

The Interior News-Way

A Newsletter By Leaders for Kansas 4-Hers in the Geology Project

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What’s That Specimen?

Can you identify the specimen below? No worries if you can’t! The image is taken from the weebly website, so take a look around and see if you can find it.

<https://kansasgeology.weebly.com>



Last Issue’s Answer: Breccia, a clastic sedimentary rock

Online Resources

mindat.org is an outreach effort by the Hudson Institute of Mineralogy. It is a resource for mineral identification, containing images, information, and discussion pages. It’s searchable by mineral name, locality, and has many other ways to look for minerals.

<https://www.mindat.org>

Reminders

As we come to state fair, here are some friendly reminders for you:

This is our second year of a five year grace period for correcting Brachiopod classes. You should no longer use Articulata or Inarticulata, and are instead split into Strophomenata and Rhynchonellata, or Lingulata and Craniata, respectively. For more information, check the weebly site or the information in previous newsletters.

To reiterate, specimens from Saturday Stop 5 in Joplin are from the Tri-State Mining District, and this is the source you would use. If you have a Warsaw Limestone from this stop, label it as such, without the Tri-State Mining District. Specimens from Sunday Stop 2, the Mined Land Wildlife Area, can be labeled as from the Tri-State Mining District or the Cherokee Group, NOT Mined Land Wildlife Area.

If you have an educational display that includes specimens going to state fair, you will be allowed to take your specimens home after judging and leave a photo in their place. You will be in charge of getting the specimens or sending a written request listing a proxy.

News

At the end of this newsletter is information on an award trip from Chandra Plate for members exhibiting at the state fair. Please check it out!

If you have a submission you would like to have considered for the newsletter, you can send them, along with your name and county, to Natasha Graham, the 4-H Geology Project Leader in Johnson County, at nlgraham95@gmail.com

Engonoceras belviderense

By: Brenden Crouch

Phylum: **Mollusca**

Class: **Cephalopoda**

Order: **Ammonoidea**

Family: **Engonoceratidae**

Genus: ***Engonoceras***

Species: ***belviderense***

There are many types of ammonites that can be found throughout Kansas. One I recently found while out with my family was the *Engonoceras belviderense*. The water level was down at Kanopolis, exposing the dark Kiowa Shale Formation. The Kiowa Formation sits between the Cheyenne Sandstone Formation and Dakota Formation. It is a marine shale that is dark grey, and contains many *Turritellas*. *Engonoceras* is a Cretaceous fossil and I had never seen this particular ammonite before. It was very flat and I noticed that everything was compressed looking. It had many sutures that were well preserved. All the specimens we found were heavy and appeared pyritized, or rusty from pyrite disease. Several specimens were very brassy and had a nice metallic gold color. There were even some specimens that had blue, pink, dark purple-red, and green coloration on the pyrite.

Recently there was an article online about the rainbow shimmer on ammonites. I found out that there is a gemstone made from this called ammolite and it was caused by the mineral aragonite. Scientists measured the gaps in the aragonite crystal plates in the ammonite's nacre. The rainbow color was produced from light reflecting between gaps that were four nanometers in width. They found this was the ideal width and many specimens of other varying widths did not produce the rainbow sheen.

I am not sure what caused the rainbow color on my pyritized specimens. It definitely is not worthy of being cut into a gemstone. There is a lot of siderite, calcite cone-in cone, selenite, limonite, and hematite on the beaches of Kanopolis. There is a possibility that the minerals that are present influenced the fossil coloration as well.



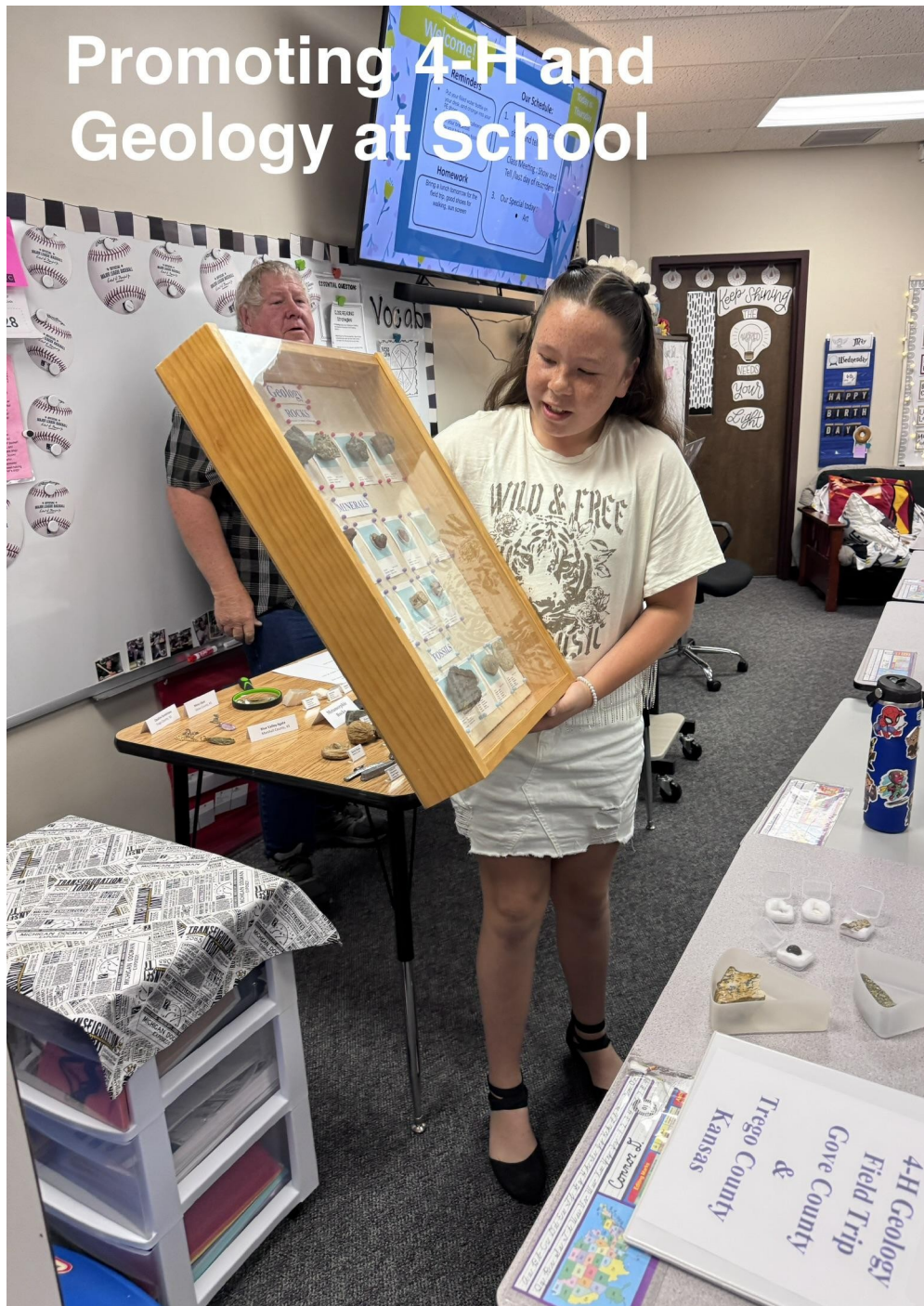
These two specimens show before and after being rinsed off.

A rusty looking specimen.

Works Cited

- Beamon, Joseph C., "Depositional Environment and Fossil Biota of the Kiowa Formation, Lower Cretaceous (Albanian), McPherson County, Kansas." Master's Thesis, Fort Hays State University, 1999.
- Temming, Maria. "What Causes the Rainbow Shimmer of Ammolite Gems?" *Science News*, 7 Nov. 2025, www.sciencenews.org/article/rainbow-shimmer-ammolite-gems-crystals.

Promoting 4-H and Geology at School



Alexis promoted the 4-H Geology Project during show and tell at her school. She took posters, gypsum specimens to give to each person in class and her geology box from the State Fair. What a great and easy way to tell other kids about 4-H and the geology project! She is a member at McPherson County, Kansas.

State Fair 4-H Work Day in Geology!

We were making the geology stands more secure!

4-H Members and Leaders from McPherson, Sedgwick, Wilson and Sumner Counties were wonderful help. Hats off to Sumner to finish their work and to come over and help us with a painting party!

We also want to thank Home Depot of Hutchinson for their generous help for the expenses for the day!

Thanks to Knox and Brenden from Sedgwick County; Naomi, Jerry, and Sue from Wilson County; Joshua, Paul, and Robin from McPherson County; Michelle, Katherine, Kendall, Wyatt, Jhett, Isaac, Emma, and Gavin from Sumner County; and Chandra, representing Kansas 4-H.



Left: 4-Hers building the new racks.



Right: 4-Hers unloading wood.



Left: Measuring, cutting, and building the racks.



Right: Discussing the game plan for painting the racks



Left: 4-Hers begin painting racks.



Right: Moving and rotating the racks to paint the other side

Helping Each Other Get Ready for the Fair!

Geology members from three counties come to the McPherson Co. Geology ID meeting. It was lots of fun finding out what new specimens each member had found this year. The members and parents were all excited every time a new specimen was identified. Josh, Paul and Robin helped with this joint county meeting. What a great way to help each other!

4-H Members that attended were Joshua, Lucy, Kinnon, and Emmett from McPherson County, Reid from Saline County, and Elsie from Reno County.



Comparing Specimens



Discussing Specimens with a Junior Leader



Listening to the Leaders



Getting Help from a Leader

State Geology Award Trip

Great news, team!

I have been working with Alan Hedrich from the Strataca Salt Mine, and he would like to choose up to 15 Geology boxes from the purple ribbon group at the State Fair to be displayed at the Strataca Underground Salt Museum in Hutchinson, KS. They would pick up (or we will deliver) boxes to Strataca when State Fair ends. They have made special precautions so the boxes can be locked up at the Museum.

Then on October 10th (tentative date) they would like to have all youth whose boxes were displayed come to the Museum and there will be Geology mentors and some special activities for those youth. The youth will return home with their boxes after this educational day. In order to be considered for this educational award, there will be a project release form required. Boxes will be selected by the Strataca Museum the day after judging day at the Kansas State Fair.

Please note, the release form is attached and should be placed on each Geology Entry that is brought to the State Fair for those who would like to be considered for this opportunity.

Thank you for all you do to make Kansas 4-H the best!

Best Regards,
Chandra Plate

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Kansas State Fair 4-H Geology Project Release Form

Geology

I give my permission for my work to be selected for display at the Strataca Museum (Kansas Underground Salt Museum in Hutchinson, KS)

Yes ☐ No ☐

Signature: _____

Please fill out the following information:

4-H Member Name: _____ Age: _____

Address: _____ Phone number: _____

City/State/Zip: _____

County/District: _____ Club Name: _____

KSF Geology Class #: _____

Description: _____

K-STATE
Research and Extension



4-H Youth
Development

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