

NATIVE AMERICAN PETROGLYPHS AND PICTOGRAPHS

Petroglyphs, or carved [rock](#) designs, and pictographs, or painted rock designs, are known by the general term rock art. In what are now the states of Utah, [Arizona](#), New Mexico, Texas, and Colorado, prehistoric hunter-gatherer Indians began to decorate canyon walls, rock shelters, and boulders with rock art several thousand years ago. Navajos, Apaches, Pueblo Indians, and even Spanish soldiers and settlers continued to create rock art over the centuries. They probably did it for many reasons: aesthetic, magical, religious, historical, astronomical, as a part of hunting rituals--or a combination of the above.

Archaeologists believe that rock art is much more than meaningless doodles. And contrary to popular belief, it was not created by the inhabitants of sunken, mythical continents, it does not represent maps to buried treasure or depict extraterrestrials, and it was not intended as a form of writing. Rock art does provide a means of understanding the sacred as well as the mundane in prehistoric and historic Indian culture. It is a way of recognizing cultural relationships and the patterns of communication and commerce among individuals and tribes. Changes in rock-art styles often reflect new ideologies and religious practices. However, the quality of [the rock](#) art and the level of sophistication of the culture it belongs to are not necessarily related.

Petroglyphs, which are more common than pictographs, are found on the dark, exposed surfaces of rock such as sandstone and basalt. These surfaces serve as the base color for abstract as well as representational human, anthropomorphic supernatural, animal and plant figures as well as designs such as spirals, circles, and stars. Representational figures are always stylized. Abstract figures, which were used by hunters and gatherers in the oldest known southwestern rock art, bear no resemblance to the [real world](#).

Pecking into the rock to create petroglyphs was accomplished with a hammerstone or chisel, sometimes creating a preliminary outline of the figure. Different pecking techniques created different styles. Incising or scratching with a sharp tool was also done. Incised designs are more expressive and detailed than pecked designs.

Pictographs are usually found on light-colored, protected surfaces. Stylized animals and humans and geometric objects are common subjects. Pictograph pigments were made from soot or powdered local minerals. A binder was used to stabilize the paint and allow it to stick to the rock. The colors generally used were

red, white, black, and orange, and less often green, blue, and turquoise. Red pigment probably came from hematite or iron oxide; orange from a combination of hematite and limonite. Malachite provided the green, azurite the blue, and turquoise probably came from ground up turquoise. Other sources of pigment included white clay, silica, gypsum, chalk, calcium carbonate, and charcoal. Pastels were created from clay mixed with other minerals.

Water was used to create consistency, but the binding agent could be anything from saliva, to yucca juice, to a mix of water and white bean meal, to pinyon gum; even the whites of eagle eggs were employed. The surface of the rock was sometimes smoothed and abraded in preparation for painting. Brushes were probably made from the tips of yucca leaves chewed to remove the pulp, leaving vertical fibers for painting small solid areas, clear lines, and other fine details. Wider areas could be painted with a corn husk wrapped around the finger, or even the finger itself. Dots were applied with the fingertips. Entire hand prints were created using a stenciled design and spraying paint around the hand.

Sometimes techniques were combined; incised figures were added to pecked and painted figures, or pecked figures were also painted. Representational and abstract figures were also often combined. The choice of methods was probably based on the quality of the available rock, and even on the shape of the rock.

Archaeologists are able to date designs by examining subtle color variations and the various layers of petroglyphs on a rock. When a design is scratched through the surface, the original color of the rock is exposed. Naturally occurring water stains and lichen growth also add color. As time goes on, the exposed surfaces develop a patina, which is caused by the presence of black or brown mineral stains. The patina becomes darker as it ages, so that it is possible to determine more recent rock art by its lighter patina. Another method of dating is by examining the vertical placement of rock art styles on a cliff face or in a rock shelter. Erosion happens from the top downwards, so the figures of later artists are lower. It's also possible to date rock art by comparing styles with the figures used on pottery, clay pipes, or walls in Indian ruins. Or dates may be provided by the subjects of the art. For example, if a horse is represented, the rock art is from the 16th century or later, because Spaniards imported horses to [the New World](#) beginning in the 1500s. Some rock art even depicts specific historic events, for example the Spanish massacre of Navajos in an expedition into Canyon de Chelly in 1805.

Pictographs are found most often in the mountains of southwestern [New Mexico](#) because of its predominantly light-colored rock. Petroglyphs are more common in southern Arizona and New Mexico's Rio Grande Valley, with their talus rock slopes and dark, patinated boulders. Many rock-art sites display collections of designs by different individuals or tribes, or were created in various centuries and sometimes superimposed on each other.

The three major southwestern Indian horticultural groups who created rock art were the Hohokam of southern Arizona, the Mogollon of southern Arizona and New Mexico and [West Texas](#), and the Anasazi--now known as the Pueblo Indians--of southern Utah, Northern New Mexico and Arizona. They existed from approximately A.D. 1 to A.D. 1500. In addition, the Fremont culture of Utah employed a dramatic rock-art style based on Anasazi motifs from A.D. 700 to A.D. 1200 .

The Navajos and Apaches began their rock-art traditions at a later time. The earliest Navajo rock art, which dates from the 1700s, is ceremonial in nature and located in northwestern New Mexico, northern Arizona, and southern Utah. Apache rock art is less known, but is located through southwestern New Mexico and Arizona and west Texas.

The conquering Spanish also created rock art, which first appeared in the 1600s and includes Christian crosses, inscriptions, and figures of priests and soldiers left by explorers, sheepherders, traders, settlers, and missionaries. Crosses are most common, and they are often found near or on top of Indian rock images, presumably to protect and exorcise the possible evil influences of the Indian figures.