

---

---

# THE LAKE AGASSIZ ROCK HOUND

---

---

Volume 20, Issue 3

March 2020

Y'all know ND's State Fossil... Now Meet Teredo's Godzilla Cousin, *Lithoredo abatanica*



*ND's Petrified "Teredowood" sample*

Between a rock and a hard place? That's just where *Lithoredo* likes it. Researchers found the new-to-science shipworm, a kind of clam, in the Abatan River on the Philippines' Bohol Island. It was a stunning sight.

"It is unlike any other shipworm, both in its appearance and its unusual habits, and this was apparent from the very first moment I laid eyes

on it," says marine biologist Dan Distel, executive director of the Ocean Genome Legacy Center at Northeastern University and senior author of the June paper describing the animal in the journal *Proceedings of the Royal Society B*.

Shipworms got their name because they bore through wood that's in contact with water. They leave behind tunnels lined with the calcium carbonate that they secrete, similar to the way their clam kin build shells. Shipworms have been a maritime plague for millennia, destroying boats and piers. But *Lithoredo abatanica* nibbled its way down a different evolutionary path. This shipworm eats rock!



*Individuals such as this 4-inch-long specimen secrete calcium carbonate that hardens into a burrow lining. (Credit: Marvin A. Altamia and J. Reuben Shipway)*



Distel's field colleagues, acting on a tip from an earlier French expedition about shipworms apparently boring into the Abatan River's bedrock, had to strap on snorkeling gear to search for the animals. "[We] picked up these rocks, swam them over to the bank and proceeded to crack [them] open with a hammer and chisel," says Reuben Shipway, the paper's lead author and a marine

biologist at the University of Portsmouth. "Splitting the rock open to reveal several shipworms inside was just so bizarre."

Specimens of *Lithoredo* range from less than an inch to more than a foot long. Perhaps not surprisingly, given its unique diet, the animal lacks the sharp, wood-chewing pseudo-teeth of all its relatives and instead has broad, spatula-like chompers.

Finding the rock-eating shipworm raises a broader issue. Because the shell-like burrow linings of shipworms can survive in the fossil record long after the wood around them is gone, these tube-like structures have been used by researchers as a proxy for the presence of woody material in ancient environments.

*Lithoredo's* dining preference for limestone means that scientists can no longer make such an assumption. The animals who left the linings behind might have just been rocking out, and wood was never there.

"I think people tend to assume that nearly everything is known about the diversity of life on our planet, but nothing could be further from the truth," says Distel. "The world is full of amazing creatures that have yet to be discovered, creatures that are stranger than fiction."



*Holes in limestone from Lithoredo.*

**Please Come to the LARC  
March 2020 Meeting  
Wednesday March 4<sup>th</sup> 7:00 pm  
Stevens Hall Room 134, NDSU**

**Program:**

Still uncertain at press time  
We do have NICE YouTube clips on tap

Remember! Pebble Pups at Crystal Rock  
6PM on March 4<sup>th</sup> Merit Badge Fieldtrip

**Show & Share topic**  
Keep those great Geodes & T.-Eggs coming  
**Guests are always welcome!**

# Lake Agassiz Rock Club

**President:** Frank Svezia  
**Vice President:** Nina Flippance  
**Treasurer:** Terry Mallick  
**Secretary:** Chris Patenaude  
**Youth Group/Pebble Pups:** Nina Flippance  
**Program planning ideas/volunteers welcome**

## What is our Purpose?

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

## Where and When Do We Meet?

The Geology Lab, Room 136, lower level of Stevens Hall, NDSU, Fargo. Time: 7:00 p.m. This placement may change soon as we are seeking a larger space for our members. Directions meanwhile:

[From N. University Dr. turn West on 12<sup>th</sup> Ave N. Turn North on Bolley Dr. Drive just past Centennial Boulevard. See **Stevens Hall** on west side of Bolley, 2<sup>nd</sup> hall from the corner. To park, go into next driveway ahead, on the left. Drive west, then left again behind a lab building to Stevens Hall back-lot. Enter E. door or call a member to hold N. door.

## 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. Or contact him during regular meetings.

## What Happens at Meetings?

Our youth group The Pebble Pups attend their own separate group meeting, while the adults cover business. The kids join us for the main Program; a silent auction of collectable minerals; and "lunch".

## What are some of our Club Activities?

Field trips are taken to areas ND, SD, and MN. We fundraise at the R.R.V. Fair. LARC sponsors a scholarship to an outstanding Geology student at NDSU each year. Personal Info lessons can be arranged for pre-meeting times. Lots of Show & Tell at meeting nights!

## What are Our Club Affiliations?

We are affiliated with the American Federation of Mineralogical Societies. (**AFMS**) We are in the subsector Midwest Federation of the Mineralogical and Geological Societies. (**MWF**)

## How Do We Keep in Touch?

Website: > <http://www.lakeagassizrocks.com/> <  
Facebook: > [lakeagassizrocks.com/about.php](http://lakeagassizrocks.com/about.php) <  
The Lake Agassiz Rock Hound is our monthly bulletin e-mailed 7 days before meetings. Paper copy free to active members **without** computer access. \$15 dollar subscription/ yr. for hardcopy to members who want one in addition to their e-addy. **Send news tips and articles** to the editor: Chris Patenaude P.O.Box 434, Perley, MN 56574 or email [LakeAgzRC70@yahoo.com](mailto:LakeAgzRC70@yahoo.com). Rock Hound articles may be reprinted if full credit is given, unless otherwise noted.

LARC is an all-inclusive, diverse group. We welcome and respect every person in regard to age, gender, heritage, language, social class or disability. Discrimination or ill will towards another will not be tolerated. We are here to support any and all who love the hobby.

# Minutes from February 5th, 2020 Meeting

Submitted by Chris Patenaude, Secretary

In honor of Valentine's Day, Cam L. brought a box of hearts! All her wonderful Show-n-Shares were heart-shaped in one way or another. Going with the Pebble Pups' phenomenon theme as well, there were Shimmery Labradorite, rainbow Obsidian & "Bumblebee Jasper" (Rhyolite from Indonesia). One geode's 'window' into its center was a druzey-sparkly heart shape. One unusual 'heart' was made of "gold"... it was an example iron-pyrite, flat as a sand-dollar and textured with golden rays from the center out. This format is called a "Sun Dollar" and grows in coal, of all things!

Merle and Susan H. filled their corner with classic Thunder Eggs from the Bakers' Ranch, AZ. These typically present in earthtones with white accents and deep walnut brown stripes. Additional pieces included Crayola Jasper with green, gold, & red bands. And there was a Picture Agate sporting the distinct image of a gecko lizard!

One young fellow, an NDSU student, came in to glance at our activities. He might likely come back another time to sign up; but under his arm he carried a cooler-sized wooden box. It was full of thumb to fist sized chunks of petrified wood! Have at, he was giving it to us freebie for who ever wanted to adopt a piece or as many as a person took a shine to. Now *that's* an intro.

Dean Hansen is downsizing his quality, agate & misc. collection. He brought gallon baggies of polished stones, full of quartz, agate, jaspers and any color-thing else that might take a great finish. He sold out in a matter of ten minutes, eh!

In the 'business' meeting, Secretary and Treasurer's reports were approved. Moorhead Public Library would like to bring us in for a gig later this summer. Jessie R. suggests a practiced "activity", similar to ours, in that she brings out a whole trough of sand seeded with actual fossils. A person can dig and discover all they want and for as long as they wish, but only pick the *one* favorite to take home.

Topic of discussion... coming up with ways to try and get more of the **60-some** members we do have to attend the regular meetings so we have a fair-count voting on issues that affect everyone...like field trip destinations, expenses being spent for such events, where to put our energy and efforts by vote, not just the bids of a few dozen.

How should we contact more members to get RSVP responses for events, and get more volunteers out for the fundraisers, not just the same **6 or 7** core to support the whole rest of the club? [mmm!]

*Meeting Notes continued on Page 3*

## BRAD'S BENCH TIPS

### Inexpensive Electric Wax Pen

You can make your own wax pen from a small soldering iron plugged into a light dimmer switch for heat control. Both components are easily found at a big hardware store or at Harbor Freight. As an example of the components, see items # 43060 and # 47887

File the tip of the soldering iron into the shape you prefer or even better get a soldering iron with replaceable tips. Then you can make several tip shapes for different tasks. Set the dimmer control just hot enough to melt the wax without producing any smoke.

A tip design that I find ideal for some work is a length of small gauge wire that lets me reach in around the model to melt some wax. The wire is 18ga and about 15mm long. I use Sterling wire to conduct heat easily to the tip, and I silver solder it into a hole on the end of a copper or brass rod that fits into the soldering iron.

Discover New Jewelry Tricks in  
Brad's "How To Books  
[Amazon.com/author/bradfordsmith](https://www.amazon.com/author/bradfordsmith)

Meeting Notes cont.

Discussion point 2... we really need to try and find a larger space to meet and spread out. Examples: there are other AFMS clubs who've chosen room to hold small workshops in a corner after a meeting, say. Reasons to stay with NDSU are obvious, the aura of associating with scholastic environments has status. We have a long standing and co-operative relationship with the Earth Sciences department thru most of LARC's history. The purpose of LARC in the long run is education of youth and fostering exciting interest in future growth of membership.

On the other hand, in another location, we would be paying rent, insurance on property and likely material upkeep in order to get the elbow room and space we obviously *need* if *we want* to expand our horizons and activities.

In the event of moving, would dropping the usual chip out of our treasury, to support an NDSU scholarship, make up for the other expenses? Not really. In order to have enough to work with, we would need more fundraising efforts than we currently lay back on.

Again the question rises... how do we get more percentage of the existing membership to step up to the plate and volunteer time to make this the club we can be proud of and find satisfaction in?

One circle of logical feedback lays on the other in a continuous loop. We need space. To get space we need more financial input. To get more finance we need to hold more events. To hold more events we must get more volunteers to help. To get more members, we need more space.

Comments anyone? Page 2 has our contact routes. E-mail, Facebook and snail mail. Where do we go from here? Like the little robot #5... Input! We need input!

Cam L. has been checking out August fieldtrip options over in Laker Agate country. She's put out feelers to the other two MWF societies in the eastern side of MN. One promising result... there are two gravel pits over by Moose Lake, MN... *prime* agate zone. We need to apply for permits but that's do-able!

Nina F. has relatives over in Idaho that have access to good rock-hounding sites. Spring, before the pucker-brush sprouts too high, is the time to go. She invites members to contact her if they'd like to coordinate travel-times so as to have her as the 'guide' to the best spots. Members can write in to the club e-mail addy for contact info. *[RH is read by others, online now. Nina's offer is private invitation.]*

Longtime member Larry Kessel has opted to take up assisted living at Villa Maria, and can't really get out by himself anymore. He invites visitors and rock-chats to drop by to lighten the moments.

The Pebble Pups put on their Magic Rock Show for us!

**Micah** presented buoyant rocks. The secret is just the right kind of volcanic stuff. Obsidian sinks like a stone ☹️ Pumice floats!

**Arlo** showed us Nature's own magnifying lens... Ulixite. Parallel fibers stacked together creates a magnification effect of image from one *end* of polished fiber surface to the other, lengthwise.

**Adeline** explained the different sources of 'shimmer' between Adularescence of the Labradorite/Moonstone/Feldspar variety, and Chatoyancy from a Cat's-eye or Tigereye stones. Again it's nature's fiber-optics at work from the *side*, instead of the ends.

**Oscar** and **Elizabeth** displayed Phantoms and Inclusions, with crystal specimens that grew new, clearer mineral structure around and on top of older, more nebulous or darker stuff.

The kids turned off the lights to display Quartz Luminescence as pieces of the silicate lit up under impact with other quartz chunks.

**The Pebble Pups will meet on MARCH 4<sup>th</sup> 6PM at Crystal Rock shop at 6PM, 4950 13<sup>th</sup> Ave. S. Fgo.** [Not NDSU with the rest of us on Meeting Nite.] This is a field trip to earn credits toward their Lore and Legend merit badge.

In April, Jesse Rock will be the guest speaker with news about the up and coming F/M Science Museum Project.

## MWF March 2020 Calendar

Edited for dist. to Fgo or popularity; See whole cal. at: <http://www.amfed.org/mwf/Calendar/March.html>

**7-8: MACOMB, IL** Geodeland Earth Science Clubs Annual Show. Sat 10 am - 6 pm; Sun 10 am - 5 pm. Western Illinois University Student Union Ballroom, Murray St., Macomb. Contact: Deb Coursey, (309) 368-8451; [courseyfarms@gmail.com](mailto:courseyfarms@gmail.com) [www.geodeland.com](http://www.geodeland.com)

**12-14: KANSAS CITY, MO** Association of Earth Science Clubs of Greater Kansas City Annual Show. Fri 10 am - 8 pm; Sat 10 am - 7 pm; Sun 10 am - 5 pm. KCI Expo Center, 11730 NW Ambassador Dr., Kansas City, MO Contact: Bruce Stinemetz, (816) 795-5159; [brucestinemetz@att.net](mailto:brucestinemetz@att.net); [www.kcgemshow.org](http://www.kcgemshow.org)

**21: LA VISTA, NE** Nebraska Mineral & Gem Club Rock Swap. LaVista Community Center, 8116 Park View Blvd, LaVista, NE Contact: Bruce Sturges, (402) 680-4051; [bsturges@yahoo.com](mailto:bsturges@yahoo.com); [www.nerockgem.org](http://www.nerockgem.org)

**21-22: WHEATON, IL** Earth Science Club of Northern Illinois Annual Show. Sat 10 am - 5 pm; Sun 10 am - 4 pm. DuPage County Fairgrounds, 2015 Manchester Rd., Wheaton. Contact: Dave Carlson, (847) 931-0856; [fossil54@aol.net](mailto:fossil54@aol.net); [www.esconi.org](http://www.esconi.org)

**28: TAYLOR, MI** Midwest Mineralogical & Lapidary Society Rock Swap. 10 am - 5 pm. St. Johns Lutheran Church, 13115 Telegraph Rd., Taylor, MI Contact: Lou Talley, (734) 837-8920; [ltalley1970@gmail.com](mailto:ltalley1970@gmail.com); [www.mmls.us](http://www.mmls.us)

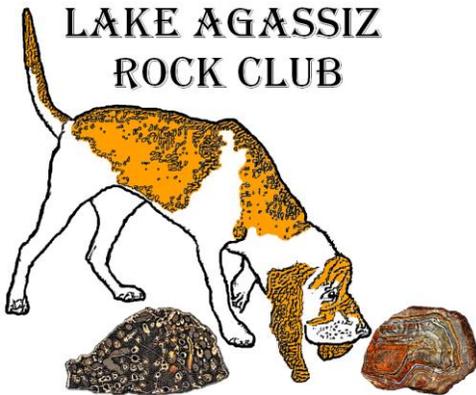
**28-29: CEDAR RAPIDS, IA** Cedar Valley Rocks & Mineral Society Annual Show. Sat 8:30 am - 6 pm; Sun 9:30 am - 5 pm. Hawkeye Downs, 4400 - 6th St., Cedar Rapids. Contact: Marv Hoag, (319) 364-2868; [m-houg@yahoo.com](mailto:m-houg@yahoo.com) [www.cedarvalleyrockclub.org](http://www.cedarvalleyrockclub.org)

**28-29: CANTON, OH** Stark County Gem & Mineral Club Annual Show. Sat 9 am - 5 pm; Sun 10 am - 5 pm. Stark County Fairgrounds, 305 Wertz Ave, Canton. Contact: Scott Walton, (330) 493-5752; [1timothy412@att.net](mailto:1timothy412@att.net); [www.facebook.com/SCOGMC/](http://www.facebook.com/SCOGMC/)

**28-29: JANESVILLE, WI** Badger Lapidary & Geological Society Annual Show. Sat 9 am - 5 pm; Sun 9 am - 4 pm. Craig Center, Rock County Fairgrounds, 1301 Craig Ave, Janesville. Contact: Laurie Trockke, (608) 935-0597; [glowyrocks@gmail.com](mailto:glowyrocks@gmail.com); [www.badgerrockclub.org](http://www.badgerrockclub.org)



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



Carnac Standing Stones, Brittany  
in N. Western France

### European Walking Tours of Things Humans Build Out of Stone and Rock

Like a stone warship away from  
the French coast, Fort Boyard was  
a fortress and a military prison.



Pont Du Gard, aquafer  
France

Schwerin Fantasy Castle,  
Germany



Grande-Dixence Dam, the largest  
gravity dam in the world.  
Switzerland.

The "Well" of Sinta, Portugal, wasn't  
used as a source of water but for  
secret initiation ceremonies with  
Templar knights and Rosecrucians.

