

# **Manzano Mountain State Park Nature Trail**

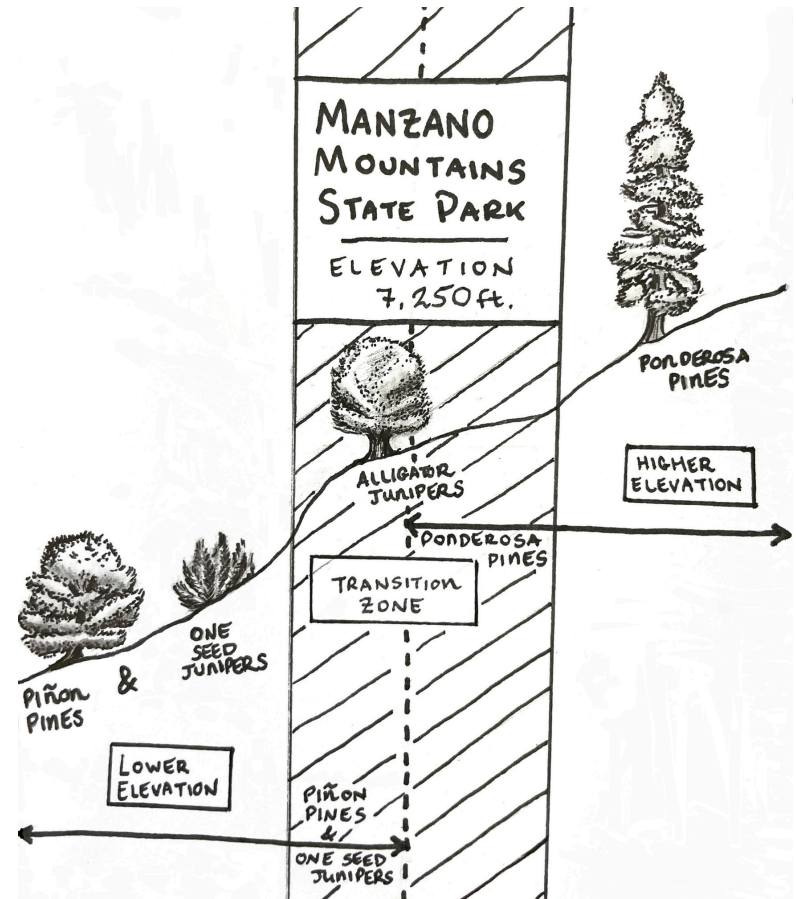
**Manzano Mountain State Park  
Mile Marker 3 Highway 131  
Mountainair, NM 87036  
(505)469-7608  
[www.emnrd.nm.gov](http://www.emnrd.nm.gov)**



**Self-Guided Walk**



## Where am I?



**Welcome to Manzano Mountain State Park! We are standing at about 7,250 feet above sea level. This is a transition zone of vegetation found in high and low elevations. You will be able to find one seed junipers from lower elevations and ponderosa pines from higher elevations. As you walk along our nature trail there are numbered signs at points of interest that will coincide with information you will find in this booklet.**

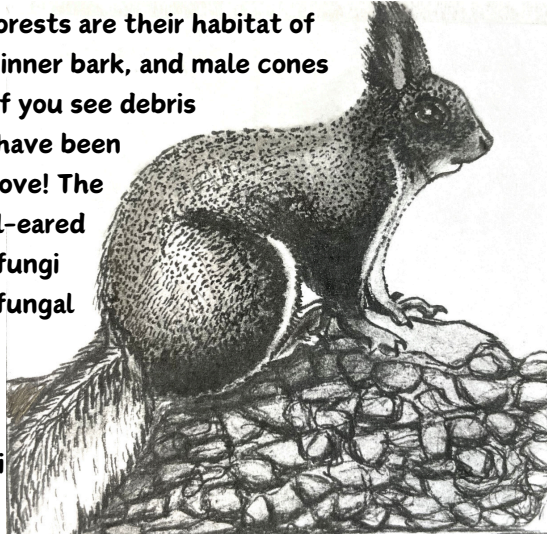
**Text By: Theresa Lewis, Karen Herzenberg  
and Esequiel Rivera**

**Illustrations By: Shannon Campbell**



# 1 Abert's Squirrel (*Sciurus aberti*)

What type of squirrel is that? Maybe you've seen this black, dark gray, and white mammal scurrying around the park. If you look towards the office where there's a bird feeder you may see them displaying their acrobatics jumping from tree to tree. Abert's Squirrel, also known as "tassel eared squirrel" because of its big ear tufts which are shed in the summer. Ponderosa pine forests are their habitat of choice: they eat seeds, buds, inner bark, and male cones of the Ponderosa pine trees. If you see debris below these trees, there may have been an Abert's squirrel feasting above! The ponderosas benefit too. Tassel-eared squirrels eat ectomycorrhizal fungi that grow on ponderosas; the fungal spores are spread as the squirrel eats, supporting the growth of more fungi. Ponderosas rely on these fungi for survival!

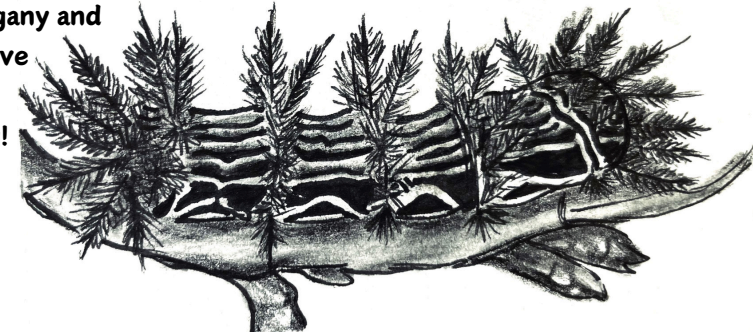


# 2 Ponderosa Pine (*Pinus ponderosa*)

Throughout Manzano Mountains State Park you can see your fair share of Ponderosa Pines. They are also known as blackjack pine, western red pine, yellow pine, bull pine, or rock pine. They can live over 300 years and are typically about 60-130 feet tall. The tallest known Ponderosa Pine was 262 feet tall! They can be identified by their needles which grow in groups of three and measure about five inches long. Their trunk reaches a diameter of two to three feet. When they mature their bark becomes red and scaly in a diamond pattern. If you get very close to the bark, you will notice they smell like vanilla! The smell is more noticeable in older trees.

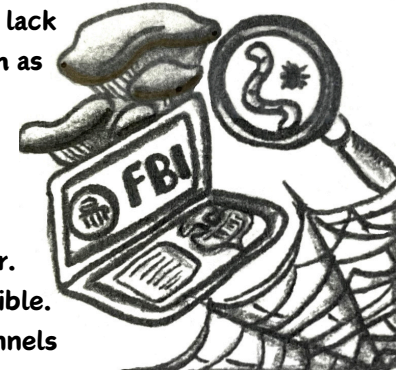
# 10 Zephyr-Eyed Silk moth (*Automeris zephyris*)

Zephyr-eyed Silkmoths are a dull tan with a pale line across the wings and colorful hind wings that appear to have eyes on them. In late summer and early fall you may be startled by large bright green and black spiky caterpillars which are the larvae of the moths. Don't touch them as tempted as you may be, their color is a warning of their poisonous nature. The "hairs" all over their body will sting causing a burning rash that usually lasts about 10-15 minutes. Watch out for them and keep children and pets at a distance. The larvae feed on oak and mountain mahogany and the adults survive their short lives without feeding!



# 11 FBI: Fungus, Bacteria or Invertebrate

What do you think might be decomposing this log? It's time for the FBI-Fungus, Bacteria, and Invertebrates. You may be familiar with fungi in the forms of mushrooms, yeast, mold, and mildew. Fungi, along with bacteria, break down organic matter, which releases important elements into the soil and air such as carbon and oxygen. Bacteria are microscopic, single-celled organisms and are critical in the decomposition of dead organic matter. Invertebrates are any animals that lack a backbone (or any internal skeleton), such as insects. Some insects are responsible for the first level of decomposition which is chewing dead leaves and other organic matter into smaller and smaller bits like a blender. Later, fungi and bacteria take over. In this case, termites are probably responsible. They create colonies like ants and form tunnels and feed on the nutrients in the wood.



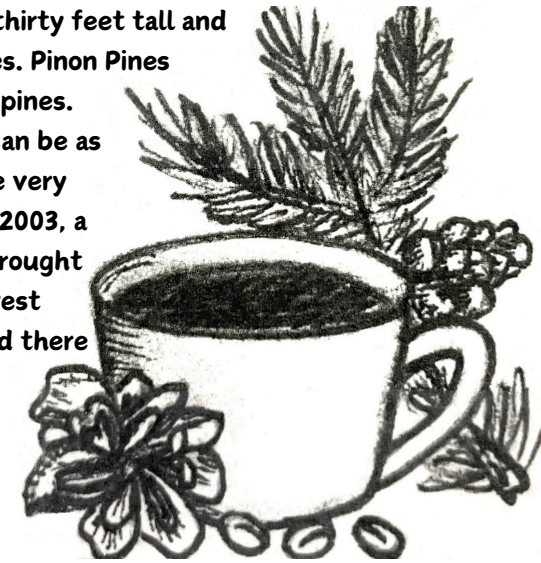
## 9 Grasses

Take a walk into the world of grasses, but watch your step! Grasses are like nature's blanket, protecting the soil from erosion. These plants, classified in the Poaceae or Gramineae family, number around 12,000 species worldwide and include hundreds of species growing in the state of New Mexico. Here at Manzano State Park you might find side-oats grama, sheep fescue, johnson grass (invasive), foxtail barley, ring muhly, and our state grass—blue grama. Grasses provide food for animals, including humans! In areas where grasses and other plants have not established, the soil has another adaptation to protect itself from erosion. Have you ever seen soil that looks like it has bubbled up and crusted like pie filling oozing from the pan? That's called biological soil crust. Also called "desert glue," this soil contains layers of biotic organisms, including algae, lichens, mosses, microfungi, and bacteria. The organisms create a network of fibers that holds moisture, provides nutrients, and stabilizes the surface. These networks can take years or decades to establish, but a simple footprint can break the connections in an instant. This highlights the importance of staying on trail and being mindful of how and where you walk. Grasses and the many organisms living within the soil are protecting the land from erosion and providing important habitat needs; the steps you take can have a great impact on the beings who live here.



## 3 Piñon Pine (*Pinus edulis*)

Have you ever eaten a piñon nut? Or had piñon coffee? Piñon trees are a great source of food for many animals including people. The pitch has been used as a glue and medicinally. It's easy to see why New Mexico adopted the Piñon Pine as its state tree in 1949. They can grow between fifteen and thirty feet tall and have pairs of 1 to 2-inch needles. Piñon Pines are one of the slowest growing pines. A tree with a 6-inch diameter can be as much as 150 years old. They are very drought-tolerant, but in 2002–2003, a combination of high heat and drought made the piñons of the southwest susceptible to bark-beetles and there was a mass die-off. This one survived.



## 4 Gambel Oak (*Quercus gambelii*)

If you look around the park in the fall you won't see many of the trees changing colors. This is because most of them are evergreen trees that stay green year-round. The fall colors you do see here are from oak trees whose leaves change to yellow-orange. You may see Gambel Oak, Gray Oak, and Emory Oak at Manzano. Oaks produce acorns which are eaten by deer, wild turkey, and squirrels. In areas where they can get lots of moisture, a Gambel Oak can grow into a 30 foot single-trunk tree. In dryer areas they grow as colonies of smaller shrubs.

## 5 Birds at Manzano

At Manzano, there are birds from both lower and higher elevations – about 90 species have been recorded at the park on eBird, an online database of bird sightings. A small pond, wildlife drinkers, and bird feeders invite many species. Common Raven, White-breasted Nuthatch, Stellar's Jay, Mountain Chickadee, and American Robin are the five most commonly seen birds here.

Two of these species are known as “cavity nesters.” They build their nests inside tree cavities or holes. The park has several nest boxes or artificial tree cavities used by the birds. Sit quietly in a peaceful location for 30 minutes and you may be surprised at how many birds you see and hear!



## 6 Stewardship

As you walk the trails here and beyond, consider your relationship with this living earth. The trees, grasses, and other plants take in carbon dioxide and expel oxygen; you and other animals breathe in that oxygen and breathe out carbon dioxide as you all breathe out. The squirrels are nourished while spreading fungal spores, helping fungi and trees to thrive; the trees provide food and shelter for squirrels and other animals. The plants hold the soil in place and the soil provides nutrients to all living things. As you walk, consider how the earth nourishes your life. How can you in return care for the earth?

## 7 Fire

In November of 2007 the Ojo Peak wildfire broke out in the Cibola National Forest burning over 7,500 acres before it was fully contained. Approximately 58 acres were burned on the southeast side of the park. Even though fire can be devastating, it has its role. The pinecones of some trees will not open to release the seeds unless they are exposed to fire. Fire naturally thins the forest, providing opportunities for new growth and better access to nutrients for the surviving vegetation. Overgrowth increases the intensity and severity of wildfires. Land managers thin forests by cutting back vegetation and by using controlled fire. Thinning projects happened here in 2014, 2019, and 2024. These areas may look more open than areas where thinning has not been used.

## 8 Alligator Juniper (*Juniperus deppeana*)

These trees can be identified by their bark which has a checkerboard pattern that looks like alligator skin. Reach out and touch the bark. Could you identify it by touch alone? Other juniper species are generally found at lower elevations, but alligator juniper grows in the transition zone at the lower part of ponderosa pine forests. As the largest juniper in New Mexico, they can grow up to 70 feet tall and 7 feet in diameter although most are closer to 20 feet tall and 2-3 feet in diameter. They are slow-growing trees adding only about .5 inch in diameter every decade. They are well-adapted to dry environments and can stop and start growth in response to ambient moisture levels.

