

# Paleontology at a Distance

*Becky Barnes*

By the time March hit with Covid-19 news, we knew it was only a matter of time before North Dakota followed other states and cancelled in-person instruction in schools. All the NDGS paleo staff (Dr. Clint Boyd, Jeff Person, and Becky Barnes) have young children at home, and knew other parents would be adjusting to the chaos that would become the new normal. Schools were scrambling to convert their in-person teaching styles to fit an online format – and kids would be restless in the interim.

A science program was started two years ago, called Skype-A-Scientist by Dr. Sarah McNulty, which connects classrooms across the world with different scientists (biologists, geologists, chemists, mathematicians, physicists, and more). With the onset of schools closing all over, they opened up their program to also include families stuck at home.

I thought this was a brilliant idea! An hour of amazing science could be a spot of normalcy in these crazy times. What if we crafted a North Dakota version, where we (paleo) would host a short presentation (fig. 1), followed by a question and answer session? Each day we could present on an interesting topic, and then compile the video (minus any bloopers) into an archived video for later watching. Any special names or terms that were discussed in the talk could be added during editing (fig. 2).

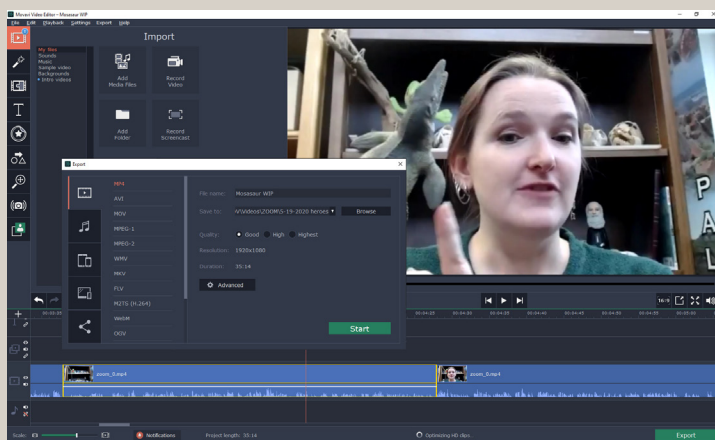


**Figure 1.** Paleontologist Becky Barnes hosts one of the first episodes of Chatting with NDGS Paleo in March.

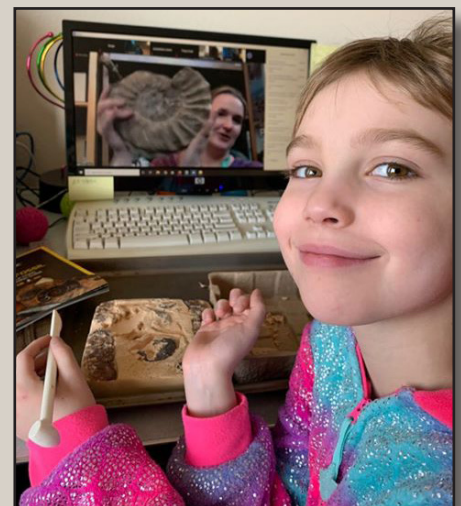
Monday, March 16th hit, and schools were now closed. I brought the idea to Clint Boyd, and we began compiling a list of topics. We had just finished the mosasaur installation at the Walhalla Public Library, in Walhalla, ND. Part of that event included creating a kids' book about mosasaurs (Barnes, 2020). It would be an easy first topic – mosasaurs, and a book reading. Now what platform should we use for the presentation distribution? We had run into problems with Skype in the past, and Facetime was only useful for Apple users. We already had the basic ZOOM software for backups during our classroom chat sessions, so decided to go with that. We updated our Social Media (Facebook and Twitter) in a hurry, announcing we would be holding a paleo chat on that Wednesday (March 18th) at 10 a.m. CST. This would be a nice mid-morning break for families at home, and it would also keep away from the

timeframe Skype-A-Scientist was holding their chats – so if watchers wanted to, they could get two doses of science in their day!

Our first chat went well – so well the Bismarck Tribune came by for a photoshoot the following day, when we were discussing coprolites. We quickly fell into a routine. Each morning we would check our topic, and raid collections for samples of whatever we were talking about that day. Mosasaurs, coprolites, ammonites, saber-toothed cats, amber – it was going so well! We decided to change how we were presenting a little. We had previously



**Figure 2.** Once the live presentation was finished, the recorded video would be edited to add in images and definitions of unfamiliar terms to improve the presentation before being posted on YouTube.

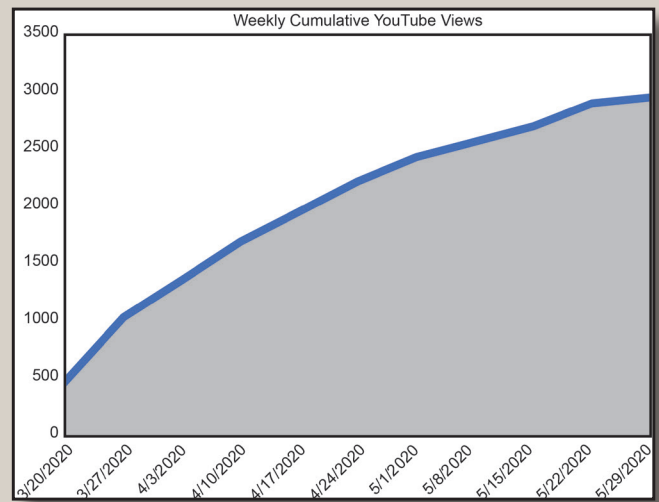


**Figure 3.** A young viewer watches an episode of Chatting with NDGS Paleo while working on a toy dinosaur dig.

been using the ZOOM meeting function, which had good and bad aspects. It was great to have instant visual feedback from our audiences – to see them watching, what they were confused about, or even them showing us their paleo projects they had made at home (fig. 3). The downsides were that if microphones were left on, it caused extra noise during our video edits. Or a kid discovers in the meeting function they can draw on our screen, or accidentally share their screen with us (Minecraft popped up on one occasion!). For the most part the audience self-policed, and after the first couple sessions everyone knew the drill. Log in, microphones off.

In order to curtail some of the disruptions, we moved to the ZOOM webinar platform. We would no longer get to see the audience’s smiling faces – but microphones were automatically off, and there was no screen sharing except from presenters (Clint, Jeff, myself, or any guest speaker). It worked beautifully. Then the news came Tuesday March 24th, the Heritage Center – home of our Johnsrud Paleontology Laboratory and paleontology offices – would be closing to staff as well as the public. We had one more day of presenting (topic = hadrosaurs [duck-billed dinosaurs]) to gather our things, tear down our computers, and set up at home. No more collections raiding, which meant it was time to improvise again. Jeff Person was itching to talk about teeth, and we already had a guest speaker, Dr. Lydia Tackett of NDSU, lined up to talk that Friday about North Dakota’s State Fossil: Teredo-bored petrified wood.

We had time to plan our next course of action – it was time to bring in more guest speakers. The great thing about paleontologists is they tend to know a copious amount of information about their current research subject, or favorite fossils. Clint reached out to a bunch of his contacts and colleagues, and speedily built a list of presenters (fig. 4). Each weekday meant a new presenter and topic, and a new video to archive on YouTube. Tyrannosaurs, horses, dinosaur brains, bone-crushing dogs, and so many more topics to explore. April 1st, we took a slightly different turn with April Fools’ Day, and I set up a Bob Ross style “The Joy of Paleo” painting session while teaching about trilobites. Happy little crinoids!



**Figure 5.** Graph of the cumulative views of all of the Chatting with NDGS Paleo videos on YouTube from the start of the program through the end of May 2020. Note that beginning the week of April 20-24th the number of videos posted each week decreased from five to two, resulting in a lower rate of viewership.

As schools began to ramp up their homeschooling directives, families had less time to tune in to these daily chats while they were broadcasting live, but were still able to go back to YouTube to watch the posted videos from each day (fig. 5). Once the immediate need for a science break began to diminish, we reduced our chats to twice a week (Tuesdays and Thursdays), until the school year ended and summer break began. Even though these daily chats ended once school was out, the platform is still there for future talks. Now that we have experience with what works, what doesn’t, and what can be done better, any future chats or presentations we do will be improved. Additionally, the videos we have already made and posted are available for future use by teachers and other educators. They can be found at [www.youtube.com/c/NDGSPaleo](http://www.youtube.com/c/NDGSPaleo).

**References:**

Barnes, B., 2020, PrehiStories: Mosasaur; North Dakota Geological Survey Education Series 36, 23 p.

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| Tuesday March 31<br><i>Dunkleosteus</i> | Wednesday April 1<br>The Joy of Paleo  | Thursday April 2<br><i>Dinosaur</i><br>National Monument |
| Friday April 3<br>Dinosaur Brains       | Monday April 6<br><i>Tyrannosaurus</i> | Tuesday April 7<br><i>Parasaurolophus</i>                |
| Wednesday April 8<br>Bite Marks         | Thursday April 9<br>Horses             | Monday April 13<br><i>Oryctodromeus</i>                  |
| Tuesday April 14<br>Camel Evolution     | Wednesday April 15<br>Histology        | Thursday April 16<br>Plants (Dino-age)                   |
| Friday April 17<br>Bone-crushing Dogs   | <b>...more to come!</b>                |  |

**Figure 4.** A selection of topics from the Chatting with NDGS Paleo series showing the wide range of subjects covered during the series. A total of 32 episodes were presented from March 18 - May 21, 2020.