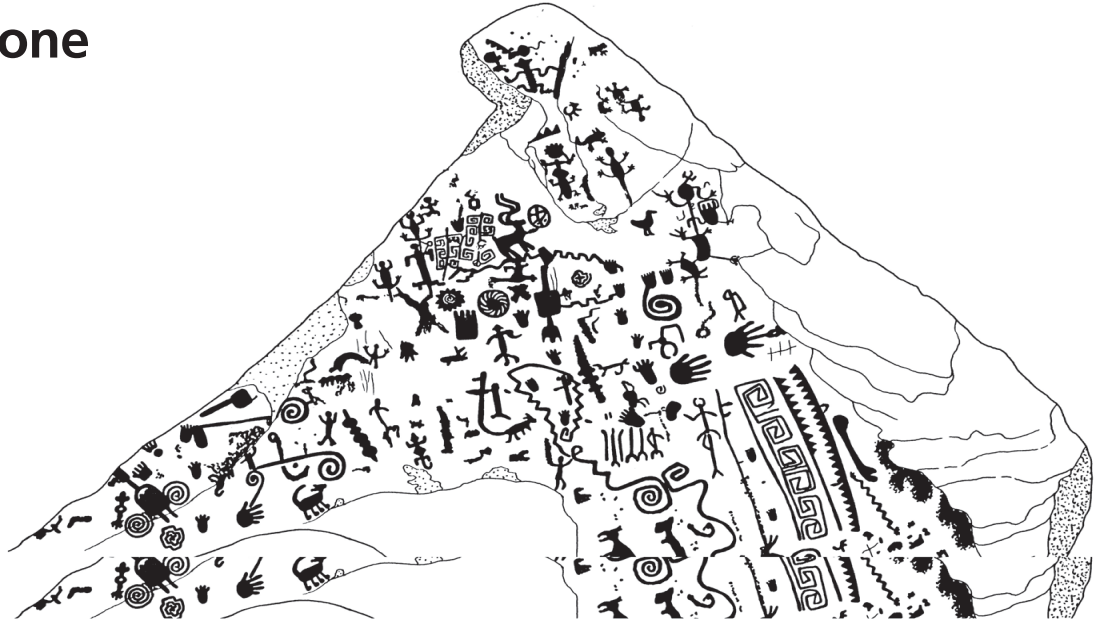




## Messages on Stone



Petroglyphs are like whispers from the past. For thousands of years, prehistoric people of the Southwest have used the surfaces of the boulders, canyon walls, and rock shelters as a means of communication. Petrified Forest National Park contains many fine examples of these images pecked into stone.

### What is a petroglyph?

Petroglyphs are images, symbols, or designs that are scratched, pecked, carved, or incised on natural rock surfaces.

Created by people hundreds, even thousands, of years ago, petroglyphs intrigue us and provoke many questions.

### How are petroglyphs made?

There are several possible techniques that could have been used to make Petrified Forest's petroglyphs. One method was using a direct blow from an angular palm-sized rock called a hammerstone. The

method of indirect percussion gave greater control, using a chisel-like rock in conjunction with the hammerstone, resulting in a superior effect.

### What is that dark surface on the rock?

The dark coating found on many rock surfaces is called *desert varnish*. This natural patina is formed of iron and manganese oxides fixed with clay particles by microorganisms to the rock. Many petroglyphs are made by pecking or scratching through this thin patina to

reveal the original color of the interior of the rock. Eventually, desert varnish redeposits, also called *repatination*, darkening over time. Some researchers hope that repatination may help with dating petroglyphs.

### How old are they?

Determining the age of petroglyphs is a difficult task. Archeologists might assign an age which correlates with a nearby habitation site; evaluate the subject matter and style to determine how it relates to a specific time period; compare the

sequence of design layering; or use analytical dating techniques such as X-ray fluorescence. Most of the petroglyphs in the park are thought to range between 650 to 2000 years old.

### What do they mean?

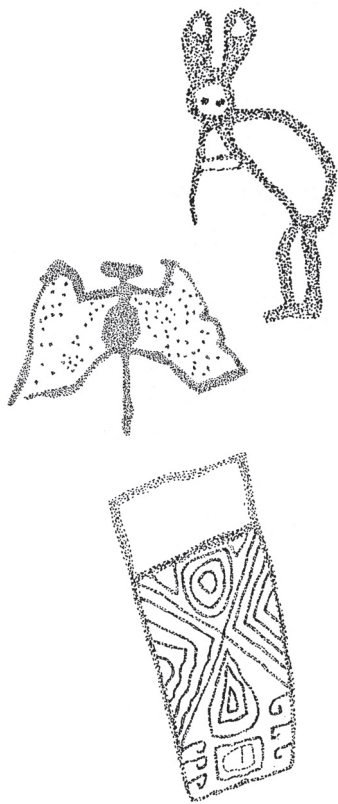
The Hopi, Zuni, and Navajo of today have centuries of cultural affiliations with this area, therefore different beliefs and practices may be represented by the petroglyphs. Researchers learn a great deal from these living people. Some meanings were not meant to be known or understood today. Some meanings were not meant to be known or understood by the uninitiated. Some images were possibly made for religious purposes. They probably all have a deep spiritual significance and may be considered prayers by some people. Current speculation has led some researchers to

believe that various petroglyphs may tell a story, mark a trail, or commemorate an event. Some images may have been made to ensure fertility or successful hunting, or may have also been used to keep track of the seasons. In some instances the image may represent a clan or family, many of which have been recognized by their descendents.

Some of us may never know for sure what the maker intended. Petroglyphs may have significance that can only be explained by the original artist.



## Is that a poodle?



Researchers classify petroglyph and pictograph (images painted with mineral or vegetal pigment) styles according to elements, figures, compositions, and techniques that are consistent within a geographic area and time period. Once a style is defined, it may be used to associate images with specific cultural groups.

Archeologists have categorized the petroglyphs found in the park into six distinct groups: anthropomorphs (human forms), zoomorphs (animal shapes), *Katsinam* (sometimes spelled Kachinas), hands/tracks, geometrics, and indeterminate. Many shapes represented by petroglyphs are familiar. Even the geometric and abstract figures may remind us of patterns in our own lives: water, stars, clouds, and the passage of time.

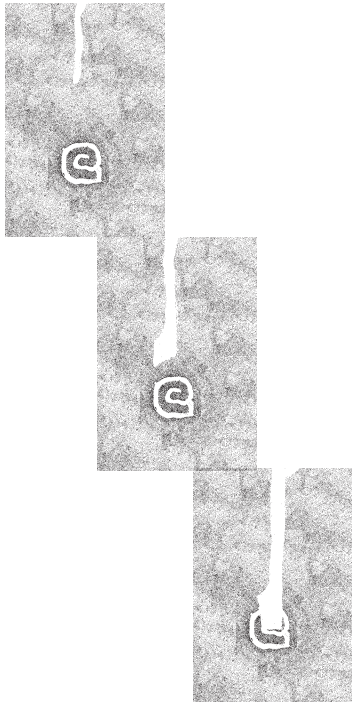
Anthropomorphs and *Katsinam* are represented by the human form. Anthropomorphic figures may have complete bodies but generally lack facial

features. Hand and footprints appear on many panels. Cultural items sometimes associated with human figures include rattles, dance wands, *pahos* (prayer sticks), and ceremonial staffs. *Katsina* figures and masks appear in petroglyphs by A.D. 1300 in this area. *Katsinam* are spiritual beings who are part of the land, bringing moisture to the Hopi villages and Zuni.

Zoomorphs include large and small animals, reptiles, and birds. You may see cougars, birds, lizards, snakes, bats, coyotes, and rabbits on the petroglyph panels in the park. Hunters are sometimes seen in conjunction with prey. Both animal and some geometric symbols can be linked to specific clans.

Geometrics consist of textile and pottery designs, spirals, circles, straight and wavy lines, “squiggle-mazes”, and other geometric shapes. Often, the same patterns are found in the artwork of living Pueblo people, such as the Hopi and Zuni.

## Solar Calendar



The paved trail leading through Puerco Pueblo ends at an overlook to view a small circular petroglyph. Although it isn't as complex or elaborate as some of the other images, this is a special petroglyph. It marks the summer solstice. For about a two week period around June 21, there is an interaction of light and shadow that passes across the rings of the petroglyph as the sun rises. Rangers will be available in the morning during the summer solstice at Puerco Pueblo.

*Archaeoastronomy* is the term used to describe the study of the heavens by the ancient people. Petroglyphs and pictographs such as the Puerco Pueblo solar marker are found throughout the Southwest and beyond. While some mark the summer solstice, others indicate winter solstice and both equinoxes. Evidence also

indicates that some petroglyphs interact forty-five days before and after the winter solstice. Even supernovas have been recorded as petroglyphs and pictographs!

Why did the ancestral Puebloan people make these special symbols? Did they have ceremonial purposes? Were they calendars for planting for these farming people? Researchers have many theories and continue to learn from the living indigenous people.

Periods associated with the different styles of petroglyphs in Petrified Forest include Basketmaker (500 B.C. to A.D. 650) and Pueblo I, III, and IV (A.D. 650-1450). A few Navajo petroglyphs have also been found (A.D. 1750 to the present). Unfortunately, images on the petroglyph panels also include modern additions.

## How to visit a petroglyph site

A variety of factors contribute to the erosion of petroglyphs including natural forces such as wind, rain, extreme temperatures, plant growth, and rock type. There may have been much older petroglyphs left by Archaic people, now lost to erosion. Perhaps the most devastating factor is human. Vandalism of rock art sites has escalated, including bullet holes, graffiti, and removal of petroglyphs or entire panels. Even the seemingly innocent touch can harm petroglyphs. Oil

from your hands can damage the petroglyphs and desert varnish. For your own safety and the preservation of the petroglyphs, stay on the trails. Do not climb down to the petroglyphs. Altering, defacing, or damaging the petroglyphs is against the law—even if the damage is unintentional. Petroglyphs are fragile, non-renewable cultural resources that, once damaged, can never be replaced. We ask for your assistance in preserving this rich cultural heritage.

