

THE LAKE AGASSIZ ROCK HOUND

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From Stone Age chips to microchips: How tiny tools may have made us human

Redacted for educational purposes from full article online at:
<https://www.sciencedaily.com/releases/2019/03/190312123733.htm>



The iconic, tear-drop shaped hand axe, which filled a human palm, required a large toolkit to produce (left), in contrast to a toolkit for tiny flakes. *Credit: Emory University*

Anthropologists have long made the case that tool-making is one of the key behaviors that separated our human ancestors from other primates. A new paper, however, argues that it was not tool-making that set hominins apart -- it was the miniaturization of tools.

Just as tiny transistors transformed telecommunications a few decades ago, and scientists are now challenged to make them even smaller, our Stone Age ancestors felt the urge to make tiny tools. "It's a need that we've been perennially faced with and driven by," says Justin Pargeter, an anthropologist at Emory University and lead author of the paper. "Miniaturization is the thing that we do."

The journal *Evolutionary Anthropology* is publishing the paper -- the first comprehensive overview of prehistoric tool miniaturization. It proposes that miniaturization is a central tendency in hominins going back at least 2.6 million years.

"When other primates used stone tools, they chose to go big and stayed in the forests where they evolved," says co-author John Shea, professor of anthropology at Stony Brook University. "Hominins chose to go small, went everywhere, and transformed other-wise hostile habitats to suit our personal needs."



The paper reviews how stone flakes less than an inch in length - used for piercing, cutting and scraping - pop up in the archeological record at sites on every continent, going back to some of the earliest known stone tool assemblages. These small stone flakes, Pargeter says, were like the disposable razor blades or paperclips of today; pervasive, easy to make and replaced.

Pargeter identifies three main points in our developmental timeline for miniaturization in hominin evolution. The first spike was about two million years ago, driven by our ancestors' need for stone flakes in place of nails and teeth for doing things. A second spike occurred sometime after 100,000 years ago with the invention of weapons like the bow and arrow, which required light-weight stone inserts. A third spike in miniaturization occurred about 17,000 years ago. The last Ice Age was ending, forcing us to adapt to rapid climate shift, rising sea levels and population stress. These changes made resource conservation critical, including the rocks and minerals needed to make tools.

The research lab members actually make stone tools to better understand how our ancestors learned these skills, and how that process shaped our evolution. The lab's director, Dietrich Stout, focuses on hand axes, dating back more than 500,000 years. These larger tools are considered a turning point in human biological and cognitive evolution, due to the complexity involved in making them. "We're exploring what may have led to the compulsion to produce these tiny instruments -- essentially the relationship between the tools and the human body, brain and the probable uses of the tools," Stout says.

The classic "Ice Age" megalithic mammals were gone. Any game during hard times might be small, like rabbits, or gophers. Small tips set into reeds and then hafted to an arrow shaft would break off in the target to insure better success.

"Smaller tools are the choice of technology for a mobile, dispersing population," Pargeter says. "When Homo sapiens left Africa they weren't carrying bulky hand axes, but bows and arrows and smaller stone implements."

Please Come to the LARC

April 2019 Meeting

**Wednesday April 3rd, 7:00 pm
Stevens Hall Room 134, NDSU**

Program:

(Sign up of NDSU Geo Club & sales table yet in limbo at press time. Still maybe!)
Fun DVD's, You Tube vids,
Show & Tell + great Pot Luck...
Certainly on!

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 12th Ave N. Turn North on Bolley Dr. Drive just past Centennial Boulevard. 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. 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://www.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. 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 March 6, 2019 Meeting

Submitted by Chris Patenaude, Secretary

Meeting was brought to order by President **Frank S.** Treasurer **Terry M.** couldn't attend this evening. Action was quick to start with a charming talk by one of our Pebble Pups, **Ansley.** She was not able to be here when the other LAPP's made their own First Shows. Ansley displayed and spoke about her beautiful amethyst, see photo on page 3. Then, making his third earned merit badge, **Micah** was honored for his achievement.

Frank focused the adult meeting and acknowledged **Dan E.**'s move to approve the Secretary's minutes from last meeting as printed in the Rock Hound. **Joe S.** 2nd s. Ayes. **Dean A.** brought a whole 'ice cream bucket' of tumble-polished agates for adoption by any comers. Fresh Pet Rocks!

Frank S. is still in contact with NDSU student Sara from their Geology Club, trying to work out just when some of their minds can make it in, to share some great ideas with us. The topics range from 'hounding, rocks, to careers in geology they are learning.

Two new members join us! **Michelle** from West Fargo and her girl **Maggie**; and also **Jackie** from Fargo. Welcome all!

As presentation and then background ambiance, there were overhead moving videos being shown with the computer projector, featuring "Fossicking" (down-under term for rock hunting) in Oz.

In Memorial, Dan Johnston

Long time and supportive LARC member Dan Johnston passed away during the last week of February, 2019. Honored club member Wayne Hankel recalls times alongside Dan with good memories.

"Dan and his family were long time members of the Rock Club. His wife Eunice served as editor of the Rock Hound for many years. Dan was a reliable worker within the club. He was always there to help set up and prepare the displays and he worked tirelessly at the Red River Valley (Fair). He was the one that got things initiated in talks with the RRVF management which resulted in the present arrangement. Dan, Eunice and Shawn hosted the annual Rock Club summer picnic for several years. Dan had a fun personality and yet was noted for his common sense solutions to problems."

Due to Dan's help in group negotiations, exhibits and fund raising at the Fair is at an all-high exposure. We can believe he'd be proud of our growth, because of his groundwork.

BRAD SMITH'S BENCH TIPS

I always like small containers for all those rings, prongs or tools dealing with jewelry. My faves are the plastic vials with rubber stoppers, used in the Dr's office. The perfectly clean extras that exceed their "expiration date" are thrown out. On my last office visit I asked the nurse if she had any expired vials. "How many do you want?" She tried to give me 400, we settled on 200.



Be More Productive With Brad's "How To" Books
[Amazon.com/author/bradfordsmith](https://www.amazon.com/author/bradfordsmith)

B.Y.O.B. Bring Your Own Bacon!

<https://www.sciencedaily.com/releases/2019/03/190313140553.htm>



Date: March 13, 2019

Source: Cardiff University

Archaeologists have unearthed evidence of the earliest large-scale celebrations in Britain - with people and animals traveling hundreds of miles for prehistoric feasting rituals. (circa. 2800-2400 **BC**)

The study is the most comprehensive to date and examined the bones of 131 pigs, the prime feasting animals, from four Late Neolithic complexes. Serving the world-famous monuments of Stonehenge and Avebury, the four sites hosted the very first pan-British events “back in the day”.

The results show pig bones excavated from these sites were from animals raised as far away as Scotland, North East England and West Wales, as well as numerous other locations across the British Isles. The researchers believe it may have been an important expression of honor, for those attending, to contribute prized animals raised locally at their homes.

MWF April 2019 Calendar

See complete calendar at:

<http://www.amfed.org/mwf/Calendar/April.html>

4-6: WYOMING, MI Indian Mounds Rock & Mineral Club 44th Annual Gem & Mineral Show. Thur 9:30 am - 9 pm; Fri 9:30 am - 9 am; Sat 9:30 am - 7 pm. Rogers Plaza Town Center, 972 - 28th St., Wyoming. Contact: Kreigh Tomaszewski, (616)243-5851; kreigh@gmail.com www.indianmoundsrockclub.com

6: LOVES PARK, IL Rock River Valley Gem & Mineral Society Open House. 10 am - 3 pm. North Suburban Library, 6340 N 2nd St., Loves Park. Contact: Duane Cushing, (815) 218-5011; tcdc78@comcast.net [FLYER](#)

6-7: MARION, IL Southern Illinois Earth Scienc Annual Show Sat 10 am - 6 pm; Sun 10 am - 5 pm. Pavilion of the City of Marion, 1602 Sioux Dr., Marion. Contact: Mike Contofalsky, (618) 367-0046, chontofalsky@att.net [FLYER](#)

6-7: DES PLAINES, IL Des Plaines Valley Geological Society Annual Show. Sat 9:30 am - 5 pm; Sun 10 am - 4 pm. Des Plaines Park District, 2222 Birch Street, Des Plaines. Contact: Frank Lavin, (815) 298-9178; nival42@hotmail.com

13-14: DECATUR, IL Central Illinois Gem & Mineral Club Annual Show. Sat 9 am - 5 pm; Sun 10 am - 4 pm. Lester Building, Progress City, 4140 E 2nd Progress St., Decatur. Contact: Tony Kapta, 1483 E. Wood St., Decatur 62521; (309) 830-6516; tkapta@comcast.net

13-14: CANTON, IL Fulton County Rockhounds Annual Show. Sat 10 am - 5 pm; Sun 10 am - 4 pm. Donnelson Center @ Wallace Park, 250 S. Ave. D, Canton. Contact: George Coursey, (309) 368-2947.

13-14: COLUMBUS, OH Columbus Rock & Mineral Society Annual Show. Sat 10 am - 6 pm; Sun 11 am - 5 pm. Northland Performing Arts Center, 4411 Tamarack Blvd., Columbus. Contact: Craig Kramer, (614) 436-4511; show-info@columbusrockandmineralsociety.org www.columbusrockandmineralsociety.org [FLYER](#)

20: ST. PAUL, MN St. Croix Rockhounds Semi-Annual Show. 9 am - 1 pm. Valley Creek Mall, 1750 Weir Dr., St. Paul. Contact: David Rusterhaz, (715) 760-0479.

27-28: CUYAHOGA FALLS, OH Summit Lapidary Club and Akron Mineral Society Semi-Annual Show. Sat 10 am - 6 pm; Sun 10 am - 5 pm. Emidio and Sons Expo Center, 48 East Bath Rd., Cuyahoga Falls. Contact: Sandy Shorter, 8510 Grouse Ridge Dr., Chardon 44024; (440) 479-0069; gemboree@outlook.com

27-28: EAU CLAIRE, WI Chippewa Valley Gem & Mineral Society Annual Show. Sat 9 am - 5 pm; Sun 10 am - 4 pm. Eau Claire Expo Center Bldg, Lorch Ave, Eau Claire. Contact: Paul Tubbs, (715) 834-5747; bizpain1@gmail.com



Pebble Pups Presenter!

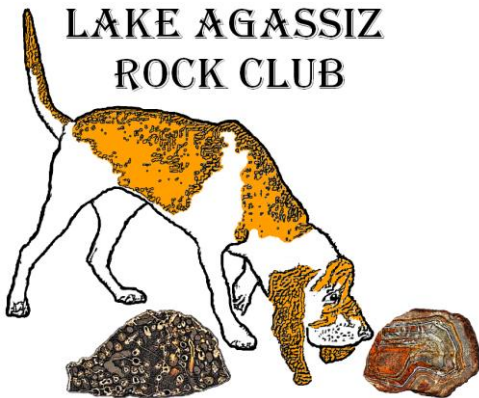
Ansley shows off her current favorite collection piece. It is a gorgeous hunk of amethyst crystal with a pale lilac shimmer. She points out that amethyst is part of the quartz family, and sought out by almost every rock hound. She'll see many “favorites” as she grows!



Micah's earned his Collection Badge and was presented with it at March's meeting. For this accomplishment, the honoree has to finish 3 activities from the category. Micah 1) gathered his collection; 2) catalogued and labeled each specimen; 3) then gave his speech on it last Dec. Good job Pebble Pups!



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



26 miles from Portland OR, near Hillsboro
<https://ricenorthwestmuseum.org/>



<https://visitingmedia.com/tt8/?tid=rice-northwest-museum-of-rocks-and-minerals#/outbound-link?iframeSrc=https%3F%252Fmy.matterport.com%252Fshow%252F%3Fm%3DGSSK1Qua3Ve>

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Rhodochrosite



Ammonite sample



curator **Leslie Moclock**, left,
and collector **Ed Thompson**
w/ the Morrow County meteorite



Plumbogummite; China



<https://ricenorthwestmuseum.org/2019/03/08/thunder-egg-stravaganza-2019/>