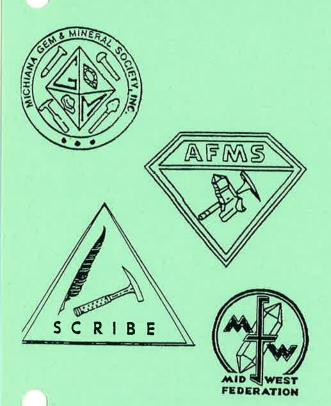
LEOTATION.

Michiana Gem & Mineral Society Tom Noe, Editor 305 Napoleon Blvd. South Bend, IN 46617







MICHIANA GEM & MINERAL SOCIETY

1999 BOARD OF DIRECTORS

President Margaret Heinek 654-3673
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The purpose of the Michiana Gem & Mineral Society is to promote the study and enjoyment of the earth sciences and the lapidary arts, and to share lapidary knowledge and techniques.

General meetings are held the fourth Sunday of each month, 2:00 PM, EST, at Our Redeemer Lutheran Church, 805 S. 29th St., South Bend, IN. Regular exceptions include May (third Sunday), June (field trip), July (no meeting), August (club picnic) and December (Christmas party). Board meetings are held before the general meetings. The annual club show is Labor Day weekend.

HEADS OF COMMITTEES

Programs Ed Miller 498-6513 Hospitality Pat McLaughlin 259-1501 Educational Emily Johnson Librarian Diane Gram Historian Ed Miller 498-6513 Sunshine Sally Peltz (616) 683-4088 Publicity Phyllis Luckert 282-1354 Field Trips Kathy Miller 291-0332 Membership All Members

The Michiana Gem & Mineral Society, a notfor-profit organization, is affiliated with the Midwest Federation of Mineralogical Societies and with the American Federation of Mineralogical Societies.

The Rockfinder is published monthly except July and August. Staff: Editor, Tom Noe, 305 Napoleon Blvd., South Bend, IN 46617 (ph. 289-2028). Co-editor, Herb Luckert, 221 Marquette Ave., South Bend, IN 46617 (ph. 282-1354). Reporters, Bob Heinek, Herb Luckert, club members.

Permission is hereby granted to reprint any original *Rockfinder* articles, as long as due recognition is given along with the reprint.

Yearly Membership Dues (Payable by January 1)	Additional names:
Individual \$10.00 per year	
Family \$15.00 per year	Name
Junior \$1.00 per year	Birthday
Subscriber \$7.50 per year	Nome
(One-half these amounts after July 1)	NameBirthday
Please indicate areas of special interest.	Diffiday
General Geology Beads	Name
Gems & Minerals Fossils	Birthday
Cabochons Field Trips	Nome
Faceting Crystals	NameBirthday
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Other Jewelry Making	Date of Wedding Anniversary
Name	Phone
TValle	PLEASE READ AND SIGN THIS SECTION:
Change	With my signature I hereby release the Michiana Gem and
Street	Mineral Society, Inc., and its individual members and the owners of any premises upon which I enter under permit
City,ST.,Zip	granted to the society, absolutely free of any liability whatso-
Please send your dues and this form to	ever, to my person or my property, and further I will respect
	the equipment and property of the aforesaid owners.
Michiana Gem & Mineral Society	
c/o Margaret Heinek	SignedDate
7091 E. East Park Lane, New Carlisle, IN 46552	



Newsletter of the Michiana Gem & Mineral Society

Volume 39, Number 5

May, 1999

Meeting: Sunday, May 23, 1999

Doors open at 1:30 p.m. Meeting at 2:00 p.m.

Guests are always welcome.

Place: Our Redeemer Lutheran Church

805 S. 29th (29th and Wall)

South Bend, IN

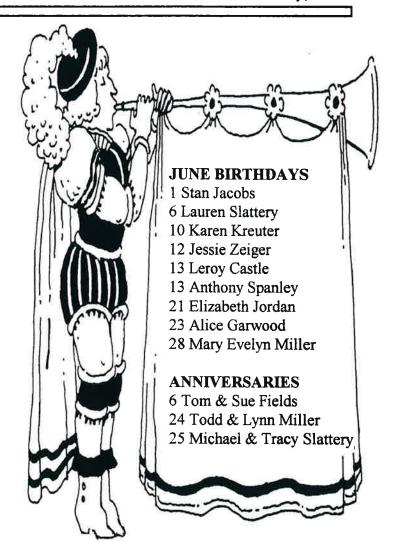
Hosts: Sister Jeanne

Sister Georgia Margaret Schultz

Program: Rockhounding in Alaska and the Yukon will be presented by Ed Miller.

LOCAL AUCTION OF ROCKS

On May 22, auctioneer Britton Knowles will auction some rocks, minerals and fossils as part of an estate sale at North Village Mall. Check newspapers for details the week before. Included will be thundereggs, Brazilian agates, petrified wood, rose quartz, Kona dolomite, Wyoming agates, Montana agates, South Dakota prairie agates, a nice piece of dinosaur bone, some Indiana cave formations, alabaster, assorted debris from a collector who is cleaning out the garage. Very little in the way of finished or polished material—mostly rough.



UP AND COMING

June 19-20--25th Annual Rockhound Seminar, Southwestern Michigan College, Niles, MI.

une 25-27--Lawrence County Rock Club 34th annual show, Monroe County Fairgrounds, Bloomington, IN.

July 9-10--Combined SE Federation and American Federation convention and show, Nashville, TN.

Aug. 8-13--Red Metal Retreat, Houghton, MI.

Aug. 22-Gala club picnic at Clay Township Park. More details will follow.

Sept. 10-12--Toledo Gem & Rockhound Club show.

MARGARET'S COLUMN



What a beautiful Mother's Day weekend! It was a pleasant day for cooking outside. I sincerely hope you all had a nice weekend too.

I understand Ed Miller has a good program planned for us this month. He promised us a program on Alaska, so if you have any material from there, bring it for "show and tell" at this month's meeting.

Congratulations are in order to one of our young members, Daniel Paul Zieger, who is graduating from high school and going into the Navy. Dan has been a member for many years, and we will hate to see him leave, but wish him good luck in his new adventure.

My column is short this month, but I would like to send you all the following thought:

Friends---

A ball is a circle,
No beginning, no end.
It keeps us together
Like our circle of friends.
But the treasure inside
For you to see
Is the treasure of friendship
You've granted to me.
Today I pass the friendship ball to you.
Pass it on to someone who is a friend to you...

Looking forward to seeing many of you at the meeting. Take care.

Margaret

AND THE WINNERS ARE...

Congratulations to the members of the MGMS who were awarded prizes in the 1999 Bulletin Editors Contest. Midwest Federation President Neil Snepp presided over the ceremony announcing the results at

the federation show in Columbus, Ohio, in April.

Our Rockfinder captured third place in the MWF in the category of small bulletins. The certificate and plaque were awarded to Tom Noe, editor.

In the category of poetry, Tom Noe's entry, "Wyoming Cycad," was awarded third place. Bob and Margaret Heinek's humorous article in the advanced adult category was named to fourth place. The article concerned "The Romance of Crystal O'Quartz and Cab O'Shawn." Pat McLaughlin's article, "Crazy from the Heat," describing a collecting trip to southern Indiana, won an honorable mention certificate.

By the way, all members are invited to send in original articles, poetry, cartoons and story ideas for *The Rockfinder*. Juniors are welcome to contribute articles--there's a special contest category for them. Contact Tom Noe for more information or to submit articles.

MICHIGAN GEOLOGY & GEMCRAFT SOCIETS

ROCKHOUND SEMINAR

JUNE 19 & 20, 1999

SOUTHWESTERN MICHIGAN COLLEGE NILES, MI



....AND MUCH, MUCH, MUCH MORE!!!

TICKETS: \$15.00 per day. Advance \$12.00 For further information/schedule and advance tickets:



Cathy Hodgson 1360 Roods Lake Road Lapeer, MI 48446 (810) 664-8985 5-9 pm



AINUTES OF THE APRIL 25, 1999 MEETING

The meeting was called to order by President Margaret Heinek at 2:05 p.m. Present were two junior members and 22 adult members, including some new members who were attending their first meeting. Welcome!

The hospitality committee consisted of Molly Elwell and Bess Wise, who served bar cookies and other goodies.

David Peltz made a motion, seconded by Margaret Schultz, to accept the minutes of the previous meeting as printed in the last *Rockfinder*. The motion passed unanimously.

An extensive treasurer's report followed, presented by Bob Heinek. It will be filed for audit.

Tom Noe showed the two plaques which were awarded to club members at the recent Midwest Federation convention. *The Rockfinder* was awarded third place under the category of small bulletins, and Tom's poem "Wyoming Cycad" was awarded third ace in the poetry category. Bob and Margaret Heinek's article won fourth place in its category and Pat McLaughlin's article describing a collecting trip received honorable mention.

Tom Noe gave a short preliminary report on the success of the silent auction, indicating that over \$400 was added to the club treasury. Income from these sorts of fundraising activities goes toward the cost of providing free bus transportation on the club field trips and also toward the cost of other club activities.

Margaret mentioned that dealers at the April show were pleased with their sales. The attendance wasn't high, but the people who came wanted to buy and that makes the difference.

Kathy Miller reported that the fall field trip to Oxford, OH, to collect fossils is nearly full. There are still a few vacancies to fill, so contact Kathy if you would like to sign up. Other members shared some of their recollections of visiting this area on a previous trip.

Don Church has finished with restorations on the green display cases which the club sets out at shows. There are two more cases which could be

filled, one with minerals and one with fossils. Margaret called for members to donate items for display in these cases. Size is important, since the items have to fit in the various compartments, so check with Margaret if you have material to donate. It should be identified, and should look interesting in a display setting. Many thanks to Don for his work on this project.

The club picnic will take place August 22 at Clay Township Park. Mark your calendars. More information will be announced in *The Rockfinder*, and all members are welcome.

Margaret noted that all who are going on the bus trip to Ohio must be members of the club. Otherwise our insurance policy won't cover us. So, if your friends or relatives want to sign up for any vacant spots, they must also join the club.

Door prizes were presented to Bob Heinek, Don Church, Herb Luckert, Sr. Georgia, Bess Wise and Tom McLaughlin. Door prizes were also given to junior members Adam Maust and Lauren Slattery.

Displays brought in by members included a large piece of calcite in limestone found locally, some gem stones purchased on a recent trip to Brazil and a real prize--a complete tooth from a baby mastodon found by Tim Maust at a Mishawaka construction site. The skeleton had apparently been crushed and scattered during the construction, and various fragments of bone were lying around. The Mausts collected whatever they could find, including the cap of enamel from an adult tooth.

David Peltz made a motion, seconded by Kathy Miller, to adjourn the meeting for refreshments and the day's activity, which was to put together handouts and prizes for the children attending the club show on Labor Day Weekend. Mike Slattery organized folks in an assembly line for filling grab bags and setting aside materials for the free egg-carton mineral collections.

While members were busy gabbing and filling grab bags, Ed Miller set up a silent auction and ran a video of some gorgeous mineral specimens. At the end of the day, several boxes of prizes for the kids were sent off to the storage shed for the fall show.

FOSSILS/FUN/FIELDTRIP/FELLOWSHIP

The Michiana Gem & Mineral Society has a Cardinal coach chartered for September 24, 1999, through September 26, 1999. Our destination is Oxford, OH, Brookville, IN, and nearby areas. This field trip is to fossil-collecting sites of the Cincinnatian Series (Ohio fossilized marine animals and Indiana Ordovician fossils).

The following is a brief itinerary for those going on this weekend field trip:

FRIDAY, September 24, meet at the K-Mart parking lot on the corner of Ireland Road and Michigan Street. We will board the Cardinal bus at 3:45 p.m. and leave at 4:00 p.m. Your cars may be left in the parking lot for the weekend. There will be one stop on the way to Oxford, OH, where our motel is. Arrival time between 9-10 p.m.

SATURDAY we board the bus at 9:00 a.m. (pray for a sunny day), and depart for collecting. We will collect until 3:00 p.m., when everyone will have found good material. Bus will return us to our motel so we can get cleaned up for dinner.

At approximately 5:00 p.m. we board the bus again for a short drive to town; our motel is two or three miles on the outskirts of town. We have a dining room reserved for us at the Oxford Union on the campus of Miami University. This enables our group to enjoy fellowship together and rehash those special finds of the day. After dinner we can take the bus back to our motel to relax. If there is time before dinner, possibly we can enjoy a short time in downtown Oxford to walk around and see the sights, or a short tour of the Miami campus.

SUNDAY we will leave the Oxford Motel at 8:45 a.m. We will have a personal tour of the Karl E. Limper Geology Museum, an experience everyone will enjoy.

After our tour we will leave Oxford for another collecting area (pray for a sunny day). We will collect as long as time allows or until our bus driver tells us it's time to hit the road for home. By that time we should all have acquired many prize specimens. Myself, I am partial to garden rock and leaverites, — just ask Bob!

If for some reason, and I don't want to think about it, we should have rain, Bonnie has an alternate plan for us that is excellent too. At this time I would like to express thanks to Bonnie and Matt Brueseke for all the work they have done to help make this a great rockhound weekend for us.

On our way home we will stop at a fast food restaurant (driver's choice) then sit back and enjoy a good movie on the bus for our return trip home. Arrival time 6:00 p.m.

WHAT TO BRING...

Rock equipment - collecting bag, rock hammer, chisel, pick, eye protection, rake and a box for your specimens to be stored under the bus.

<u>Collecting clothes</u> - extra socks, OLD shoes, be aware of weather (rain gear), and bug spray.

<u>Food</u> - bring a small cooler for pop and snacks that can fit under the seat of the bus, and another cooler (if desired), for the luggage compartment of the bus containing extra drinks, your brown bag lunch for Saturday afternoon, and/or more snacks for the bus and your motel room. The Oxford Motel told me they do serve a continental breakfast.

THIS IS GOING TO BE A GREAT FIELD TRIP FOR MICHIANA MEMBERS OF ALL AGES. LET US LOOK FORWARD TO A GREAT ROCKHOUND WEEKEND!

Kathy, Bonnie and Matt - Co-chairs



LAPIDARY SCHOOL

This year the William Holland School of Lapidary Arts is providing two weeklong workshops, one in June and one in October, in Georgia. Many aspects of jewelry and lapidary work are covered. If you would like more information, contact Herb Luckert or, log on to the school's web site (http://stc.net/~lapidary), or phone 706-379-2126. Housing is available.



MAZON CREEK: SECRETS UNEARTHED

By Jeanine N. Mielecki

When it comes to fossil collecting, I'm the persistent type. So, after having found less than a half-dozen fossils in three visits to the Mazon Creek area in northeastern Illinois, I didn't get discouraged. I decided to find out what others knew that I didn't by making "field trips" to the Mazon Creek Open House held at Northeastern Illinois University (NEIU), the Internet, a local rock shop, and by digging into a mound of books and literature. Here's what I discovered.

Mazon Creek fossils from the Pennsylvanian Period, 300 million years ago (mya), are primarily found in Grundy, Will, Kankakee and Livingston counties. The area, world-famous as a lagersträttren for the exceptional diversity and preservation of its fossil record, first captured the attention of the scientific community in the 1840s, with the discovery of terrestrial plants and soft-bodied animals in local river banks. Commercial coal mining removed the overburden above the Frances Creek shale, where these fossils are found, on a large scale from the 1870s through the 1960s, which brought more exciting discoveries to light. When the Peabody Strip Mine, known today as Pit #11, opened circa 1945 between the towns of Braidwood and Essex, the discovery of soft-bodied marine animals this time rocked the scientific world. In 1958, Francis Tully found something highly unusual, brought it to the Field Museum of Natural History for identification, and became one of the great names in amateur paleontology. The Tully Monster, tullimonstrum gregarium, is the Illinois state fossil and found nowhere else. Today, important new discoveries increasing our knowledge of past life continue to be made by both amateurs and professionals—one of them could be you!

North America was a very different place 300 mya. Much of the land was covered with equatorial swamps, river deltas, and warm, shallow seas. The Mazon Creek area was a river delta teeming with the life forms of all three ancient environments.

Depending on where the fossils are found, they will be from one of the three zones forming the total Mazon Creek Biota. Fossils of the Essex facies, found south of the town of Braidwood, are the remains of near-shore, marine life. Fossils of the Braidwood facies found to the north consist of two subbiotas: the Braidwood Fauna, the remains of the animal inhabitants of the non-marine portions of the swamp; and the Braidwood Flora, the plant remains of the terrestrial lowlands. A site yielding fossils of plants and insects generally will not be a place to find mollusks and jellyfish, and vice versa. Yet within the limits of Pit #11, both plant and animal fossils can be found.

Mazon Creek fossils are found inside siderite (iron carbonate) concretions that are fine-grained; round, oval or flattened; and rusty orange, brown, gray or dark red. Texture and color will vary by location, even when collecting sites are just miles apart.

Mazon Creek animal fossils include fish, crabs, shrimp, clams, centipedes, millipedes, worms and jellyfish. Plant remains include the bark, roots, stems, fronds, leaves, seeds or cones of lycopods (club mosses), seed or spore ferns, calamities (horsetails) and more. Trace fossils can be animal tracks, trails and burrows, eggs, fish scales or coprolites. Rare amphibians, insects and spiders have been found. Although they evolved during the Pennsylvanian, remains of reptiles have not been discovered here.

The taphonomy (the process that takes place from the time a plant or an animal dies to when it is buried) of these fossils remains somewhat of a mystery. Two theories exist. One is the plants and

animals that died along the river were swept into the coastal bay, where they sank to the bottom, and were rapidly buried in silt. Bacteria began decomposing the remains, creating carbon dioxide which combined with iron in the groundwater to cement the silt.

Or, the fossil concretions could have been created when tropical storm surges flooded the area many times over the ages, encasing the plants and animals in a thick, iron-rich layer of mud and silt.

Years ago, opportunities to collect in the Mazon Creek area were abundant; this is not true today. Many mines and spoil piles have been leveled. Others sites require the landowners' permission, which may be hard to obtain due to legal issues. A permit is necessary to collect around the cooling pond for the Braidwood Nuclear Plant, where the sites at Pit #11 are located.

When collecting in the field, it pays to "think small." While fossil-bearing concretions can range in size from more than one foot to less than an inch, many excellent specimens I've seen on display are on the smaller side—including a one-inch concretion containing a scorpion.

Fragments of concretions also can contain attractive fossils. If you find a piece containing something really good, like a Tully monster(!) or an insect wing, be persistent, the counterpart may be a few or many feet and hours of work ahead.

Many of the concretions may not contain quality specimens or anything at all. One expert, who estimates he has collected 500,000 concretions since 1973, told me, only 5,000 of these have yielded good specimens. Although the chance of finding a magnificent specimen may seem daunting, it's the quest for knowledge and the thrill of the search that keep me coming back.

I have also learned that I made a common error when trying to split open my concretions; I smashed them with my hammer, ruining several of my most promising finds. If the concretions don't open with a few gentle taps of the hammer (do this in the palm of your hand and if it hurts, that's too hard), use the freeze-and-thaw method: place the concretions outside over the winter in a plastic bucket filled with water, then try opening them again in the spring. Several years may pass before many of them open (or not at all); one of my concretions recently split open after a five-year wait to reveal a seed fern stem and seed.

There is also the "fast" way: cut the bottom off a plastic, gallon-size bottle, put the concretions inside, fill with water, place it in the freezer for a few days, then take it out for a few days. Do this a dozen times or so before trying to open the concretions again.

In addition, concretion look-alikes, iron-stained, glacial pebbles and pieces of sandstone or shale, are abundant in the field. To avoid hauling home more "duds" than necessary, keep in mind that sandstone is generally paler in color and not as finely-grained as siderite, and shale tends to be angular in shape....

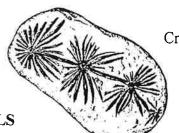
Leave your heavy-duty digging tools at home—concretions in the Mazon Creek area are found through surface collecting. What you want to bring are: a large plastic bucket or canvas collecting bag, a garden trowel, a small ice pick, chisel or screwdriver to pry concretions from the soil, a hand lens, a notebook for recording your finds and a rock hammer. Split concretions can be fragile. You may want to bring zipper-lock plastic bags and paper towels to wrap them. Other items to consider bringing: a disposable-camera should you make that find of a lifetime, and a whistle to be better heard should you get lost.

One more tip: eroded gullies are the best place to start looking for concretions, and after a heavy rain, the best time. Good luck and have a fossiliferously rewarding time!

For more information on field trips to Pit #11, conducted by The Mazon Creek Project of NEIU, send a self-addressed, stamped envelope to:

Gina Wysocki

1228 N. Raynor Ave. Joliet, IL 60435 C/O Mazon Creek Project



Crystal Cluster

February 1999



MAZON CREEK FOSSILS

MGMS members, if you would like to use the club's permit to hunt for leaf and other fossils in the Mazon Creek area of Illinois, be sure to contact Kathy Miller before you leave. She has the permit and all the necessary information.

THE WORLD'S EASIEST QUIZ

- 1) How long did the Hundred Years War last?
- 2) Which country makes Panama hats?
- 3) From which animal do we get catgut?
- 4) In which month do Russians celebrate the October Revolution?
- 5) What is a camel's hair brush made ot?
- 6) The Canary Islands in the Pacific are named after what animal?
- 7) What was King George VI's first name?
- 8) What color is a purple finch?
- 9) Where are Chinese gooseberries from?
- 10) How long did the Thirty Years War last?

ANSWERS

- 1) 116 years, from 1337 to 1453.
- 2) Ecuador.
- 3) From sheep and horses.
- 4) November. The Russian calendar was 13 days behind ours.
- 5) Squirrel fur.
- 6) The Latin name was Insularia Canaria Island of the Dogs.
- 7) Albert. When he came to the throne in 1936 he respected the wish of Queen Victoria that no future king should ever be called Albert.
- 8) Distinctively crimson.
- 9) New Zealand.
- 10) Thirty years, of course. From 1618 to 1648.

BRITTLE FLUORITE STILL AN OHIO GEM by Dale M. Gnidovec via *Chip & Lick*, January 1999

Ohio is famous for some of its fossils, but it is not well known for minerals. One of the minerals Ohio has that is sought by collectors is fluorite.

Fluorite is calcium fluoride. It is composed of calcium and fluorine in a 1-2 ratio. The name comes from the Latin *fluere*, to flow, in reference to its use as a flux in the smelting of metals. In the making of steel, for example, 2 to 20 pounds of fluorite is used per ton of steel to remove impurities.

Fluorite once was the principal ore of fluorine, an extremely reactive element with many uses. Fluorite compounds are used in refrigerants, solvents and resins, and are added to drinking water to strengthen teeth. Hydrofluoric acid is used to refine aluminum, and fluorine is an ingredient in Teflon.

Some specimens of fluorite are fluorescent; they take in light of some wavelengths and change it into other wavelengths. The process was first explained in 1852 by Sir George Stokes, who gave the mineral's name to the phenomenon.

Some specimens of fluorite are phosphorescent (they continue to glow even after the light source is removed) or thermoluminescent (they emit light when heated).

Fluorite usually crystallizes as cubes. Less often it forms octahedrons (eight-sided crystals)

and rarely dodecahedrons (12-sided crystals). When pure, fluorite is colorless and transparent, but the mineral is often beautifully colored.

It may be deep blue, sky blue, purple, green, yellow, pink or brown. A single crystal may be multicolored, with the colors appearing as bands or streaks. The borders between colors may be razor sharp or diffuse, grading from one color to another.

The pretty colors and shiny luster of fluorite would make it a beautiful gemstone if it weren't for some of its other characteristics. Fluorite is one of the index minerals on the Mohs hardness scale, but at 4 it is much too soft to be gem. It is easily scratched and scuffed. It is also rather brittle and has prominent octahedral cleavage, meaning that it readily breaks along eight planes. Not a characteristic you'd want in a gemstone.

The best fluorite specimens in Ohio come from the Findlay Arch district in the northwest part of the state. The towns of Tiffin, Bellevue, Blufton, Clay Center, Junction, Lime City and Gibsonburg have produced world-class specimens. Cubic crystals up to 3 inches across have been found. Most Ohio fluorite is dark brown, but may be colorless, pale yellow, purple or pale green.

Some of the most beautiful specimens have a brilliant iridescent sheen caused by coatings of pyrite or other minerals.

Fluorite is truly one of Ohio's treasures.

Dale M. Gnidovec is collection manager of the Ohio State University's Orton Geological Museum. He is online at gnidovec@orton.mps.ohio-state.edu.

MYSTERIOUS "MAN TRACKS" IN CARSON CITY

One of the strangest controversies in American paleontology began at the Nevada State Prison in Carson City. In the early 1880s, inmates uncovered a sandstone bed crisscrossed with more than 50 ancient trackways. Many of the tracks were easily identified, and belonged to deer, mammoth, dogs, wolves and birds. But the most common print, large and somewhat kidney-bean shaped, was unknown to science, and became the object of bitter debate. One group of paleontologists insisted the tracks were made by sandal-wearing giant humans. Mark Twain, who was working in Virginia City at the time, declared the footprints to be a record of "the drunken staggerings of primeval members of the Nevada Territorial Legislature on a rainy night." Eventually, the tracks were identified as those of a giant Pleistocene ground sloth, probably Mylodon.

Jennifer Hogler in Golden Spike News 3/97