

Fossils In North Dakota

FIND is a newsletter dedicated to helping young readers (in age or spirit) express their love of fossils and paleontology, and to help them learn more about the world under their feet. Each issue will be broken up into sections including Feature Fossils, Travel Destinations, Reader Art, Ask Mr. Lizard, and more!

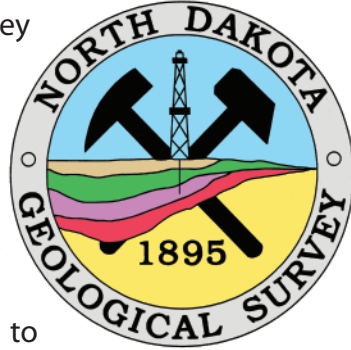
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<https://www.dmr.nd.gov/dmr/paleontology/fossils-north-dakota-find-newsletter>



2022 Public Fossil Dig Recap

We've done it! Another successful summer of digging fossils across North Dakota. This year we again had three sites that were worked - Medora in June, Bismarck in July, and the Pembina Gorge in August. Next year we'll once again be adding in Dickinson for those that want a taste of prospecting (but without port-a-potties or shade tent).

Medora: June 10-26. Medora started off very soggy, with a number of days rained out. Even when we did get out to the site, we had to hike up a muddy slope to reach the top. By the end things started to dry out, and we made good progress excavating more of our elusive *Champsosaurus*. A number of crocodile teeth were found, two belt-buckle sized osteoderms (see last issue for details on osteoderms), ghosts of two trees, and lots of wind.



Champsosaurus rib (top) and neural arch from a vertebra (bottom). Many champsosaur elements came out this year.



We only got stuck a few times... but didn't have any trouble getting un-stuck. We always pack two ropes.



The site got a lot of water at the start of the dig. Ick.



One of the tree ghosts. Carbon on the inside, and a giant hole of nothing. This one had a few bonus coprolites against the side.

Bismarck Area: July 5-29. Our big goal this year with the Bismarck site was to push the last of a remaining peninsula towards the back of the main quarry wall. We made good progress, although any "speedy" digging we thought we might accomplish was interrupted by bones. Such a terrible problem to have! More *Edmontosaurus* and *Triceratops* elements, a surprise crocodile skull chunk, a few small tyrannosaur teeth - then at the very end of the dig, on the last day - we uncovered a mosasaur tooth! In the middle of a dinosaur quarry! What does this mean?! Did the tooth wash in? Were we closer to the Western Interior Seaway than we thought? Was there a brackish mosasaur that swam up rivers like some giant river demon, snagging prey from the shorlines?!



This beautiful mosasaur was found on the last day.



Pushing the peninsula back slowly, one trowel scoop at a time.



Above, Trissa puts plaster on a small hadrosaur jaw. Below, a good sized tyrannosaur tooth.



Pembina Gorge: August 4-14. Last year we found a big fish we needed to return to - and of course, it can't be as easy as just removing the 2021 fish. Oh no. We had to find MORE fish! There were some articulated fish skeletons (with all the bones in order, as they would be in life), some disarticulated fish mash piles (all jumbled around), an isolated bird bone, and more of a mosasaur we've been hunting for a few years. The mosasaur we named Joanna - after Joanna the Goanna from *Rescuers Down Under*. Why? Because sadly the mosasaur had been partially poached. We are working on Parks and Recreation land, where any vertebrate fossil material is protected - but that doesn't keep the occasional person from trying to take home souvenirs (at best case) or those who think they can sell them on the internet for a lot of money (worst case). If you find a fossil on public lands - what should you do? Take photos, take GPS coordinates if you can, LEAVE it, and contact us. We make trips all across the state to check out fossil finds. Our division is very small, and we rely on individuals across the State to help locate and report fossil discoveries. Who knows? Maybe a new discovery will turn into another fossil dig to join!



Here is part of an arm or leg bone from "Joanna" the poached mosasaur. Found on the very first day!



One participant brought Goldfish snacks - it turned out to be PERFECT for the day, since we found a pile of fish bones.



Paired fish skull bones with teeth, from our Big Fish.



Adorable little caudal vert from a mosasaur. This little bone would have been found far down, near the tip of the tail.



Four decent sized teeth - we ended up finding more sections as well throughout the week.



Getting the tow ropes, straps, cargo net, etc. ready for a big jacket flip. Sadly it did not go well - it split in half. On the bright side, the now TWO jackets were much easier to move down the hill.



Above, staff and volunteers work to get a big jacket down the hill. Below, intern Abby celebrates the successful flip of another fish.



THE BIG event

Believe In Girls

Explore Science, Technology, Engineering and Math (STEM) in a fun and interesting way!

October 1 | Bismarck, ND



Not a Girl Scout? Not a problem! Membership is not required to attend this event.

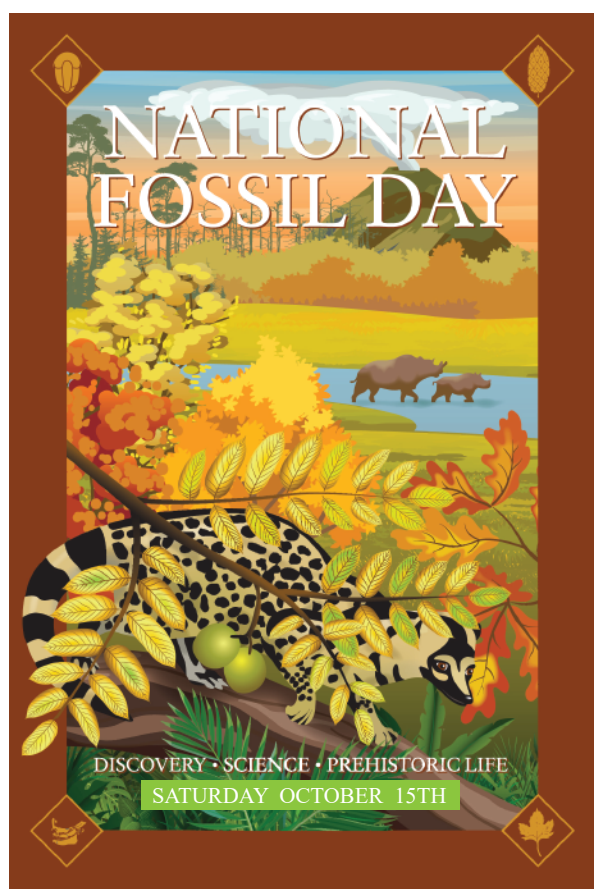
NDGS Paleo will be hosting two tables at the 2022 event, held at the BPS Career Academy on the BSC campus. Mindy Householder will be managing the Paleo table, while Becky Barnes takes on the Gemstones table. We have some activities all ready to go!

Tickets available online at: <https://tinyurl.com/NDGSBigEvent>

Saturday October 1st, 1-4pm

Girls and their families will have a blast enjoying interactive sessions, exhibitor booths, and tons of STEM fun! Work at your own pace through the different activities, and be entertained by science demonstrations. Don't miss out on this one of a kind event!

Hands-on activities are geared towards children ages 5 and up.



The Dakota Zoo and the ND Geological Survey-Paleontology dept. are teaming up to help celebrate National Fossil Day.

Where: Dakota Zoo, Discovery Center
When: Saturday October 15th, 1-5pm

Come compare and contrast living creatures in the zoo, with their fossil ancestors. The Paleontology team will be bringing along fossils and casts related to many of the creatures living in the zoo today!

Osteoderms are found on living AND extinct crocodilians!

Arctodus was much larger than a grizzly!

Scales are found on SO MANY creatures! Fish, reptiles, birds...

Gar fish have been around since the dinosaurs, and are covered in armor-plated scales!

Meshippus was the three-toed ancestor of what creatures alive today?!



Geological Survey Paleontology