



BIGHORN BASIN
PALEONTOLOGICAL INSTITUTE

NEWSLETTER OF THE BIGHORN BASIN PALEONTOLOGICAL INSTITUTE

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Reflecting On Year One

by Jason P. Schein, *Executive Director*

There must be something very natural about reflecting on the previous few months at this time of year. I say that because I typically chafe at anything that smacks of a cliché. "Top 10 ___ of 2017" social media posts and "The Year That Was" stories on the news are as tired and predictable as holiday specials on the Hallmark Channel (I know I'm going to hear it about that wisecrack!). And yet, as this year comes to a close, I can't help but think of all that we have accomplished in the 10 months or so since opening our doors.

On February 19th we were little more than an idea. We believed that we could create a nonprofit organization dedicated to paleontology and earth science research and education, and that this organization would be based primarily on *experiences*. That is, providing people with opportunities to work alongside paleontologists, contribute to and be a part of the science and the scientific process. And more than anything, we believed all this despite the fact that no one had ever before done exactly what we were doing. Bold? Maybe. Naïve? Probably. Foolhardy? Well, starting on Monday, February 20th, we would certainly find out what the world thought of our

model of "Academic-Entrepreneurial Paleontology".

That first day was a whirlwind of excitement, anxiety and anticipation. I'm also happy to report that it was the beginning of what can only be described as an unqualified success. Since that first day, we have partnered with world-renowned institutions like the Academy of Natural Sciences and Rocky Mountain College, and collaborated with recognized organizations like the Make-A-Wish Foundation and Field Station: Dinosaurs. We have provided world-class experiences to well over 5,000 people of all ages and backgrounds, and from all over the world. Four separate granting organizations thought enough of our efforts to reward us with over \$62,000. To me, though, the surest sign of success is that dozens of people like you have decided to join our vision by becoming donors, members (that's you!) or both!

Thank you for joining us on what has been an exciting, successful adventure. And stick around – we can already tell 2018 is going to be even more amazing!



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Jason Poole – paleontologist, anatomist, and artist!

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The BBPI has inherited the world-famous Mother's Day Quarry!

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Paleo-art Fun for Everyone!

The first theropod from Antarctica! Illustration by paleoartist Jason Poole.

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Catching Up

by the BBPI

Late fall and winter are pretty quiet when it comes to outreach events, and understandably so. But that's ok, because it gives us time to concentrate on fossil preparation, grant writing, report and application preparation, program development, and many other administrative tasks.

There was one important event recently, and this is a great opportunity to announce some exciting news!

 **November 16:** Dinosaur show at Derby Hills Elementary School and press conferences in Derby, Kansas. You can watch news clips of these fun events by clicking [HERE](#).

Great News!

Field Station: Dinosaurs in Leonia, NJ has long been a good friend to BBPI. This family-friendly park is a wonderful source of both science and entertainment, and has partnered with the BBPI to provide numerous outreach opportunities for thousands of kids throughout the NJ/NY region. But starting this summer, their reach will expand far beyond this region.

That's because the Field Station: is opening a new location in Derby, Kansas! And just as before, the BBPI will be the official scientific and educational partner!

This is a wonderful opportunity for both organizations in so many ways. We'll work together to develop fun, engaging, and exciting educational programs and outreach events, both in the park and

throughout the state and region. And through each of those, we'll reach many thousands of kids and their families each season.

In fact, we've already started doing just that. We presented a dinosaur-themed program to over 600 kids – the entire school! – and press at Derby Hills Elementary. A short time later, we gave a presentation to around 100 members of the local Wichita press, Derby city council, and families at the press events. The wonderful day was even capped off by an official appearance at Derby's official holiday tree lighting ceremony!

We could not be more proud and excited to partner with such a wonderful organization!



BBPI Staff Highlight

by Jason P. Schein

Jason Poole was the first friend I made in Philadelphia in the spring of 2005 before I even moved to the City of Brotherly Love. He was also the first person I (inadvertently) insulted, and it was upon that first awkward meeting that we've become good friends and colleagues.

Jason grew up and studied art in Philly and began working as an educator and paleontologist at the [Academy of Natural Sciences of Philadelphia](#) (now Drexel University) nearly 25 years ago. He is presently the Dinosaur Hall Coordinator and leads all efforts in the Paleontology Laboratory, including the all-important job of preparing our summer fossil collections.

As most people know, Jason is also an accomplished and well-known paleo-artist. You've seen his work in these newsletters, but that's only the tip of the iceberg. His work has been published in [National Geographic](#) and [Science](#), as well as multiple academic paleontology papers, documentaries, and books, including an award-winning adult coloring book coauthored by yours truly.

His experience as an artist and fossil preparator also have made Jason an exceptionally good anatomist. He is our "go to" guy for identifying any unusual fossil or fossil fragment in the field, and his ability to know exactly how and where a bone is laying deep underground is uncanny.

Jason has been a part of the BBPI crew since 2013, but we have been

working together in the field since 2006 and '07. It was then that we were part of a small team in Patagonian Argentina excavating a new, enormous, and exceptionally complete sauropod dinosaur, called *Dreadnoughtus*.

You can learn a lot more about Jason and everyone else on staff on our [website](#). You can also visit his blog at <http://dino-scribbles.blogspot.com>.



2018 FIELD EXPEDITION!

Registration for the 2018 Field Expedition is now OPEN!

Join us in Montana next summer! Visit us at www.BBPaleo.org to find out how you can join the adventure. This is an amazing experience that you'll never forget!



Do more on your next vacation. Join an adventure!

Now Offering One or Two-Day Expedition Visits

Only have time to join the expedition for a day or two? [Daily Expedition Visitors](#) get to experience the adventure, and Members get a discount of up to 50%! Click the link above to learn more.



FOR MORE INFORMATION

Have anything in mind that you'd like to see in the newsletter? Let us know about it! Message us on Facebook or send an email.

Info@BBPaleo.org

Teambuilding through Experiential Education

by Will Brandenberger

Editor's Note: *We're excited to once again feature a guest author for this article. Will joined our team in 2015, but we hope he'll join the staff again soon!*

Anyone who knows Jason - either Jason Schein or Poole - knows that they are hard working men. Paleontology takes a kind of critical thinking and work ethic that is hard to appreciate until you are ankle deep in bentonite clay carving a dinosaur out of the rock. The year I dug with Bighorn Basin Paleontological Institution (summer of 2015) I was Jason Schein's intern. I have grown to appreciate one aspect of BBPI increasingly more recently. That aspect is the temporary construction of a team, committed to doing something incredible.

Whether we were at the bottom of dumbbell hill, the black flies crawling on the inside of my sunglasses as we carried jacketing supplies across the stream (don't worry, that's what interns are for), or we were enjoying the atmosphere at a local bar seemingly as ancient and dusty as the dinosaur fossils we have traveled so far to find. Anywhere we went and every activity we did, there was a sense of comradery and mutual interest you can only get when a bunch of Paleo-nerds realize they are living their dream.

All fun aside, what the Bighorn Basin Paleontological Institution accomplishes each field season is a triumph of teambuilding. Everyone from the intern to the expert, the starry-eyed child to the mildly interested, takes part in a process that no one of us could tackle alone. If you have joined us in the field I



Will Brandenberger at camp in 2015. Photo by Brittany Malinowski.

guarantee you can relate to a mutual pride felt in looking at the literal tons of rock that are excavated every year. The expert advises the intern. The intern teaches a child the "samurai swing" with the pickaxe. The child cultivates an interest and bombards the expert with questions and scenarios. This cycle of mutual curiosity spans across generation, education, and

socioeconomic background. In my opinion, the real golden truth about Bighorn Basin Paleontological Institute is not just that prehistoric life is worth studying and preserving correctly.

The golden truth is that anyone, everyone, can

learn how to preserve and interpret it correctly. Both Jasons are hard working men, and before that they were hard working interns and starry-eyed children. BBPI takes a dynamic teambuilding opportunity, and uses it to teach us all that to experience science is to truly understand science, and anyone can truly understand science, especially the starry-eyed children.



Will searching for fossils in 2015. Photo by Brittany Malinowski.



Will (far right) and the BBPI staff near Johnsonops Hill in 2015.

How You Can Help

by the BBPI

Of course, the holiday shopping season is in full swing, and there are plenty of ways you can help the **BBPI** through it all. Take a look at these easy and (mostly) FREE ways to support the **BBPI**.

Amazon Smile & iGive

Shopping online couldn't be easier, of course, but now supporting your favorite nonprofit while shopping is just as easy. Click here to link to our [Amazon Smile account](#), and then each time you shop through Smile.Amazon.com, Amazon donates a portion of the sales to the **BBPI**! iGive works the same way, but the donations are available through thousands of online stores! Click here to link to the BBPI's [iGive account](#).

amazon smile
You shop. Amazon gives.

iGive.com

Spread The Word!

We have learned through trial and error that the most effective advertising strategy for the **BBPI** is by word of mouth. There are only so many people we can meet and talk to, so this is where you come in.

We have a new supply of rack cards, and soon we'll have brochures as well. If you would like a stack of either or both to hand out to friends and family, or if you have a place to display them at your business or community center, please contact us and we'll ship them out to you right away.



Year-end Tax Planning!

At the risk of being a downer, this is also the time of year to start thinking about your taxes. If supporting nonprofits is part of your end-of-year tax planning, keep the **BBPI** in mind! As a 501(c)(3) organization, your donations are tax deductible! Donations also come with benefits, many of which make great holiday gifts! Check out our [donation page](#) for details.

Be sure to check with your employer, too! Many corporations still match all or a portion of your financial gifts!

One last reminder: Facebook is now waiving all fees on donations made on our homepage! Visit us today at [Facebook.com/BBPaleo](https://www.facebook.com/BBPaleo).



Updates from the Lab

by Jason C. Poole

We are about four months into fossil preparation of the specimens. The sun-burns and tans have faded but the excitement of discovery is still going strong at the ANSP Fossil Prep Lab. There are often surprises, sometimes even unexpected bones wrapped up in the jackets. In past years I have recovered one wedding ring "slipped off while slapping plaster in place," a pair of nail clippers, a live scorpion, a dead one, and about 20 biting red ants. In this batch of bones, we have recovered one hair band and, happily, a couple of unexpected fossils bones. Of those, the ones we're most excited about are an *Allosaurus* tail bone, a pathological (injured) toe, a *Diplodocus* tail bone and skin imprints, and a partial rib and spinal process from the "Suuz" quarry.

There have been some fun, scientifically-important surprises, but there also have been specimens that we purposely collected and prepared that are absolutely beautiful. These specimens are great reminders of why we do this. These fossils are masterpieces of evolutionary art, beautiful in presentation but astounding in scientific context. It is so exciting to work with these bones, preparing them to spend the rest of their afterlives as unique clues that will help unlock the secrets of our ancient past.

Be sure to come by the Academy's Paleo Lab soon to see these and many other great fossils from our summer field collections!

Camarasaur vertebra.



Beautiful, so-far unidentified sauropod vertebra.

Our Role as Citizen Scientists

by Jason P. Schein

Citizen science, to the uninitiated, is scientific research implemented and executed at least in part by amateur scientists. Although the concept has been around for a few decades, citizen science as a widespread, global movement, is a relatively recent phenomenon. In truth, it has exploded in popularity, with no sign of stalling.

Like just about everything else, the internet has a lot to do with that. Within seconds, and from the comfort of my heated office and cozy chair I'm sitting in right now, I can donate to any number of worthy research projects through wonderful websites like [Experiment](#). If I want to contribute to a project by collecting data, I can do that too. There are dozens of amazing projects on websites like [Zooniverse](#) that can instantly transport me around the world, placing me in the role of a field biologist. With the click of a mouse, I can be on a cliff face in the North Atlantic Ocean [observing seabirds, or identifying orchids](#) to document climate change in the U.K. What's even more incredible is that you don't need to be a highly-trained Ph.D. to make real contributions. I can't begin to tell you what an incredible moment it was when I watched my 7 and 8-year-old children identifying, counting, and observing the behaviors of [exotic wildlife photographed in Mozambique's Gorongosa National Park](#), and doing it well after only 5 minutes of "training".

What's even more important, of course, is that crowd-scientists are making real contributions. Very often the contribution is simply time. One wonderful result of the technology implemented into many research projects these days is that we are able to capture volumes of data that just a few years ago were unimaginable, and with far less effort. The downside to that, of course, is that there is a *lot* more data – far more than one person, or even a team of scientists can analyze. Many of

the citizen-science projects on Zooniverse, for example, involve analyzing pictures taken from motion-activated game cameras. Literally *hundreds of thousands of images*, each with perhaps dozens of important data points. Properly analyzing that much data is impossible without the efforts of a crowd. Other citizen-science projects have [exposed polluters and corrupt government officials](#), and led to changes in state and federal laws.

At its core, the **BBPI** is, very simply, an experiment in citizen science, and many of the same principles are at play. Do we *have* to include non-paleontologists on our digs? Of course not – most don't. But we have access to hundreds of square miles of prime fossil-hunting public lands, and there's simply no way we'll ever begin to scratch the surface without the help of folks like you. One of the first lessons we learned on our expeditions is that the more eyes we have on the ground, the more fossils we find, and fossils, to a paleontologist, are data points. It's that simple. The benefits of more data points far outweigh the small amount of extra time required to train a new group of Expedition Crew Members (ECMs) each week, or the slight risk of damage to a fossil by inexperienced hands.

There is another benefit to citizen science, and one that is likely more important in the grand scheme of things. Our country, society, and the world all clearly benefit when its citizenry is more scientifically literate. Our ECMs aren't just collecting data points. They are immersed in the theory and practice of science. They are experiencing the adventure of science first hand. At a time when scientific literacy is waning, and its negative effects bombard us daily, the role of citizen science in everything we do and the **BBPI's** commitment to it, are perhaps our greatest contribution and legacy.

OUR CITIZEN SCIENTISTS AT WORK



Members of the 2016 Field Expedition excavating some Triceratops remains.



2016 Expedition Crew Members excavating sauropod limb bones.



Expedition Crew Members at the Suuwassea site in 2015.

Who We Are

About Us

The **Bighorn Basin Paleontological Institute** is a nonprofit 501(c)(3) organization dedicated to paleontology and earth science research, education, and outreach. We harness the universal appeal of dinosaurs to engage people of all interest levels and backgrounds to conduct and promote the natural sciences. The greatest strengths of the institution lie in our seamless integration of collaborative scientific research, educational programming, and world-class, immersive citizen science experiences.

The **BBPI** seeks to be a world-class center of paleontological research and education, and an important resource for paleontologists, natural scientists, and citizen scientists seeking to more fully understand and interpret the natural world.

Our Mission

*The **Bighorn Basin Paleontological Institute** seeks to collaboratively study, actively preserve, and dynamically interpret the paleontological treasures of the Bighorn Basin and the surrounding region, as well as to promote paleontology and the natural sciences to life-long learners, wherever they may be.*

Our Ethos

We believe that science is an adventure - an adventure in exploration and discovery. There is no more fundamentally human or important endeavor than to explore.

We believe that science has the power to inspire the global community, and that all children - fueled by endless imagination and insatiable curiosity - are inherently natural scientists.

We believe that science is exquisitely capable of asking and answering questions about the natural world, revealing the universe's fundamental truths. As such, we believe that science and reason are the best tools for addressing and solving the world's most pressing problems.

We believe that scientific discovery builds on the findings of other scientists. We believe that scientists have no greater responsibility than to communicate their work, sharing their discoveries to inspire others in the pursuit of knowledge.

We believe in the power of science.



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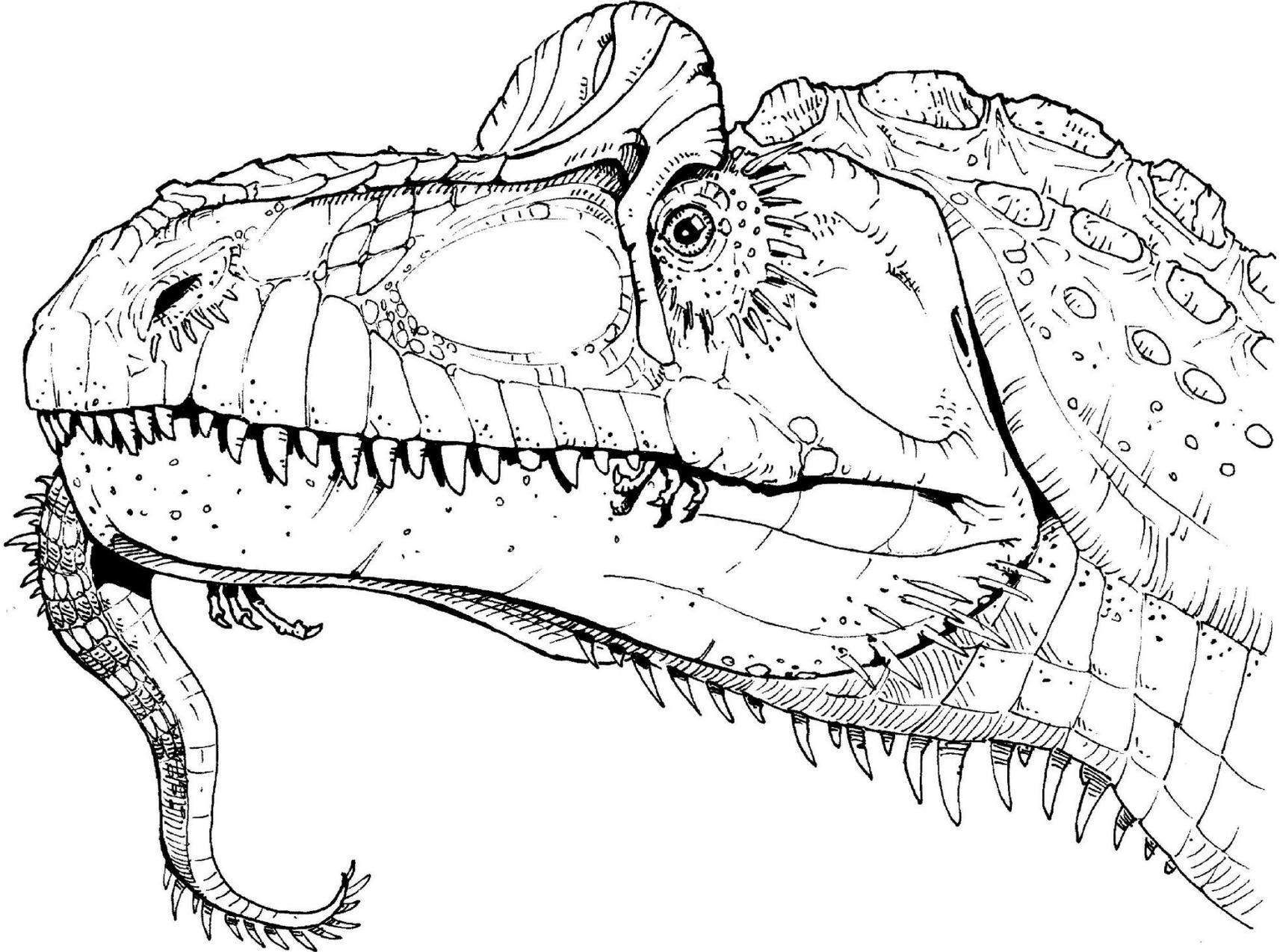
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YouTube

Paleo-art Fun For Everyone!

Have a blast coloring the dinosaur! The color of dinosaurs is one of the most exciting subjects in paleontology research right now, but we still don't know exactly what they looked like. Use your imagination and ask your parents to share what you come up with on our [Facebook page!](#)



Cryolophosaurus [CRY-oh-loaf-oh-SAWR-us] is a theropod dinosaur from the early Jurassic Period (190 million years ago). Found in 1990, it is the first meat-eating dinosaur to be discovered in what is now Antarctica. Its name means 'Cold Crested Lizard'. Illustration by Jason C. Poole.