

Friends of Petrified Forest National Park

Working together we can
make a difference!

Issue 1, August 2012



Events

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| June 2, 2012 | Re-opening of <i>Revueltosaurus</i> Quarry with Bill Parker |
| June 8-9, 2012 | Rock Art recording on expansion lands with Bill Reitze |
| September 29, 2012 | Public Lands Day volunteer opportunities |
| This Fall | Clean up at Hatch Ranch Headquarters – more info to come! |

Welcome to the Friends Group!

The Friends of Petrified Forest National Park is a non-profit, partner organization that supports the mission of the park, particularly in the science and education fields. The role of individual and institutional Friends of Petrified Forest National Park is to bring expertise to the planning and support of research projects and educational endeavors designed to study, evaluate, and interpret the natural and cultural resources of the park. Friends take an active role in planning, execution, and/or follow-up on projects within their scientific or institutional communities.

Though funds required for projects will be welcome from all sources it is hoped that extensive use will be made of web-based fund raising and grant requests directed at institutions and foundations having an interest in projects being undertaken.

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Like us on Facebook!

If you use Facebook, visit Friends of Petrified Forest National Park and stay in touch with events and



(left) *Revueltosaurus* Quarry excavation with Susan Drymala and Frankee Sena
(right) *Revueltosaurus* scapula

The Work Begins

Since the first meeting in March, several activities have brought Friends together in the park again.

Paleontological Excavation

On June 2, 2012 the Friends Group was invited to help reopen the *Revueltosaurus* Quarry in Petrified Forest National Park. Between 2004 and 2006 numerous bones of *Revueltosaurus*, including eight partial to mostly complete skeletons, were discovered at this site.



Revueltosaurus callenderi by Jeff

Revueltosaurus callenderi is the name given to a small (3 meter length) reptile known only from the later part of the Triassic Period (~215 million years ago). First named in 1989, *Revueltosaurus* was known only from its teeth, which were found in rocks of the Chinle Formation originally in New Mexico and then in Arizona. Based on the shape of these teeth, which resemble those of the *Iguana* and some dinosaurs, *Revueltosaurus* was thought to be a primitive plant eating dinosaur.

The material collected from the park's *Revueltosaurus* Quarry allowed paleontologists to reconstruct the animal for the first time. It was discovered that *Revueltosaurus* was not a dinosaur, but instead a member of the crocodylian lineage. This discovery has subsequently helped generate a lot of global research on the origin and

early evolution of the dinosaurs. The quarry was closed in 2006 to allow preparation, study, and curation to progress on the collected skeletons.

Funding was received from a National Park Service Block Grant to reopen the quarry in 2012, with additional work to be done in 2013. With the help of two Friends, when the quarry was reopened, two partial skeletons of *Revueltosaurus* were immediately discovered. Subsequent work has uncovered a third skeleton as well as many isolated bones of *Revueltosaurus*.

These additional specimens will hopefully provide missing information regarding *Revueltosaurus* including details of the skull, pelvis, tail, and limbs. Scientists are also looking for evidence to suggest why so many of these animals died and were buried in the same place.

The Friends of Petrified Forest National Park were a great help in discovering these initial new specimens as well as exposing other clues in the quarry to help determine what the environment was like at the time. They were able to experience how paleontologists find and collect fossils in the field. Work at this globally significant site will continue this summer and in 2013. All indications are that more *Revueltosaurus* specimens will be uncovered from this amazing site.

You can see fossil bones at Rainbow Forest Museum, located at the south end of the park.

Petroglyphs can be observed at both Puerco Pueblo and Newspaper Rock, located in the middle of the park, directly off the main road.



(left) Vessel found during survey, currently under reconstruction.



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Archaeological Survey

On June 8th and 9th, archaeologist Bill Reitze; the summer crew, Amy Schott, Andy Bridges, and Josh Vanbuskirk; along with several Friends of Petrified Forest, recorded rock art in the park's eastern expansion lands. They focused on a single location near the Puerco River with several different glyph panels and broke into groups to draw and document the petroglyphs.

Petrified Forest has hundreds of petroglyph sites making it an ideal location to research and understand what these panels might mean. The park's location between the Little Colorado and Rio Puerco has made it a travel corridor for over ten thousand years, bringing in a wide variety of people with different ideas and ways of living. Petroglyph research provides a direct link with prehistoric groups. The question of why and how people chose these locations and images is always fascinating.

High winds and temperatures made Saturday's work difficult, but everyone enjoyed seeing these previously unrecorded petroglyphs. Although these images have been unprotected for many years, very little vandalism has occurred making these an excellent study site.

Early in the morning the crew found a pot! It is probably a Pueblo I canteen and over a thousand years old. It's in a few pieces and not quite complete, but still an amazing find. The park is currently working to stabilize and reconstruct the vessel for display to the public.

In the afternoon the group took a field trip to see a couple of Pueblo II ruins near the petroglyph site.

There was a much smaller group on Sunday, but the morning was spent finishing up glyph panels started on Saturday. In total the group only finished a handful of the 24 panels on site, leaving an exciting future recording opportunity. This site along with many more in the park and the new expansion lands will provide exciting new research opportunities in the future.



Rock art survey on eastern expansion lands. From Top: Pic 1 - Andy, Janet, Amy, and Bob. Pic 2 - Bob, Evelyn, and Amy. Pic 3 - Janet and Andy. Pic 4 - Dennis.

What's Been Going On....

Solar Events.

Visitors to Petrified Forest National Park are having fun in the sun and under the stars! This year has marked an exceptional year for solar events. A record-breaking crowd of more than 200 visitors enjoyed the Annular Solar Eclipse on May 20th. A special program with a telescopic view of the Venus Transit was held on June 5th. From June 14-28 rangers helped visitors observe a solar marker at Puerco Pueblo, when a shaft of sunlight traveled to the center of a spiral petroglyph, marking the summer solstice.

Youth Conservation Corps.

The Youth Conservation Corps (YCC) is a summer employment program for young men and women, providing the opportunity to work on and learn about public land areas. The Petrified Forest YCC team helped every day with park clean up, trail maintenance, and landscaping. They assisted the park's paleontology staff in retrieving fossils from the Painted Desert Wilderness and helped with trash clean up at McHood Park in Winslow.

Native Conservation Corps.

Thanks to a generous grant by the National Park Foundation's "America's Best Idea" grant program, Native Conservation Corps (NCC) enjoyed a second year of success! The NCC provides the opportunity for Native American High School Seniors to work and live at the park. They explore a variety of career paths while working alongside national park service staff. The Petrified Forest NCC team began working on projects in the park in early July. They were also able to travel and work at Grand Canyon, Glen Canyon, and Rainbow Bridge.

Since the program's launch in 2011, NCC has grown to include new partnerships with multiple parks and government agencies, multi-tribal participation and active involvement with local schools.

The NCC project is in direct alignment with the NPS "Call to Action" in that it engages diverse communities, provides educational experiences, helps in the preservation of natural and cultural resources and contributes to a diverse workforce. The NCC has been so successful that it has generated interest from a variety of other parks in the southwest!

HQ Gets a Makeover.

Rehabilitation work is ongoing in the Headquarters and Visitor Center Complex. Using an old-fashioned bucket brigade, YCC and park staff brought drain rock and soil, to new second story planters. More landscaping will be done on **National Public Lands Day, September 29th**. The park is asking for volunteers to help mulch hundreds of new plants to be used for landscaping.

It's Starting to Come Together...

Kevin Dahl (kdahl@npca.org) and Mike Snader (mnsader18@verizon.net) have begun soliciting interest for participation on the Board of Directors for the embryonic Friends of Petrified Forest. If you have an interest, they would like to talk with you. Two additional Friends have agreed to serve so far. The board will get the legal process underway to form an official 501(c)3 organization, discuss a partnership agreement with the NPS, plan extensive use of social media to disseminate information and for fund raising, and work with the park to define projects and needs.

Please send this newsletter to others whom you think may be interested in joining the Friends. Contact Brad Traver (brad_traver@nps.gov) to be added to the mailing list.



(above) YCC crew.
(below) New planter at HQ.



(below) NCC crew.



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Park managers realize that budgetary restraint will be a fact of life for the park for the foreseeable future and value the support that a Friends group can provide. Petrified Forest only has three full-time employees to manage paleontology, archaeology and ecology resources on both existing and newly acquired park lands and while seasonal or project-supported help is available most years it's on a competitive basis

and cannot be relied upon. While park managers are working to address shortcomings in resource management staffing levels, it is hoped that the Friends of Petrified Forest National Park can help with specific projects involving paleontological excavation, archaeological surveys, education programming and scientific outreach.

Projects the Friends can help accomplish

Paleontological excavation.

Bones are discovered in the Chinle Formation regularly and need to be removed to avoid loss through erosion. Park staff and partner institutions regularly perform field excavations of promising sites. Additional field tips may be possible through grants and/or donation of funds. There may also be volunteer opportunities.

Archaeological surveys.

Only about 30% of pre-expansion lands and none of the new lands have been surveyed. Surveys may be undertaken through partner organizations or may be funded through grants and/or donations. There may also be volunteer opportunities.

Inventory of resources.

Coordinated by park staff, inventories may be conducted by partners, contractors, and/or volunteers with funds from grants and/or donations.

Vegetation and geological mapping.

Coordinated through park staff, mapping may be accomplished

through the dedicated efforts of students, partner organizations, and/or volunteers over several years. Grants and donations will be necessary.

Travel grants.

Providing funds for area schools to travel to the park for field trips.

Enhance scientific communication.

Promoting better and broader understanding of park resources through communication with technical and popular press.

Establish a Field Institute.

Giving interested visitors the opportunity to delve more deeply into park resources.

Create a Triassic Science and Education Center.

This facility would include a paleontology lab, classroom, official natural history repository, and public interaction opportunity in the Painted Desert Visitor Center area.



Have an expertise or interest in archaeology or paleontology?

Join the Friends of Petrified Forest National Park for a survey day! You can document rock art and puebloan sites, walk the badlands in search of fossil material, assist in excavations at known fossil quarries, and learn more about Triassic animals with others who share your interest.



Know of a funding source that the park can use?

Let the Friends of Petrified Forest National Park know about funding sources that the park might be able to use for some of the projects listed to the left. Donations are also always welcome!



Join the Friends Group today!

You can be a member of the Friends of Petrified Forest National Park! Contact Kevin Dahl for more details.

kdahl@npca.org

Visit the park's official website to learn more about the park and its resources:

www.nps.gov/pefo/

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