

THE LAKE AGASSIZ ROCK HOUND

Volume 18, Issue 02

February 2018



Mystery Rock Found in MN

Three years ago in 2014, a rockhound found a 22 pound stone and had no idea what he might have discovered. So ugly it was cute!

A person can see the original YouTube at: <https://www.youtube.com/watch?v=VJGzEBgVIL0>

Elad Noslo

Published on Jul 10, 2014

Mystery Rock Found in Minnesota close to St. Croix River. Found this in an area we have been finding agates in. I'm not sure what it is. If there are any expert opinions, I'd love to hear them.

EN continued:

It feels like a piece of coral and it almost has the look of coral from a distance. It actually is kind of kooky. My wife loves it but she won't let it in the house. I'd say 75% of the surface is covered in tiny geodesic type crystals.

Godgesil Rex responded – (3 years ago)

What you have looks to be a siliceous concretion. The irregular crystals look to be silica, and as you observed there is also some iron cement thrown in as well. Most concretions form during diagenesis when dissolved silica, iron or calcite move through sediments in percolating ground water and then precipitate out around an organic nucleus, say a shell or leaf and continue to grow. As observed in your specimen, anything in the surrounding sediment gets incorporated into the concretion, gravel, rocks, etc.

Since the area you were searching in is known for micro crystalline quartz it stands to reason that the geochemistry of the area is dominated by quartz and ground water would have a lot of free quartz in it. We are not talking near surface here, diagenesis occurs at great depth, where temperatures and pressure enhance the solubility of quartz. You've seen travertine deposits near springs or caverns, where calcium carbonate laden water comes to the surface and deposits dissolved calcium carbonate as travertine limestone. Dunn's River Falls in Jamaica is a great example. This same sort thing occurs with silica but at greater depths. As you can imagine the solubility of quartz is low under near surface conditions, so any kind of microcrystalline quartz needs high temps and pressures. Chert nodules found in limestones, usually with long bands, form the same way. Silica deposited with the limestone, in the form of siliceous skeleton parts of micro-organisms, migrate and coalesce over time to form the chert nodules [which also interbedded with the limestone. [in this sample]



Please Come to the LARC

February 2018 Meeting

**Wednesday, Feb 7, 7:30 pm
Stevens Hall Room 136, NDSU**

Program:

Jerry Loegering brings a great DVD about White Sands NM where he has gone 'hounding' himself

Silent Auction:

Valentine's specials, bring out the ones every one "hearts" for

Guests are always welcome!



[Other, shorter or speculative replies were also noted and can be found at the addy given earlier, at EN's post.]



Lake Agassiz Rock Club

President: Frank Svezia
Vice President: James Zinke
Secretary: Chris Patenaude
Treasurer: Terry Mallick
Silent Auctions: Jerry Loegering
and/or other members as happens
Program planning ideas/volunteers welcome

What is our Purpose?

To create an interest and promote a knowledge of all phases of geology in an informal setting.

Where and When Do We Meet?

The Geology Lab, Room 136, on the lower level of Stevens Hall, NDSU, Fargo. Time: 7:30 p.m.

[From N. University Dr. turn West on 12th Ave. N. Turn North on Bolley Dr. Drive just past Centennial Blv. See **Stevens Hall** on west side of Bolley, 2nd hall from the corner. To park, go into next driveway ahead, on the left. Drive west, then left again behind a laboratory building to Stevens Hall back-lot.]

How Much Are the Dues?

Single person—\$20.00; Family—\$30.00; College (any school) students and youth (if not a family member)—\$10.00 per year. Send dues to Terry Mallick, Treasurer; 416 3rd Avenue S., Moorhead, MN 56560.

What Happens at Meetings?

We cover business; then the main program; a silent auction of rocks, minerals, and fossils; and “lunch”.

What are some of our Club Activities?

Members and their families enjoy many exciting activities. Youth are always welcome. Field trips are taken to collecting areas in ND, SD, and MN. We do exhibits at the R.R.V. Fair and other events. LARC sponsors an award to an outstanding Geology student at NDSU each year. Often we offer info-lessons given just before the scheduled meetings.

What are Our Club Affiliations?

We are affiliated with the Midwest Federation of the Mineralogical and Geological Societies and the American Federation of Mineralogical Societies.

How Do We Keep in Touch?

The *Lake Agassiz Rock Hound* is our monthly bulletin mailed one week before each meeting. Non-members may subscribe to it for \$10.00 per year. Members are urged to send news tips and articles to the editor: Chris Patenaude P.O.Box 434, Perley, MN 56574 or email. LakeAgzRC70@yahoo.com.

Rock Hound articles may be reprinted if full credit is given, unless otherwise noted.

Minutes from January 3rd, 2018 Meeting

Submitted by Chris Patenaude, Secretary

Delayed start... Cold outside! Actual NDSU student class (post-Holiday) resumption not due to start till the next day. We had to call campus security to get the meeting room opened. Welcome back to the New Year! Officers present, Frank Svezia, James Zinke, Terry Mallick and Chris P.

First order was a reading of November 2017 meeting minutes as published in the December Rock Hound, since there were no minutes at the party in Dec. Merle H. moves to accept the Secretary's Minutes, Amy H. (not related) seconds. [Editor's Note: Looking ahead to these Rock Hound Newsletters being posted on the world-wide internet-access soon, with our new Website being crafted. In the interest of personal and Identity privacy, noted members' surnames will be given the Initial only, unless otherwise needed in the course of a news article or other event.]

Treasurer's report covers "impact of our NDSU Jr. Class Scholarship." Letters from NDSU have been written in to thank and congratulate the Club on the good the scholarships do. Terry says Barbara Weatherston writes in with welcome comments about her late husband George's fossil and mineral collection. George was an eager LARC member right up to his passing. [See larger spread on the insert re> these topics.]

Treasurer's report also mentions that the basic fees, costs & expenses for Deane's Diner were covered. Thanks were expressed to Dan E. for the fantastic gift/door prizes he put together for the party. Very appreciated and enjoyed! Jerry L. moves to accept Treasurer's Report, Amy H. 2nd s.

Joe Seaman moves to let the Holingshead family have a free

[CONTINUED ON PG 3]

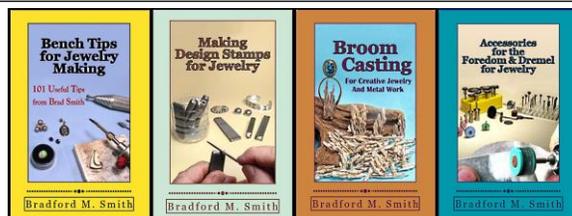
Brad Smith's Bench Tips

LOCAL METALS SOURCE

Local companies that use sheet metal typically have barrels of scrap copper, brass and aluminum sheet that they save for recycling. The shop owner/manager will usually let you go through it to select the shapes and thicknesses you want. Prices vary but will generally be close to the wholesale per-pound scrap value. For me at this time, that's \$3 per pound for copper.

I've found it's much cheaper to buy metal this way than ordering from a catalog. There are no shipping charges, and you'll be supporting a local small business in your community.

Remember to bring your work gloves if you try this. Also useful is a thickness gauge. When I asked if they had any 14 gauge, they didn't know. Turns out they measure the thickness of copper by its weight per square foot.



(Meeting Minutes cont.)

membership for 1 year in honor of their hospitality and warm invitation for us to rock-hound on their property. We will likely be using their resources again in the future. Merle H. 2nd s.

Ben K. extends thanks to the Club for the memorial gift to the Scholarship fund in the name of their Mom, Jeanne.

Merle and Susan H. have re-contacted "Laura" the teacher in Casselton who was looking for a speaker/demonstration. They will continue conversation to that end.

Amy H. motions to close the business meeting. Jerry L. 2^{nds}.

NDSU NORTH DAKOTA
STATE UNIVERSITY

DEPARTMENT OF GEOSCIENCES

Peter G. Odour, Ph.D., Chair

NDSU Dept 2745 / PO Box 6050 / Fargo ND 58108-6050

Terry,

Thank you for donating to the Lake Agassiz Rock Club Scholarship Fund and also remembering a few people, e.g. Jeanne Kessel, Marle Thorstad and George Weatherston. We immensely appreciate your generosity!

The Lake Agassiz Rock Club Scholarship is an integral scholarship that benefits our students with an immediate impact.

On behalf of the department, I extend our sincerest gratitude to your generosity. May you be eternally blessed!

Peter

Huge ancient penguin inhabited New Zealand

WASHINGTON (Reuters) - Scientists have unearthed New Zealand fossils of what might be the heavyweight champion of the penguin world, a bird nearly 6 feet tall that thrived 55 to 60 million years ago. The asteroid that wiped out the dinosaurs also did in most large marine reptiles, which opened the oceans to fish-eating, diving birds like penguins.

Penguins are thought to have evolved from ancestors like a cormorant. Researchers said the ancient penguin, called *Kumimanu biceae*, weighed nearly 225 pounds and was much bigger than the largest modern variety, 90 lb. Emperor Penguin. The *Kumi* may have been brownish instead of black and white.

Fossils indicate that the earliest penguins possessed much longer beaks than their modern relatives, useful for spearing fish. "It would have been very impressive: as tall as many people, and a very solid, muscly animal built to withstand frequent deep dives to catch its prey," said Alan Tennyson, vertebrate curator at the Museum of New Zealand. *Kumimanu* and other early penguins had already developed typical penguin features including flipper-like wings and an upright stance.

2018 MWF Convention

sponsored by the

**Lincoln Orbit Earth Science Society,
Springfield, Illinois**

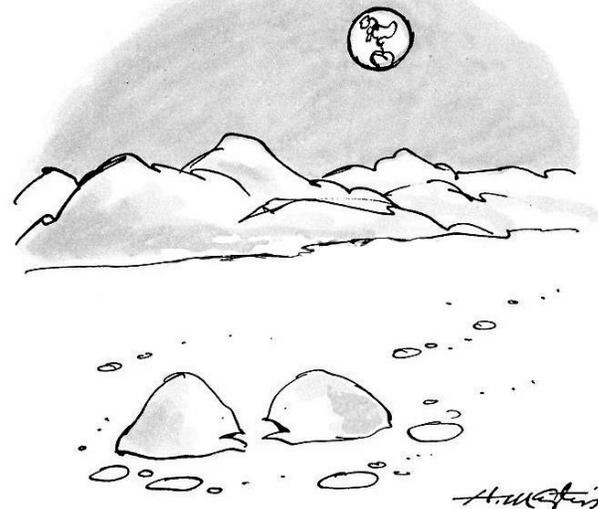
October 2018

Scientists home in on a potential Anthropocene 'Golden Spike'

An international working group, which includes geologists Jan Zalasiewicz, Mark Williams and Colin Waters, from the University of Leicester's School of Geography, Geology and the Environment and archaeologist Matt Edgeworth has, since 2009, been analyzing the case for formalization of the Anthropocene, a potential new epoch of geological time dominated by overwhelming human impact on the Earth.

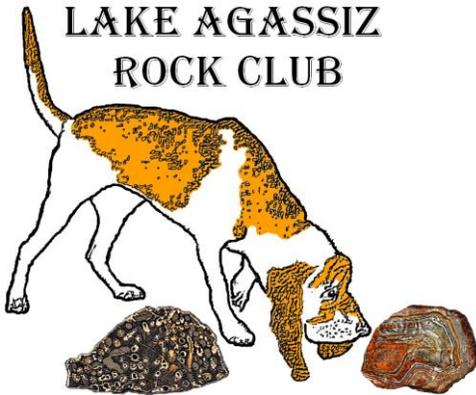
The group has found that a broad range of potential physical, chemical and biological markers characterize the Anthropocene, the clearest global markers being radionuclide fallout signals from nuclear testing and changes in carbon chemistry through fossil fuel burning -- these in particular show marked changes starting in the early to mid-1950s.

The group, with a number of invited scientists, has now reviewed present knowledge on where these and other markers form the clearest, sharpest, and most stable signal in strata that might be used to define the Anthropocene as a formal unit of the Geological Time Scale.



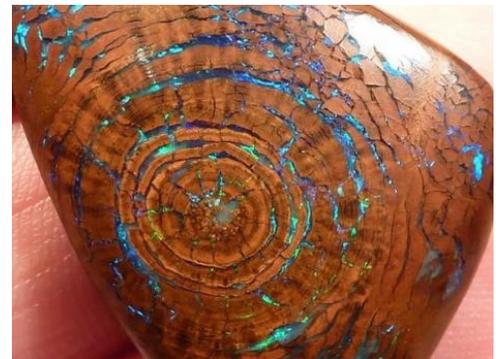
*My guess is: if there are rocks on the Moon,
there are rocks on Mars.*

Lake Agassiz Rock Hound
 P.O. Box 434
 Perley, MN 56574



Opalized fossils brighten the plainest past!

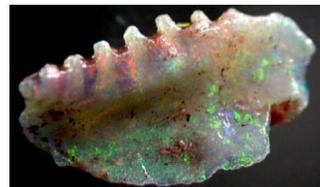
Opal is the product of seasonal rains that drenched dry ground. Think Australia, Nevada or any other spot on earth that formed fossils in one era then dried out and was also desert for a million years. The showers soaked deep into ancient underground rock, carrying dissolved silica (a compound of silicon and oxygen) downward. Molecule at a time, the silica deposits replaced extant fossils in place. These fossils are literally gems: teeth, bones, shells and pinecones which have turned to solid opal.



Opalized wood from Australia, above, and Nevada, below.



Belemnites looked like a squid. This piece is part of the shell, an internal support, like the pen of a cuttlefish.



(left) A tiny Fish Jaw takes on sheen as an opal;



a sizeable Dino Toe-bone has a glow.



(Left) Opalized gastropods (snails with a shell to pull up into) Small *and* Big!