email and VOTE on all Action Items by selecting "Reply All" after typing your name and indicating a "Agree or Disagree" vote for each numbered Action Item. The Deadline for your responses by "Reply All" email will be Monday, April 27th. If you have questions about any item call or text me at 307-260-6442 or pres@wsmsg.org Board members are encouraged to submit old or new business items that have not been included in this meeting and a special attachment will be sent out for the entire WSMGS Board's consideration.

II. President's Report by Jim Gray:

- WSMGS and the Sublette County Rock Hounds hosted the 2020 RMFMS Show in June at Sublette County Fairgrounds. Show was a huge success.

Natrona County Rock Hounds has volunteered to have the WSMGS Show in Casper July 2021.

New rock club starting in Laramie, Laramie Rock Hounds, working on getting them involved and joining the WSMGS and the RMFMS.

- Jim Gray was sworn in as the new Wyoming State Director for the WSMGS replacing Stan Strike.
- Northeast Wyoming Rock hounds are planning a Rock Show Sept. 26, 2020 from 9 am to 3 pm.

Will post a flyer for everyone to share.

- Need clubs to please send in a list of activities, field trip pictures etc. to WSMGS Historian and copies of meeting minutes once a month or after the meetings so they can be archived.

- Any clubs that are planning a show in 2021 please let us know so we can get into the Jade State News and on the WSMGS web site.

- If any club has any questions please let me know and I will do my best to help.

III. Vice President's Report by Linda Richendifer:

- WSMGS affiliated rock clubs need to submit their Annual Election of Officers Report as soon as club officers are determined for the new year.

- The WSMGS Vice President updated the Annual WSMGS Club Directory and it was sent to the email contacts in each club. This WSMGS Club Directory is for WSMGS affiliated club use only and IS NOT FOR PUBLIC DISSEMINATION. The WSMGS makes every effort to protect the personal information of its members via the use of Alias Email Addresses for each WSMGS affiliated Club and the WSMGS officers.

IV. Secretary's Report By Leane Gray:

- Prior Electronic WSMGS Board Meeting Minutes are as printed in the Jade State News, which are available online: wsmsg.org under the heading Newsletters.

- Results of April meeting action

items were sent to Marlene Sibley, Webmaster, to be reflected in the By-Laws: travel stipend for Board members to the annual show, increases in minimum and maximum vendors allowed without Board approval at the annual show, and increase in Board contribution toward the meat purchased by the annual show host club for the dinner for Board members, volunteers, and vendors if such a dinner occurs.

Result of June meeting voting was sent to Marlene Sibley, Webmaster, to be reflected in the By-Laws: if a WSMGS officer's absence from the annual Board meeting is unexcused or repetitive, the Board member is expected to resign.

V. Treasurer's Report by Stan Strike:

WSMGS Club Report Reminders:

- January 1st to May 15th- Form 990N must be electronically submitted to the IRS (The Registered agent for each club should receive this form from the IRS in advance of the deadline). Clubs may contact the IRS directly by email: la2.alt.www4.irs.gov/pub/rup_login_1

- Deadline for Annual Report to WY Sec. of State Varies by WSMGS Club — Deadline for renewal of "Non Profit Corporation Annual Report" varies by club and is due the 1st day of the month in which the club was first recognized by the

(Continued on Page 22)

WSMGS Electronic Board Meeting, April 2020 (Continued from Page 21)

Wyoming Secretary of State as a Non Profit Corporation.

(The Registered Agent for your club should receive this form in advance of the club's deadline

WSMGS Clubs' Incorporation Dates:

- Cheyenne Mineral & Gem Society December 2, 1969
- Cody 59ers Rock Club February 1, 2012
- Natrona County Rock Hounds April 15, 1954
- Rex Young Rock Club Not Incorporated
- Northeast Wyoming November 8, 2018
- Riverton Mineral & Gem Society August 17, 2012
- Shoshone Rock Club February 8, 1962
- Sublette County Rock Hounds March 21, 2018
- WSMGS Board Incorporated November 23, 1964

The current Treasurer's Report is as follows: I will send 2 attachments. Because our Annual Treasurer's Report is given at the Annual Meeting we have been marking our Financial Year as July(2020) - June(2021) instead of the calendar year. It seems to work better that way because most of our expenses end with state show and dues income starts in November and ends in February.

- I would like to nominate Ken & Debbie Steele and Mark Fisher as Wyoming Rockstars for developing the website: www.geowyo.com. and serving as speakers for our local rock clubs and as judges for the

2020 WSMGS WY Rockhound of the year.

VI. Historian Report by Roger McMannis:

- Reminder that all WSMGS clubs need to send activities and meeting minutes or annual reports please.

Please email them ASAP with Attention to Roger McMannis: hist@wsmsg.org OR mail to him P.O. Box 1081- Big Piney, WY 83113.

VI. Jade State Newsletter by Ilene Olson:

Clubs are encouraged to submit news items, abbreviated minutes, and photos for publication in the Jade State News.

Submission dates to Jade News Editor [jsn@wsmsg.org] are the 1st of February, May, August, and November.

The WSMGS would like to encourage clubs to nominate non-club members individuals/couples from your region who have been active in promoting the Earth Sciences to be recognized by receiving recognition in the Jade State News as Wyoming Rock Stars! Check out former winner write-ups on the WSMGS website: wsmsg.org-Menu-WSMGS Topic Library-WSMGS Awards. Rock Star Nominations: please submit these nominations with a descriptive paragraph and photo to the JSN. There is not an award associated with the nominations; it is a recognition.

VII. WSMGS Website by Marlene Sibley:

The WSMGS needs action photos from each of your clubs. Please include the photographer's name for proper photo credit and a short caption summary as to activity. Send photos to: webmaster@wsmsg.org

VIII. Old Business:

A.

IX. New Business:

Restore the show cases donated by Rex Young club as approved during April 2020 meeting.

*** VOTE Action Item #1- Number of days for the annual WSMGS show to a minimum of two days to no more than three days.

NAME: 4 votes received

AGREE OR DISAGREE:

- All agree, MOTION carried.

Change to the By-Laws was sent to webmaster, Marlene Sibley September 30, 2020.

X. MEETING ADJOURNED- MONDAY, SEPTEMBER 28, 2020

VOTING RECORD

- Date: Mon 09/14/20 10:58 AM
Linda Richendifer
Action # 1—Agree

I also agree to the changes to the By-Laws.

- Date: Sat 09/19/20 02:51 PM
ILENE OLSON
Action #1: AGREE

- Date: Mon 9/21/20 07:42 AM

*** VOTE Action Item #1- Number of days for the annual WSMGS show to a minimum of two days to no more than three days.

NAME: Leane Gray, Secretary
AGREE OR DISAGREE:

Agree

Date: Sat 09/19/20 08:02 PM
Action Item #1- Agree
Stan

- Date: Tues 9/22/20 08:15 AM
Action Items #1 – Agree
Jim Gray

(Continued on Page 23)

WSMGS Electronic Board Meeting, April 2020 (Continued from Page 22)

WSMGS Treasurer's Report, June 2020 (fiscal year end)

ITEM	WSMGS-CodyBankoftheWest				BALANCE	BANK
Check #	DateWritten	Bank Date	Check Written To/Deposit From	Check/Deposit	Check From:	
Deposit	9/9/2019	10/7/2019	Donation New WSMGS State Trailer	\$500.00	Riverton M&GS	\$500.00
Deposit	9(10)/4/2019	10/7/2019	Donation New WSMGS State Trailer	\$500.00	Cody 59ERS	\$1,000.00
Deposit	9(10)/4/2019	10/7/2019	Payment for Old WSMGS Trailer	\$1,000.00	Cody 59ers	\$2,000.00
Deposit	910/&/19	10/7/2019	Transfer From Valley Credit Union	\$1,283.89	WSMGS Account	\$3,283.89
Deposit	!0/4/19	10/23/2019	Refund forWYSalesTaxPaidNewTrailer	\$80.00	ParkCo.Treasurer	\$3,363.89
Deposit	10/23/2019		ClosedValleyCreditUnionAccount	\$275.01	ValleyCreditUnion	\$3,638.90
Check 101	10/23/2019	Voded	Voided-ParkCo.Treas.-Old TrailerSold		VOIDED	\$3,638.90
Check 102	10/23/2019	10/25/2019	Cody59ersRockClub-80% of \$275	\$200.00		\$3,438.9010/31/19
Bank	10/16/2019	10/16/2019	DirectChargeByBank-PrintedChecks	\$30.00		\$3,408.90 \$3,408.90
Check 126	11/7/2019	11/12/2019	8thStreetlvlyInn-Malene'sThankYou	\$50.00		\$3,358.90 11/30/2019
Deposit	11/5/2019	11/22/2019	Cody 59ers 2020 dues	\$162.00	Cody 59ers	\$3,520.90 \$3,520.90
Check 103	12/9/2019	12/17/2019	RMFMS-2020 Dues/Insurance	\$12.90		\$3,508.00
Deposit	11/25/2019	12/9/2019	SubletteCo.Rockhounds-2020 dues	\$246.00	SubletteCo.RH	\$3,754.00
Check 104	12/11/2019	12/20/2019	Ilene Olson-Nov. 2019 JSN	\$75.00		3,679.00
Deposit	!2/10/19	12/16/2019	Closed Account Transfer Refund	\$583.86	WYcommunityBank	\$4,262.86 12/31/2019
Deposit	12/14/2019!2/16/19		Shoshone Rock Club 2020 Dues	\$51.00	ShoshoneRockClub	\$4,313.86 \$4,313.86
Deposit	12/28/2019	1/3/2020	Cheyenne 2020 Dues	\$115.50	CheyenneM&GS	\$4,429.36
Deposit	11/11/2019	1/3/2020	Riverton JSN Donation	\$100.00	RivertonM&GS	\$4,529.36
Deposit	1/6/2020	1/9/2020	Rex Young-Torrington 2020 Dues	\$33.00	RexYoungRockClub	\$4,562.36
Deposit	12/31/2019	1/9/2020	NE WY RockHounds 2020 Dues	\$81.00	NE RockHounds	\$4,643.36
Deposit	1/3/2020	1/10/2020	Riverton M&G Soc. 2020 Dues	\$216.00	Riverton M&Gsoc	\$4,859.36
Check 105	1/14/2020	1/15/2020	UPS Store-RMFMScontestPrinting	\$8.32		\$4,851.04 1/31/2020
Check 106	1/14/2020	1/17/2020	USPS-RMFMScontestPostage	\$5.55		\$4,845.49 \$4,845.49
Check 107	1/15/2020	2/10/2020	IleneOlson-Postage-RMFMS-contest	\$7.35		\$4,838.14 2/29/2020
Deposit	2/12/2020	2/18/2020	NatronaCo.RH-2020 Dues	\$34.50	NatronaCo.R.H.	\$4,872.64 \$4,872.64
Check 108	3/2/2020	Voided	IleneOlson-Feb.2020 JSN	\$75.00	VOIDED	\$4,872.64 3/31/2020
Debit	3/3/2020	3/4/2020	iPage WebpageHosting Renewa3years	\$250.20		\$4,622.44 \$4,622.44
BankFee	4/30/2020	4/30/2020	BankWest-paperStatement	\$3.00		\$4,619.44 4/30/2020
Check 109	5/27/2020	5/29/2020	ParkCO.Treasurer-TrailerLicence	\$47.82		\$4,571.62 \$4,619.44
Check 110	5/27/2020	6/26/2020	IleneOlson-May 2020 JSN	\$75.00		\$4,496.62
Debit	5/24/2020	5/26/2020	Walmart-ROY certicates & frames	\$14.68		4,481.94
Check 111	5/27/2020	6/15/2020	WY4-HFound.-StateFairGeologyAward	\$50.00		\$4,431.94
Deposit	5/7/2020	5/7/2020	Jim Gray Donation	\$5.00		\$4,436.94 5/31/2020
Bank Fee	5/29/2020	5/29/2020	BankWest-Paper statement	\$3.00		\$4,433.94 \$4,558.94

(Continued on Page 24)

WSMGS Electronic Board Meeting, April 2020 (Continued from Page 23)

WSMGS Treasurer's Report, June 2020 (fiscal year end — continued)

ITEM	WSMGS-CodyBankoftheWest				BALANCE	BANK
Check #	Date Written	Bank Date	Check Written to/Deposit From	Check/Deposit	Check From:	
					\$443.934	
112	6/2/2020	6/8/2020	Art. Sand & Steel, WY State ROY award	\$52.00		\$4381.94
113	6/7/2020	6/19/2020	Sublette Co. RH-State show food	\$200.00		\$4181.94
114	6/19/2020	6/19/2020	Western History Center Museum Award	\$100.00		\$4081.94
115	6/14/2020	VOIDED	Linda Richendifer — State show expenses	\$150.00		4081.94
Deposit	6/30/2020	6/30/2020	Jim Gray donation	\$5.00		\$4086.94 6/30/2020
Bank Fee	6/30/2020	6/30/2020	Bank West — Paper statement	\$3.00		\$4083.94 \$4183.94
116	7/7/2020	7/17/2020	Ilene Olson, lost #108 Feb. JSN check	\$75.00		\$4008.94 7/31/2020
Deposit	7/31/2020	7/31/2020	Jim Gray donation	\$10.00		\$4018.94 \$4118.94
Deposit	8/28/2020	8/28/2020	2020 WSMGS state show 20% income	\$700.33		\$4719.27 8/31/2020

WSMGS Treasurer's Report, September 2020 (new fiscal year)

ITEM	WSMGS-CodyBankoftheWest				BALANCE	BANK
Check #	Date Written	Bank Date	Check Written To/Deposit From	Check/Deposit	Check From:	
					\$4081.94	
Deposit		6/30/2020	Jim Gray	\$5.00		\$4086.94 6/30/2020
Bank Fee	6/30/2020	6/30/2020	Bank of West — paper statement	\$3.00		\$4083.94 \$4183.94
116	7/07/2020	7/17/2020	Ilene Olson, lost #108 Feb JSN check	\$75.00		\$4008.94 7/31/2020
Deposit		7/31/2020	Jim Gray deposit	\$10.00		\$4018.94 \$4118.94
Deposit		8/28/2020	2020 WSMGS State Show 20% income	\$700.33		\$4,719.27 8/31/2020
117	9/14/2020		Ilene Olson — August 2020 JSN	\$75.00		\$4,644.27 \$4,719.27



[Back to Page 1](#)



WSMGS Rock Clubs

Riverton Mineral & Gem Society

P.O. Box 1904
Riverton, WY 82501

rivertonmgs@wsmgs.org
www.RivertonMGS.com

Meets 2nd Mon. 7 p.m.
(Jan.-May, Aug.-Nov.)

Senior Center, 303 E. Lincoln, Riverton

President: Linda Richendifer
Vice-President: Stan Grove
Treasurer: Cristy Quinn
Secretary: Holly Skinner
JSN Kim Brown
Historian Open
Field Trips Ted Knowles

Cheyenne Mineral & Gem Society

P.O. Box 21412
Cheyenne, WY 82001

cheyennemgs@wsmgs.org

Meet 2nd Wed. 7 p.m. (August-May)
IBEW Union Building
810 Fremont Street-Cheyenne

President: Open
Vice President Open
Treasurer: Jan Shively
Field Trip Mark Shivel

Natrona County Rockhounds

P.O. Box 123,
Casper, WY 82644

natronarockhounds@wsmgs.org

Meets 1st Monday 7 p.m. (April-Dec)
Shop Open 6-8 p.m. Tue & Fri at
Clubhouse, 5211 Rambler, Mills

President: Martin "Mac" Goss
Vice-President: John Hines
Treasurer: Kenny Platte
Secretary: Martin "Mac" Goss

Cody Fifty-Niners Rock Club

P.O. Box 1251
Cody WY 82414

cody59ers@wsmgs.org
www.Cody59ers.com

Meets 4th Thursday (Sept-May) 6:30 p.m.
Park County Courthouse, EOC room,
1002 Sheridan Ave., Cody

President: Greg Jones
Vice-President: John Severeide
Treasurer: Aubrey Smith
Secretary Janet Lorher
Historian: Stan Strike
Field Trips Nella Flurkey



Sublette County Rock Hounds Club

P.O. Box 1351
Big Piney, WY 83113

subletterockhounds@wsmgs.org

Meets 1 p.m. 3rd Saturday (March-Dec)
The Bench Grill
415 Winkleman, Marbleton

President: Jim Gray
Vice-President: Mike Schaffer
Treasurer: Leane Gray
Secretary: Deb Jess

Shoshone Rock Club

P.O. Box 256,
Powell, WY 82435

shoshonerockclub@wsmgs.org

Meets 2nd Tuesday 7 p.m.
Powell Library
317 E. Third St., Powell

President: Dorine Strom
Vice-President: Mary Vogel
Treasurer: Linda Thomas
Secretary: Linda Jennings
JSN: Ilene Olson
Historian: Linna Beebe
Field Trips Dorine Strom

Rex Young Rock Club

112 East 3rd
Lingle, WY 82223

rexyoungrockclub@wsmgs.org

Meets 2nd Wednesday 7:00 p.m.
Senior Center
216 E. 19th Ave., Torrington

President: Kim Nielsen
Vice-President: Sherman Lenhart
Treasurer: Helen Vogel
Secretary: Joyce Trowbridge
JSN: Joyce Trowbridge
Historian: Joyce Trowbridge
..... Dale Tikalski

Northeast Wyoming Rockhounds

2107C N. Hwy 14-16
Gillette WY 82716

newyrockhounds@wsmgs.org

Meets odd # months
Check email for dates

President: Jeff Hulings
Vice-President: Dennis Brown
Treasurer: Beth Raab
Secretary: Vanessa Grove