

# ART AND SPIRIT OF TIMBERLINE ANCIENTS

Article and Photography by Terry Nathan, Field Contributor

"WHETHER YOUNG OR OLD, SHELTERED OR EXPOSED TO THE WILDEST GALES, THIS TREE [BRISTLECONE PINE] IS EVER FOUND IRREPRESSIBLY AND EXTRAVAGANTLY PICTURESQUE, AND OFFERS A RICHER AND MORE VARIED SERIES OF FORMS TO THE ARTIST THAN ANY OTHER CONIFER I KNOW OF." JOHN MUIR

High on the windswept slopes of the White Mountains of California live the oldest trees on Earth — the bristlecone pines. Taking root some 40 centuries before Columbus set sail for the New World, these timberline ancients preside over a surreal landscape that has been etched by wind, snow and rain. The bristlecone pines and their timberline environment possess, in the most elemental form, the building blocks for compositional design in the visual arts: bold lines, varied textures, extraordinary forms, and stunning light. From the microcosm to the grand scenic, this region provides the nature photographer with creative inspiration and unlimited opportunities.

Images in Ancient Bristlecone Pine Forest, White Mountains, California, by Terry Nathan. Above Left: Moonset at dawn, Patriarch Grove. Below: Bristlecone detail, Schulman Grove.

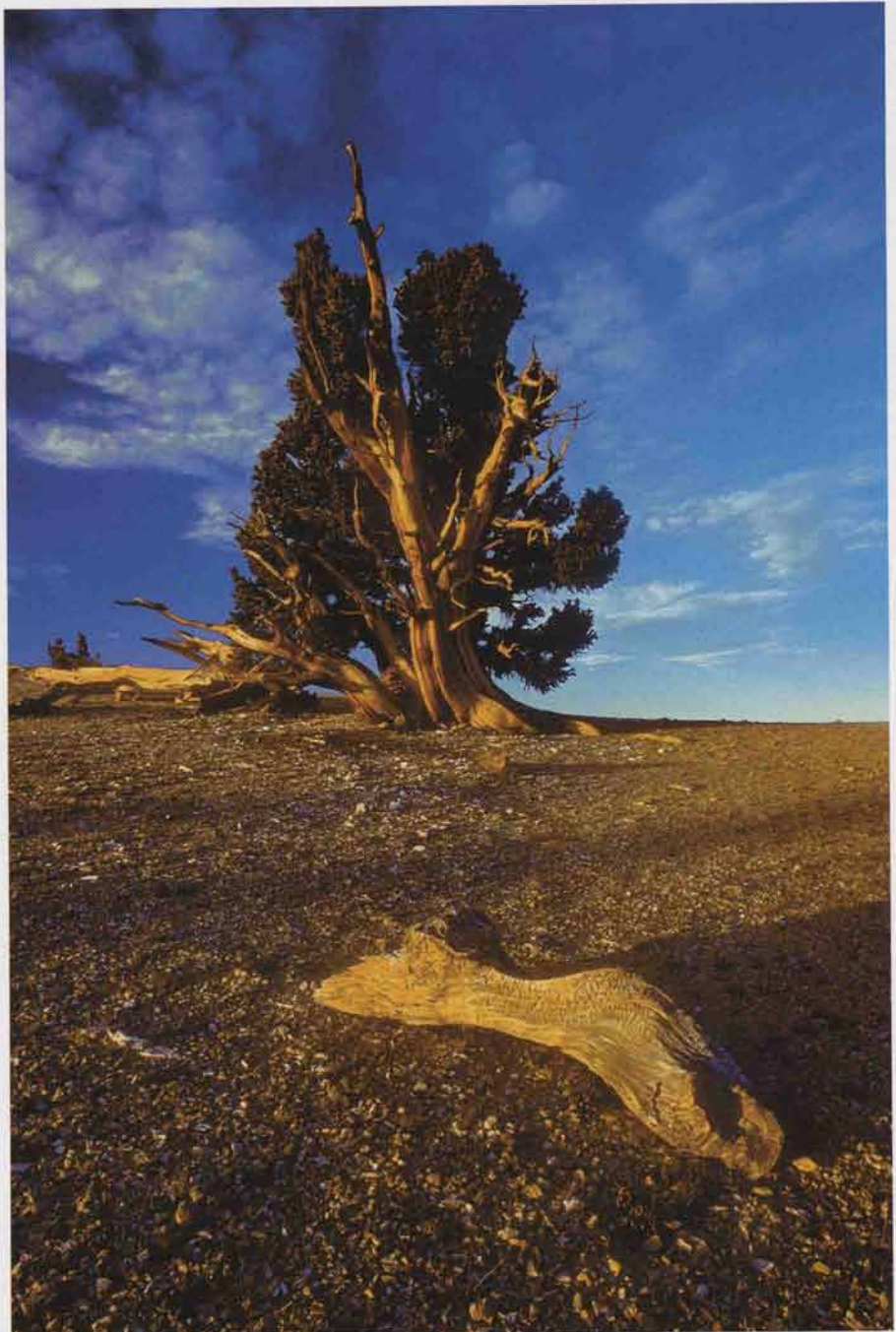


The bristlecone pines are found in isolated regions throughout the American Southwest at elevations mostly between 10,000 and 11,200 feet above sea level. At the western edge of the Great Basin, in California's White Mountains, the bristlecone pines are the oldest, with some living trees exceeding 4,000 years. Scattered wood remnants have been dated at 8,000 years. When fully grown the bristlecone pines stand about 40-60 feet tall. The branches are gnarled and the trunks are chiseled and polished by the wind. The deep green branch needles, which are about an inch and a half long, grow in clusters of five. The cones grow only on the branch tips and average just over three inches in length. The young cones are typically a dark purple or sometimes green, while the mature cones are typically dark brown and have bristles at the end of each cone scale, from which the trees derive their name. The harmonious colors of the cones, needles, and wood can be used to form a variety of photographic compositions.

The bristlecone pine's California home is extraordinarily harsh and accessible only during summer and early fall. Located in the rain shadow of the Sierra Nevada Mountains, the region receives less than 12 inches of precipitation annually, about 80 percent of which is in the form of snow. Subfreezing temperatures are the norm, summertime lightning is often severe, and the dolomitic soil is nutrient poor. Yet, it is because of these exceptionally harsh conditions, not in spite of, that the bristlecone pines have been able to adapt and live for millennia. The adaptations include very dense and resinous wood, which is highly resistant to insect penetration, rot and disease. Because of the dense wood, even dead trees can stand for centuries.

The bristlecone pine's wood also holds keys to understanding the past. The annual growth rings, highly sensitive to changes in precipitation and temperature, provide a detailed historical record of the climate for the region. By cross-dating the annular rings of living trees with those of dead trees, scientists are able to construct detailed chronologies of climate variability that date back nearly 9,000 years. This information is helping scientists to understand the many processes that are influencing today's changing environment.

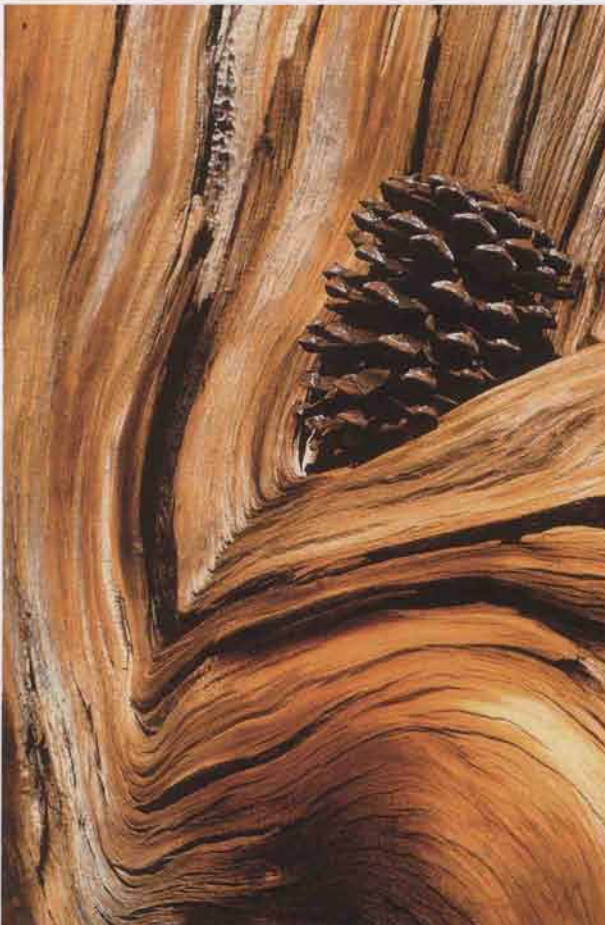
In the White Mountains the bristlecone pines are located in Inyo National Forest, about a one-hour drive from Bishop, California. The Ancient Bristlecone Pine Forest consists of



Driftwood and bristlecone pine, Patriarch Grove, by Terry Nathan.

the Schulman Grove at about 10,500 feet and the Patriarch Grove at about 11,200 feet. The Schulman Grove is named after Dr. Edmund Schulman (1908-1958) who first discovered the remarkable age of the White Mountain bristlecone pines in the mid-1950s. The Patriarch Grove is named for the Patriarch Tree, the largest bristlecone pine on Earth.

The Schulman Grove is reached by paved road. There is a visitor center and two maintained trails and the discovery trail is an easy one-mile walk. The Methuselah trail, a four-and-a-half-mile loop, has the oldest known living tree on Earth — the Methuselah tree. Estimated at more than 4,600 years, the Methuselah tree is not marked for its own protection. Compared to the Patriarch Grove, the Schulman Grove has a relatively dense stand of trees and thus is best suited for intimate portraits and close-ups.



Images in Ancient Bristlecone Pine Forest, White Mountains, California, by Terry Nathan. Above: Weathered bristlecone and wood detail, Schulman Grove. Facing Page: Bristlecone pine, Patriarch Grove.

For the intimate portraits and close-ups I rely primarily on two lenses: the Nikkor 28-70mm zoom lens with macro capability, and the relatively light Nikkor 70-300mm zoom lens with a Nikkor 5T diopter. A diopter is a thin, filter-like lens, the magnification is greatly increased, while the working distance (distance between the front of the lens and subject), depth of field (DOF), and subject area are greatly decreased. Consider, for example, the Nikkor 70-300mm and Nikkor 5T diopter combination. With the lens set at 300mm and its closest focusing distance, the magnification is 0.86 life-size, the working distance is 16 inches, and the subject area is 1.16x1.75 square inches. A magnification of 0.86 life-size means the subject is 86 percent of its actual size on the 35mm film's 1x1.5-square-inch image area. Because the diopter-zoom lens combination results in a very shallow DOF, sometimes only fractions of an inch, small apertures are recommended. Also, because the DOF is so shallow, care should be taken to ensure that the film plane is parallel to the subject.

The extraordinary wood grain patterns and the beautiful textures and hues of the weathered cones are my primary inspiration for the intimate portraits and close-ups. Because the ancient bristlecone pine trees often have only a narrow strip of bark along the trunk, which serves as its life source, much of the wood grain is exposed and easily photographed. Finding dramatic wood details with sweeping curves and dynamic lines is the challenging part — and the most enjoyable. I found such a pattern on a tree estimated to be more than two thousand years old and used it as my

canvas to photograph a single, weathered cone. My goal was to create a dynamic photograph that would illustrate the cone and capture the exquisite wood grain. To do this, I chose a vertical composition and using the rule of thirds I placed the cone at the upper right power point. I oriented the cone so that it coincided with the main diagonal of the wood pattern, which also served as the central axis for the overall flow of the pattern.

The bristlecone pine cones that have fallen from the trees form a mosaic of shapes, hues and textures. The cones vary from round to elongated, from browns to silver-grays, and from rough to smooth as a result of weathering. Keeping in mind that circles possess much visual energy and thus have an important impact on visual balance, care should be taken when composing the image. For example, when everything else is fixed, a round cone at the center of the image will produce a different balance than one at the edge of the image. Knowing how circles and other shapes, as well as light and texture, combine to affect image balance gives us additional tools for conveying our message with greater clarity.

The Patriarch Grove, which is located on a well-maintained dirt road about 12 miles beyond the Schulman Grove, offers unique opportunities to capture the spirit of the timberline ancients. It is an otherworld of sweeping vistas dotted with isolated trees of extraordinary shapes. Sunset and sunrise are the times to capture the warm light and to photograph silhouettes. If you time your trip accordingly and the weather cooperates, including the moon in your photograph can reinforce the sense of timelessness of the landscape and trees.

One challenge to photographing in the Patriarch Grove is to capture the vastness of the landscape while at the same time having bold foreground elements that entice the viewer to participate in the visual journey. When presented with this challenge, I rely mostly on two lenses: the ultra-wide angle Nikkor 17-35 zoom lens and the Nikkor 28-70 zoom lens. When using the ultra-wide angle lens in the 20mm range, it is especially important to have a strong foreground element and to make sure that the DOF is maximized by setting the lens at the smallest aperture and focusing at the hyperfocal distance (see "Lewis and Clark at the Oregon Coast," *Nature Photographer*, Summer 2003, for a discussion of DOF and hyperfocal distance). Among the objects that serve as strong foreground elements are weathered wood remnants and rocks. For focal lengths in the 28-70mm range, I prefer framing the landscape with trees having dramatic forms. On one memorable occasion I pre-positioned myself during the pre-dawn light and used a dead bristlecone pine to frame the full moon as it set over a distant ridge. Although I was quite pleased with the image, it is that special morning — the warm light, the cool breeze, and the fragrance of the pines — that lingers in my memory.

The Schulman and Patriarch Groves of the Ancient Bristlecone Pine Forest are among the few natural areas in the world where science and art are so intimately connected and where new knowledge and the creative spirit are so easily cultivated. For the naturalist and nature photographer alike, walking among the timberline ancients, viewing firsthand their magnificent forms, and knowing that they will continue their journey on Earth long after ours, makes one realize, as John Muir did more than a century ago, "we all travel the milky way together, trees and men."

*This article is dedicated to my father who spent most of his life working with trees.*

