

ACKNOWLEDGMENTS

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John W. Stockert

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INTRODUCTION

Lincoln National Forest consists of 1,724 square miles (1,103,360 acres) extending from within sight of old Mexico (on a very clear day) northward into south central New Mexico. The area contains not only semiarid landscapes, but also the most southern Arctic-Alpine Life Zone in the United States. With its meadows and tree-covered high mountain ridges, an untold number of canyons, and numerous mountain streams, this diverse national forest ranges in elevation from 4,226 to 11,580 feet, and is 42% larger than the State of Rhode Island!

The Lincoln is divided into three ranger districts. Smokey Bear Ranger District, the largest, consists mainly of the Capitan Mountains and the northern end of the Sacramento Mountains. It partially surrounds the communities of Ruidoso, Capitan, and Lincoln. The district was named for an injured orphan bear cub, found during a 17,000-acre wildfire in 1950.

Sacramento Ranger District was formed in December 1994 by combining the former Cloudcroft and Mayhill Ranger Districts. It includes much of the southern half of the Sacramento Mountains south of US Highway 70.

The distinctly different Guadalupe Ranger District is situated just north of Guadalupe Mountains National Park and the Texas border. The district is contained entirely within the scenic and geologically unique Guadalupe Mountains and is adjacent to Carlsbad Caverns National Park.

Two areas have been set aside as wilderness: the White Mountain Wilderness and the Capitan Mountains Wilderness. Both are in Smokey Bear Ranger District and are described later in more detail.

TRAILS – General Information

Lincoln National Forest has a wealth of officially recognized trails. Many are former logging roads and railroad rights-of-way. Individual trails vary in length from a fraction of a mile to 31.2 miles. Most of the longest hikes can be divided into day hikes, or made into overnight adventures. Total number and mileages of trail included for each ranger district in this publication are: Smokey Bear; 52 trails, 183 miles. Sacramento; 79 trails, 200 miles. Guadalupe; 5 trails, 15 miles. Seven proposed routes, not yet recognized as official trails, are included in this second edition. Environmental studies must be completed to determine whether they are acceptable, and if so, what uses would be appropriate. Meanwhile, limited use is being allowed.

Since I began hiking these trails in the early 1990s, many trails have shown a phenomenal increase in usage, particularly by mechanical means.

Safety First! Since some trails in this guide show low usage, it is prudent to check with the appropriate ranger district office for latest information about conditions of the route you plan to hike. This includes recent signing and other changes that may have occurred since this book was published or I last explored those trails.

Although it is permissible to hike anywhere on a national forest, unless otherwise signed, do not hike alone without someone knowing your plans. That includes your route and destination, and when you expect to return. If you are not back in a reasonable time, they should call 911. Realistically, one should not hike alone for a number of reasons: falling and breaking a bone, or receiving serious injuries, becoming lost or suddenly ill, or encountering a host of other unforeseen situations.

Weather conditions along any trail may be influenced by elevation, terrain, slope alignment with the sun and wind, and time of year. When planning a lengthy trip, be prepared for adverse weather; pay attention to forecasts. Be sure to stay away from

ridges, mountaintops, open areas, and solitary trees during thunderstorms. Summer temperatures may range from 90° F (34° C) in the high country to over 100° F (40° C) in low areas. Bring along protection from the sun such as a hat, sunscreen, sunglasses, pants, and long sleeve shirts. If hiking during cold months or at high elevations, be equipped for rain, snow, cold winds, etc.

Also, include a couple of large trash bags that can be used as warm protective cover during a storm or chilly wind, or as protection from damp ground. Such bags, along with a flashlight, can be especially handy if an emergency situation forces an unexpected overnight campout.

Carrying at least one gallon of water per person per day is a necessity due to its absence in most places, and the possible contamination of available spring or creek water.

Since hunting occurs on most parts of the forest, hundreds of sportsmen participate during the various hunting seasons. It is strongly recommended that a “hunter’s orange” vest be worn during those times.

Have Appropriate Maps. Because there are indistinct short stretches along some trails, including better-known ones, it is a good idea to carry a map covering the route and area you are planning to visit. The trail maps in this guide are good starters, but more are advisable.

Maps in print (early 2002) of importance for the Lincoln are (1) "Lincoln National Forest; Smokey Bear, Cloudcroft, and Mayhill Ranger Districts," (2) "Guadalupe District, Lincoln National Forest," (3) "Travel Map, Lincoln National Forest," which covers all three ranger districts. The Travel Map is a black and white publication, the most popular and least expensive. Although inaccuracies exist, the map includes most of the official back roads and a majority of the trails; private land is also shown. Maps (1) and (2) list the United States Geological Survey (USGS) 7.5-minute topographical maps pertaining to the respective district(s). (4). If hiking either of the wilderness areas, the appropriate

specific wilderness map is strongly recommended. For the most part, these two maps are quite accurate.

Lincoln National Forest maps are sold at all ranger stations or can be ordered from the New Mexico Public Lands Information Center, 1474 Rodeo Rd., Santa Fe, NM, (505) 438-7542.

Each trail write-up in this guide lists the United States Geological Service (USGS) 7.5-minute topographical map(s) covering the area in which the trail is found. Be aware, however, that they do not show every trail, and a few paths are inaccurately shown. The only Lincoln National Forest facility that sells such maps is Sacramento Ranger District Office in Cloudcroft, and it offers only maps covering that district.

Trail Etiquette. Have as little impact on the trail and other use areas as you possibly can:

- Refrain from cutting across switchbacks; otherwise you could cause erosion and subsequent deterioration of the trail.
- When horseback riders and mechanized vehicle users are encountered, step off the trail; stand by quietly as horses pass.
- Cattle graze many lands in the Lincoln, including wilderness areas. Please be sure to close gates that are found closed. Stay clear of cattle that show objections to your presence by snorting, stamping their hoofs, etc.
- Most wildlife retreat if made aware of your presence. Females with young may become aggressive if surprised, so it is a good idea to whistle, talk, carry a bell on your pack, or otherwise make your presence known.
- Erase all signs of campfires. Please do not build new fire rings, although you may use those that exist. *Be extremely careful with fire.* Never leave a fire

unattended, even for a short while! An unexpected wind can come up and scatter sparks.

- Leave your campsite as natural as possible; do not clear away vegetation or trench around your tent.
- Pack out all trash and garbage.

Horses, ATVs, Motorcycles and Mountain Bikes. Equestrian use is permitted on and off all trails, including those in the wilderness areas, unless prohibited by signing. However, ATVs, motorcycles and mountain bikes are permitted *only on specific trails*. Check with the ranger district office for the area you wish to visit to obtain a current list of official trails showing where each use is permitted.

Private Landowner Rights. Trails that cross private property are indicated in their write-ups in this guide. Unless an agreement granting right-of-way is in effect, private landowners have authority to control access across their property, and may post no trespassing signs on such trails, or close them. The ranger district office would appreciate being notified of recent private closures so that the trail can officially be closed, posted, or rerouted, and future conflicts can be prevented.

Trail Requirements and Conditions. Routes included in this publication meet the following criteria, *unless otherwise indicated*: (1) have a designated posted trail number, e.g., T 100, at each trailhead, (2) are signed as needed along the route, (3) and are discernible at least 97% of the time – an educated guess based on my experience.

I have hiked all of the featured trails and am sharing first hand experience. Be aware, however, that due to occurrence of storms or forest fires, heavy use of some trails, deterioration and/or vandalism of signs, etc., trail conditions and signing will change as time passes.

With the enormous backlog of trail maintenance needed, it is not always possible for Forest Service to repair reported problems in what may seem a timely fashion. Volunteers often subsidize such work.

Path conditions vary substantially, from those that are easily followed, with mild grades and excellent tread, to ones that are highly eroded with ditches and/or numerous rocks, and gradients ranging up to 50% or more. When tread evidence is vague or lacking, some paths are marked by rock cairns, rows of small rocks adjacent to the route and/or blazes on trees. Other paths are kept visible by cattle and wildlife.

How Trails are Grouped. In this guide, official trails found in the same vicinity are shown on the same trail map, and may be grouped together in the write-ups. Each trail has a number and an officially recognized name; for nearly all trails, the number is shown at the trailhead, but not the name.

Secondary Trails. Such paths are known to hunters, ranchers and others who have a particular interest or bond with the area thru which these pass. If trails are found that are followable, have special interest, and are not in this guide, please notify me; address and phone number are provided in “About the Author” in this guide.

Information Included in Each Trail Write-up.

A SPECIAL NOTE entry is used *only* if the potential trail user would benefit from knowing immediately of unusual situations about the trail. *Italics* are used frequently to emphasize important information, such as danger, admonitions, special highlights, or unusual circumstances. In cases where significant changes have occurred in trail condition, a date is shown, in parentheses, to indicate my most recent visit.

LENGTH of trail mileage was obtained mostly by using a calibrated measuring wheel during my hikes. GPS data, provided by a forest volunteer, was used for a few routes. Trail distances shown in this book may differ from official Forest Service figures. Basically, the mileage *between trailheads* is shown whether they are on private land or

not; Forest Service measurements do not include the part of a trail that crosses private land. For road distances, a sports utility vehicle was used. Considerable effort was made to pin down correct mileages. Your odometer reading may differ from listed mileages because each vehicle is slightly different.

ELEVATION data was determined primarily from a topographical map. A Forest Service volunteer provided GPS readings for others.

Gradients, shown as percents, are used to express trail steepness and were determined by using a small, hand held clinometer. For those more familiar with degrees (like a 90° angle), divide the given gradient by two to get a rough degree of inclination. For example; a 30% gradient, divided by two, is *roughly* a 15° angle rise above the horizontal (flat landscape).

DIFFICULTY ratings were assigned each trail, and consist of Easiest, More Difficult, and Most Difficult. This differs from the Easy-Moderate-Difficult rating found in most guidebooks; however, it conforms to Forest Service classification and, therefore, is the choice of the publishers. Difficulty is determined by trail condition, alignment, steepness, and total gain or loss of elevation, in addition to the type and number of natural barriers (passes, riparian areas, severe erosion) that may be encountered. Only persons in the best physical condition and with considerable hiking experience should attempt those rated as “Most Difficult.” Many trails have short sections that are often more severe than the average condition of the path! Weather and altitude *can combine temporarily* to make even the easiest trail suitable only for persons in good physical condition.

ACCESS instructions to each trail begin from a primary road intersection within a well-known town or city. Such locations are easily identifiable on the Lincoln National Forest Map at the beginning of this guide. Since many trail users are visitors and not area residents, *explicit directions* for locating trails are extremely important, as I have learned from past experience. Because some roads have differing numbers or names supplied by

county, Forest Service, or others, an effort has been made to include all of them, as there is discussion about eliminating signs on some.

A SCENIC RATING number is given to each trail described. In discussing this with friends and Forest Service personnel, there was general agreement within a difference of no greater than one. Such judgments are subjective, averaging the plus and minus qualities of each trail. The rating is based on a scale of 1 to 5 with those rated 1 considered so-so; those rated 5 are the most scenic. Each district has only one trail rated as a 5, just the way it seems to have come out.

FOREST USES

Like other national forests, the Lincoln practices Ecosystem Management. It is an enveloping, evolving approach to Multiple Use Management of natural resources and is based on using a "landscape" view to develop management activities. Emphasis is placed on achieving or maintaining a set of desired conditions for an area (ecosystem), recognizing the many different components of the natural environment, and their interactions.

Forest uses are either renewable or nonrenewable. An example of the latter is mining. This activity began in the 1870s after the discovery of gold and before Lincoln National Forest was created. Mining occurred mainly in the Jicarilla Mountains and the Sierra Blanca Peak region. There was also activity on the western slope of the Sacramento Mountains south of US 70 and to a limited extent elsewhere. Today, there are still scattered claims.

Renewable resource usage is the norm for the Lincoln. Grazing was the dominant use during the early part of the 20th century and still plays an important role in the area's economy. On forestlands above 7,000 feet, most grazing occurs during the summer months.

The logging industry, dating back about 100 years, has been quite active at various times. In order to remove timber during those early years, railroads were constructed in several parts of Sacramento Ranger District. Considerable evidence remains of railroad grades and decaying wooden trestles, although the rails and most of the ties were taken up long ago. Current timber removal is largely from second or third growth forest. In recent years, logging has undergone a cutback from its former timber harvest. This is due largely to preserving habitats for the Mexican spotted owl, northern goshawk, and the Sacramento salamander, all of which are listed as Endangered, Threatened, or Sensitive Species.

Periodically, firewood in designated areas may be collected. After such locations are advertised, permits and a list of rules governing this activity are available at the ranger office in the ranger district where the sale is being held.

Christmas tree cutting is allowed in designated areas from late November thru December 24. Contact personnel at a ranger district office to obtain an application. Pinyon pine, ponderosa pine, Englemann spruce, Douglas-fir, and white fir are available by permit and paying a small fee.

Small amounts of wild berries, pinyon nuts, pinecones, and mushrooms may be gathered without a permit. However, a temporary permit is required for plant removal.

Wildflowers must not be picked, but left for others to enjoy.

Horseback and llama trail rides and pack trips are offered in Smokey Bear and Sacramento Ranger Districts. In addition, jeep tours, hunting guides, guided hikes and shuttle service to or from a trailhead may be available. Some of these services are offered in one district but not in others, and they may change each year.

The New Mexico Game and Fish Department regulate hunting and fishing on forestlands. Hunting seasons have been established for elk, deer, bear, mountain lion, and turkey. The

best fishing is at Bonito Lake on Smokey Bear Ranger District. Stop at the ranger district office nearest to where you plan to hunt or fish to learn where licenses can be purchased, and to obtain names and addresses of available outfitters and guides.

All outfitters and guides must have a Forest Service Permit to operate on Forest Service lands. The Forest Service has the right to insure that visitors receive quality customer service.

Other forest uses include sightseeing, wildlife and bird watching, camping and picnicking, and back country exploring.

WILDLIFE

Due to an abundant variety of habitats between the Desert and Alpine plant communities, plus riparian areas, Lincoln National Forest is home to a substantial array of wildlife species. Only the most obvious and those of special interest are noted here. A good area to spot wildlife during early morning and late afternoon hours is along Forest Road 164 (Rio Penasco Road) in Sacramento Ranger District.

Elk are found in summer above 8,000 feet. In Sacramento Ranger District, they are common in the Benson Ridge area and also along the ridges near Sacramento Lookout. In Smokey Bear Ranger District, they dwell along the forest boundary with Mescalero Apache Reservation. Bugling of the male is heard in September near the first freeze. During winter months, elk may be seen in Sacramento Ranger District along the West Side Road, often near Wright and Little Cherry Springs.

Mule deer are common during summer in the mixed conifer forests around the 8,000 foot elevation. However, more are staying in their winter home, the Pinyon-Juniper Woodland, into the hot summer. A growing herd thrives on the east side of the Capitan Mountains in Smokey Bear Ranger District. Guadalupe Ranger District also has a

considerable number, and has the distinction of providing the largest harvest of these animals of any wildlife unit in New Mexico!

White-tailed deer are known from about five miles east of Cloudcroft to the Mayhill area, especially in the Sixteen Springs and Walker Canyon areas in Sacramento Ranger District. Collisions between deer and cars happen all too frequently.

Black bears are found just about anywhere. One Forest Service employee reported seeing 20 during a single summer, an unusual occurrence! The best sightings are usually along edges of large meadows during early morning and late afternoon. Highest concentrations are in the Rio Penasco Canyon area in Sacramento Ranger District. Although they frequent campgrounds, they are usually not a problem as long as food containers are kept out of reach, tightly closed and locked in a vehicle. If winters are cold, bears hibernate here from December to early March. However, they may not hibernate at all, or only on a sporadic basis, if winter temperatures are above average.

Mountain lions inhabit the western face of the entire Sacramento Mountain range from Carrizozo to south of Alamogordo, but chances of seeing them are very slim. Bobcats, on the other hand, live pretty much everywhere. However, like mountain lions, they are difficult to spot.

Raccoons are common around Ruidoso in Smokey Bear Ranger District; in Sacramento Ranger District, along the Rio Penasco, and in Agua Chiquita Canyon and Cloudcroft. The rocky outcrops in Fresnal Canyon provide excellent habitat for the rather plentiful but nocturnal ringtails.

Coyotes thrive throughout the Lincoln, especially in the high country above 8,000 feet. They move down a little during the cold months.

Gray fox span the whole range of elevation in the mountains, whereas the smaller kit fox is found at lower elevations, such as along the roads between the town of Pinyon and the northern edge of Guadalupe Ranger District.

The Penasco chipmunk, a subspecies of the least chipmunk, is known only on Sierra Blanca Peak. Bats occur in all ranger districts. Fifteen known species occur in Lincoln National Forest; five more are suspected. Because of the many caves, bats are most abundant in Guadalupe Ranger District. They are beneficial to humans because they consume large quantities of insects; big brown bats are known to eat 300 to 500 insects per night.

Horned lizards inhabit the entire area from the Tularosa Basin at elevation 4,000 feet to Apache Point Observatory at 9,200 feet. Sacramento Mountain salamanders are known only from the Sacramento and Capitan Mountains, living between 8,000 and 9,600 feet. They live underground except from the beginning of the rainy season until mid September. This animal prefers moist locations under logs or any other such places, but not in standing water. They are common around Ski Apache in Smokey Bear Ranger District and in the Water Canyon and Benson Canyon areas of Sacramento Ranger District.

A bird checklist showing 125 entries for the Sacramento Mountains is available at any of the ranger district offices. Winter is an ideal time to see bald eagles in Sacramento Ranger District where 50 birds have been recorded. Turkey populations are high, and these magnificent birds may be seen between the Pinyon-Juniper Woodland and 9,000 feet. Possible viewing areas are along the south end of West Side Road and in Benson Canyon in Sacramento Ranger District.

Discovered in 1987, Mexican spotted owl, a threatened species, has found the Lincoln to be ideal habitat. It lives in second growth, mixed conifer forests that are between 50 and 100 years old. In 1993, about 100 pairs were recorded in Sacramento Ranger District, 20 in Smokey Bear Ranger District, and one in Guadalupe Ranger District.

At least four species of hawks are known to be all-year inhabitants here: red-tailed, Cooper's, sharp-shinned and goshawk. All are found between the Pinyon-Juniper Woodland and the high country. Goshawks live above 7,500 ft. elevation and prefer large trees with little understory.

An independent population of red-faced warblers, a neo-tropical migratory bird, breeds here and can usually be seen seasonally at the Karr Canyon picnic area in Sacramento Ranger District.

PLANT LIFE

As a result of the 7,350 foot elevation range on Lincoln National Forest, a great diversity of plants are native here. Six of C. Hart Merriam's Life Zones are found here. At least 1,700 species and subspecies are present, representing a minimum of 107 plant families!

The Arctic-Alpine Life Zone includes the Alpine Plant Community, and is above tree line. It is found in only two locations in New Mexico: on the highest elevations of the Sangre de Cristo Mountains in the central New Mexico/Colorado border region, and in the relatively small Sierra Blanca Peak vicinity in southern New Mexico. The highest point on the Lincoln is just 1.1 miles north of Sierra Blanca Peak at Lookout Mountain (11,580 feet) and is within the Alpine Plant Community. Sedges and lichens, plants which dominate arctic conditions, are examples of the many species of ground-hugging plants that thrive here on rocky soil despite very strong winds and temperature extremes, which may occur daily as well as seasonally.

The Hudsonian Life Zone is characterized locally by the Spruce-Fir Forest. It is composed of Engelmann spruce and corkbark fir at the upper edge of the coniferous forest on the Lincoln, between 9,500 and 11,400 foot elevation. It is the dampest part of the forest where snow sometimes remains beyond June.

The Canadian Life Zone is represented here by Mixed Conifer Forest, generally ranging between 8,500 and 9,500 foot elevation. It consists of an abundance of Douglas-fir, southwestern white pine, white fir, and aspen. These trees often grow very tall and dense. Their thick canopy and a groundcover of dead limbs, leaves, and logs often causes a sparsity of shrubs and herbs.

The Transition Life Zone marks the mid-band of evergreens, roughly between 7,000 and 8,500 foot elevation. Here it consists of the Ponderosa Pine Woodlands. When driving into the mountains from the lower surrounding country, ponderosa pine is often the first tall tree encountered. This zone is truly a transition between the warmer, drier climates of lower elevations and the cooler, densely forested areas of the higher Canadian Life Zone.

The Upper Sonoran Life Zone includes the Pinyon-Juniper Woodland. These trees make up the lowermost part of the evergreen belt on the Lincoln, and are generally found between 5,500 and 7,000 foot elevation.

The Lower Sonoran Life Zone is Merriam's lowest zone represented here. It penetrates the Lincoln on the west side as the Chihuahuan Desert. Plains and Desert Grassland plant communities occur to the east. This zone is characterized by many kinds of grasses, creosote bush, desert holly, agave, yucca, rabbitbrush, and ocotillo.

Scattered meadows, often with lush grass cover, occur in all zones. Theories abound as to how these open spaces were formed. One idea is that roots of the abundant grasses inhibit growth of tree seedlings.

Streams, mostly intermittent, cross all Life Zones and form riparian habitats characterized by vegetation requiring additional moisture. Plants such as cottonwood, willow, hackberry, moss, watercress and monkeyflower occur at lower elevations.

Periodically, insects and diseases are noted in evergreens. The bark beetle that often affects ponderosa pine is one of the most common infestations on the Lincoln. This deadly condition affects trees that may be stressed from drought and overcrowding, or weakened by parasites such as dwarf mistletoe. Bark beetle outbreaks are cyclic in nature, usually taking a few years to run their course.

During fall months, the most obvious deciduous trees in the Mixed Conifer Forest are aspen. Their presence becomes readily apparent as leaves turn yellow and gold. Other trees or large shrubs that are less known, but still important to the Forest's diverse ecosystems, are several species of oak, cottonwood, willow, and maple, plus fragrant ash, net-leaf hackberry, ocean spray, and New Mexico locust.

At least 69 grass genera have been recorded in the Lincoln. Common native grasses are slender and bluebunch wheatgrass, nodding and hairy brome, and various species of dropseed, bluestem, muhly, three-awn, and grama grass. The most common of the introduced grasses are smooth brome, crested and intermediate wheatgrass, cheat grass, Bermuda grass, orchard grass, and Kentucky bluegrass.

Because the Sacramento Mountains form an isolated elevated "island" many miles from other similar environments, certain plants thrive here, and in some cases, better than anywhere else. A few species are found only on the Lincoln or in its vicinity. These include Alamo penstemon (*Penstemon alamosensis*) preferring dry, north to east-facing, rocky, limestone slopes of the lower canyons; Sacramento Mountains thistle (*Cirsium vinaceum*) restricting itself to limestone springs, seeps and wet canyon bottoms above an elevation of 8,000 feet; and Sierra Blanca cinquefoil (*Potentilla sierrae-blancae*) limited to wind swept areas above 10,000 feet. New Mexico penstemon (*Penstemon neomexicanus*) is more abundant here than in habitats outside the Lincoln. The gorgeous Todsens's pennyroyal (*Hedeoma todsenii*), originally known only from the San Andres Mountains, on the west side of the Tularosa Basin, was thought to be dying out. In 1990, it was found doing well in the Sacramento Mountains!

Interestingly, due to the high elevations on the Lincoln, there are plants native here that also grow abundantly in the Rocky Mountains and as far north as Alaska. For example, shrubby cinquefoil (*Potentilla fruticosa*), common monkey flower (*Mimulus guttatus*), and shooting star (*Dodecatheon pulchellum*) are all common in specific habitats on Sacramento Ranger District.

CLIMATE

The climate of Lincoln National Forest is more diverse than in any other area of similar size in New Mexico due, in part, to the 8,100 feet difference in local elevation. This altitudinal disparity is responsible for wide variation in temperature and precipitation throughout the entire area.

During July and August one can expect to see several rainstorms occurring simultaneously somewhere on the Lincoln or in the Tularosa Basin itself! On the average, about 50% of annual precipitation occurs from the end of June thru September.

TOPOGRAPHY AND GEOLOGY

The landscapes of the three disparate ranger districts within the Lincoln were fashioned thru a host of widely different earth changes over a very long time.

The unusual east-west orientated Capitan Mountains on the northeast side of the Lincoln, in Smokey Bear Ranger District, reach an elevation of 10,179 feet. They were formed during Tertiary Time as a result of molten materials welling up within the earth and pushing up the overlying sedimentary rocks. The disturbance occurred along fractures within a four-mile wide by 13-mile long uplift in the earth's crust. Most of the layered materials have eroded away, exposing solid granite rock.

Sierra Blanca Peak is the highest mountain in New Mexico south of the Sangre de Cristo Range in northern New Mexico. Located on Mescalero Apache Reservation northwest of Ruidoso, it rises to 12,003 feet elevation just a mile south of Smokey Bear Ranger District. The entire area is a result of molten magma that intruded (pushed up) from below, during Tertiary Time. Volcanic rocks surround the edges of the intrusive granite rock. About 35 million years ago, Tertiary Time, local volcanoes threw out large quantities of rock and ash.

East of Alamogordo is a single mountainous area known locally as the Sacramento Mountains, largely in Sacramento Ranger District. Rising to a height of about 9,600 feet at a few widely scattered places, its timber-covered ridges are sedimentary in origin, and identified by several exposed, thick, rock layers of varying subdued colors on the steep west side of the mountain range. Each was laid down in mostly marine environments between Cambrian and Permian times (600 - 230 million years ago).

These same layers are also represented in the San Andres Mountains, 50 miles to the west, on the edge of the Tularosa Basin. At one time the San Andres and Sacramento Mountains were part of the same, continuous, arched landform. The large area in between began to sink about 30 million years ago, creating the Tularosa Basin that today has no drainage outlet and is 6,500 square miles in size. Despite 5,000 feet of sinking, which is visible today, there is evidence of at least another 6,000 feet of fill in the basin that was received as eroded material from the adjacent mountains. This means that the Tularosa Basin may have dropped a minimum of 11,000 feet, the difference in elevation between the high areas of the Sacramento Mountains and where the eroded alluvial materials in the Tularosa Basin rest on bedrock!

The valley and the adjacent mountain ranges are extraordinary. Between the lowest point in the basin (elevation 3,890 in White Sands National Monument) and Sierra Blanca Peak is a difference of more than 8,100 feet, of which 7,350 feet are within the Forest. This represents the greatest *local* elevation difference in New Mexico!

The third and most southern segment of Lincoln National Forest is Guadalupe Ranger District in the Guadalupe Mountains. This range is nearly 100 miles long and is characterized by a 30-mile ridge called "The Rim" on the western edge, where elevation drops as much as 2,000 feet, providing spectacular views. The east side drops more gently, but has a number of steep to vertical walled canyons, each with varied riparian environments, including a few intermittent and permanent streams. Guadalupe Peak, the highest point in Texas at elevation 8,751 feet, is on the southern end of the range in Guadalupe Mountains National Park, just 8 miles south of Guadalupe Ranger District.

Guadalupe Ranger District is part of a well-studied, world-renowned formation known as the Capitan Reef (unrelated to the Capitan Mountains). Formed during Permian Time, about 250 million years ago, the Guadalupe Mountains are a small part of the horseshoe-like reef that formed along the edges of the Delaware Basin, an arm of the ancient Permian Ocean. Unlike any formation in the world, with possible exception of the Great Barrier Reef in Australia, the non-stratified limestone rock resulted from deposits made by small, marine, calcium-secreting plants and animals. Because of a series of earth movements and uplifts, the reef fractured in many places allowing water to enter. Over millions of years, vast amounts of limestone dissolved, forming many caves, including some of the world's largest. Dozens of caves in this ranger district and those in Carlsbad Caverns National Park were all formed as a part of this gigantic cave making process.

CAVES – *A permit is required for entering any cave on the Lincoln.*

Among several important resources of Lincoln National Forest are dozens of limestone caves found in the Guadalupe Mountains in Guadalupe Ranger District. Located in the same rock formation as Carlsbad Caverns and Lechuguilla Cave, some of these caves are so spectacular that, if they were by themselves in another part of the country, they would also be well known.

Caves range in size from just a small cove in a hillside to miles of passageways, and pits as deep as 500 feet that can provide physically challenging adventures to the most experienced caver. The caves are found in what geologists call the Capitan Great Barrier Reef and associated back reef formations, formed over 200 million years ago as part of a sea that covered this portion of the country.

Cave resources are nonrenewable and therefore must be protected. The slightest bump by a careless visitor can destroy a delicate formation, a feature that has taken Nature hundreds, if not thousands, of years to form! In addition to the fragile features, there are plants and animals that prefer cave entrance areas or interiors, and therefore are unusual and rare. Bats, insects, snakes, and microorganisms are a part of this environment. These may become endangered unless their delicate habitats are protected. Over thousands of years, cave environments, having constant temperatures and humidity, have preserved the remains of certain plants and animals, offering today's scientists exceptional research opportunities. For example, layered clay deposits dating back about 30,000 years have revealed skeletons of small animals, pollen, and charcoal, and provided data demonstrating local environmental changes over long periods of time.

“Wild Caving,” a booklet that details procedures for limiting human impact on caves, is available at Guadalupe Ranger District Office. Some of the ways to accomplish this are to wear clean gloves to prevent skin oils from coming in contact with cave formations, stay in a single line on established trails, and remove all trash including human wastes.

The Forest Service issues permits based on caving experience, ethics, equipment, and the difficulties to be expected in the cave the group wants to visit. Caving by oneself is not permitted, and groups are restricted to no more than six individuals. To prevent illegal access, locked gates have been placed at many cave entrances.

If you wish to visit any underground area in Guadalupe Ranger District, contact Guadalupe Ranger District Office (505) 885-4181 in Carlsbad, New Mexico, for pertinent information.

PREHISTORY

It is not known when the first humans entered or lived in what now is Lincoln National Forest. Evidence shows that the plains surrounding the mountains were occupied by 10,000 B.C.

The earliest groups hunted mammoth, horse, camel, and antelope. Their artifacts have been found in the southern part of the Tularosa Basin (none from the mountainous areas) and are dated between 9,500 and 9,000 B.C. They are part of what archeologists call the Clovis occupation.

As a result of general climatic drying, parkland savanna changed to drier grasslands, and bison took the place of the mammoth as the latter decreased and became extinct. This period lasted from about 8,800 to 8,000 B.C. and is known as the Folsom occupation. Artifacts are frequently found in the El Paso, Texas area.

Early prehistoric materials not associated with either of the earlier Clovis or Folsom periods have been classed in general as Late Paleo-Indian occupation. Arrowheads and other projectile points of this time have been found in the Tularosa Basin and most anywhere in the Guadalupes.

Around 4,000 B.C., climatic changes gradually brought on even drier environmental conditions, similar to today's climate. Archeologists have labeled this the Archaic Period and it extends to 300 B.C. As a result of fewer big game animals, prehistoric natives began developing other alternatives for meeting their daily requirements. They gathered edible plants and fruits, moving according to seasonal availability in the various climatic zones between the Tularosa Basin and the mountain slopes.

One of the most significant excavated sites representing this period is Fresno Shelter. It appears to have been used seasonally for processing plant and animal resources. Identifiable plant remnants include prickly pear fruits, mesquite pods, juniper berries, and dropseed. Animal remains are largely mule deer. Based on radiocarbon dating, the approximate occupation of this site was between 6,000 and 900 B.C.

Beginning about 300 B.C., southwestern peoples appear to have gradually developed their individualized culture and traditions. Those that inhabited the forest areas had their roots in the Mogollon tradition. They occupied the highlands of eastern Arizona, western New Mexico, and the southern and eastern portions of New Mexico. Ceramics, rock art, ceremonial structures and their villages distinguish their culture from others. They reached their peak around A.D. 1200 to 1400.

Within the Mogollon culture, six regional branches have been recognized. One of them, the Jornada variant, inhabited the vicinity of today's Lincoln National Forest. It is the earliest pottery-making and village-dwelling culture in south central New Mexico, beginning around A.D. 900. Pit houses and aboveground structures, built with rocks and adobe, have been found mainly in the Pinyon-Juniper Woodland in broad valley bottoms. These sites extend from Mayhill north to Corona, at and near the base of the Sacramento Mountains in the Tularosa Basin, and in the Three Rivers drainage just west of Sierra Blanca Peak. Settlement sizes ranged from approximately 10 rooms to more than 100. The most common animal remains found at sites of this period are desert cottontail, although some evidence of antelope, deer, and bison is also present.

Rock art sites are known in the mountains around Sierra Blanca Peak, Dog Canyon in Sacramento Ranger District and the Guadalupe Mountains. Thousands of individual carvings on volcanic rock are found just west of Sierra Blanca Peak at Three Rivers Petroglyph Site, an area managed by Bureau of Land Management. These typical Mogollon designs appear to have been created after A.D. 1050. Most such sites occur near permanent habitations.

A study of tree rings indicates a drought period in the Southwest around A.D. 1,300. During the late 1300s and early 1400s, drier climatic conditions may have forced these people to abandon their villages and revert to a more nomadic existence.

All archeological and historic sites are protected parts of our cultural heritage. Federal law prohibits the removal of artifacts from public lands. Please leave everything undisturbed for others to enjoy! If you witness illegal activities involving the destruction or theft of cultural resources, contact the nearest ranger district office.

HISTORY

The mountainous area in south central New Mexico between the Pecos River and the Tularosa Basin was initially considered for designation as a Forest Reserve in the 1880s. The principal reason for establishing the Forest Reserve here was "to protect and conserve the water necessary for the success of the Hondo Project," an area that was being developed by settlers along the Hondo River, a tributary of the Pecos River. As a result, Lincoln Forest Reserve was established in 1902 by withdrawing lands from the public domain, including the northern portion of the Sacramento Mountains (the White Mountains) and the Capitan Mountains.

Near Carlsbad in the Pecos Valley, severe overgrazing by cattle, sheep and goats, and the removal of vast quantities of pinyon and juniper from the mountains to the west were believed to have caused floods. Many thought overgrazing in the Guadalupe Mountains caused these natural disasters. As a result, Guadalupe National Forest was established on April 19, 1907, principally for watershed protection, but also to manage grazing and the harvesting of juniper used for fence posts and fuel.

Five days later, the Sacramento Mountains, south of today's highway US 70, were set aside as Sacramento National Forest. In 1908, Alamo National Forest was formed when Sacramento National Forest (more or less today's Sacramento Ranger District) and Guadalupe National Forest were combined.

The name, "Lincoln National Forest," was first used when, again in 1908, Lincoln Forest Reserve (generally today's Smokey Bear Ranger District) and Gallinas Forest Reserve (45 miles north of Carrizozo) were joined. Nine years later, President Wilson, thru Executive Order, enlarged Lincoln National Forest by adding Alamo National Forest. Since 1917, relatively minor changes have occurred to form the boundaries of today's Lincoln National Forest. The Gallinas area was transferred to Cibola National Forest in 1958.

Historic human habitation of the area appears to have been sporadic. Lack of archeological evidence suggests the area was not inhabited on a continual basis for perhaps several decades prior to Columbus' rediscovery of the American continents in 1492. However, by the 1700s, Mescalero Apaches had already made the Sacramento Mountains their homeland. As a result, few settlers lived here until after 1849 when they established ranching communities in the Bonito Valley (around Lincoln) and later in the 1860s at Tularosa. By the mid 1880s, a large cattle industry had developed throughout the mountains.

In 1879, the discovery of gold resulted in the formation of the communities of Nogal and White Oaks. About \$4.5 million was mined. Compared to current gold prices, that would be more than \$85 million today! Other mining activity was scattered throughout Lincoln National Forest, but the mining boom ended after railroad service extended north from El Paso. The advent of the railroad made possible the harvesting of timber in the high country east of Alamogordo. The "Cloud-Climbing Railroad," connecting Alamogordo and Cloudcroft, was completed in 1900 and operated until 1947.

During the Great Depression of the 1930s, the Civilian Conservation Corps set up a number of camps in Lincoln National Forest. Participants constructed dozens of projects, many of which are still in use. These include Rim Road along the western edge of the Guadalupe Mountains escarpment, rock shelters and a dam at Sitting Bull Falls

Recreational Site, the stone Monjeau Lookout, erosion control structures in drainage channels, and West Side Road south of High Rolls in the Sacramento Mountains.

FISHING AND BOATING

Fishing is permitted year-round at several sites in and near Smokey Bear Ranger District. These areas are Grindstone Lake in Ruidoso (Sunrise to 10 PM), Bonito Lake (5AM to 10PM, April 1 thru November 30 only), and Alto Lake, at Alto (5AM to 10PM). Rio Bonito is stocked above and below Bonito Lake. Rio Ruidoso, which flows thru Ruidoso, is stocked between the Mescalero Apache Reservation boundary and the old middle school near McDonald's. Tularosa Creek is stocked between the Reservation boundary and Round Mountain, east of Tularosa, just off US 70. These areas are stocked with rainbow trout at least once a month from about March thru October *when local conditions are favorable*.

To fish at any of the above areas, a New Mexico State Fishing License and Habitat Validation is required, and may be obtained from any licensed vendor.

Fishing is also permitted on Lake Mescalero. A tribal fishing license, issued daily, is available at the front desk in the main lobby of Inn of the Mountain Gods. The lake is stocked with rainbow trout from about March thru October.

Boating is restricted to two lakes near Ruidoso, both outside Lincoln National Forest: Grindstone Lake (April 1 to October 31) and Lake Mescalero at Inn of the Mountain Gods on Mescalero Apache Reservation. Motorized boats are prohibited on both lakes. Non-motorized vessels up to 16 feet long are allowed on Grindstone Lake. A permit must be obtained from the Village of Ruidoso Parks and Recreation Department; call (575) 257-5030. Non-motorized boats can be rented at Inn of the Mountain Gods; call (575) 257-5141.

WINTER RECREATION

Snow comes to the Lincoln as early as October and may last into June. The largest single winter activity on the Lincoln is at Ski Apache, a major ski facility and ski school on the northern side of Sierra Blanca Peak, southern New Mexico's highest mountain. The ski season normally extends from Thanksgiving weekend to Easter. Owned and operated by the Mescalero Apache Tribal Nation, the recreational area straddles part of Mescalero Apache Reservation and the adjacent Lincoln National Forest land. The portion on the Lincoln is operated under a Special Use Permit from the Forest Service. For information on winter activities, call Ruidoso Chamber of Commerce at (505) 257-7395.

Sacramento Ranger District offers several winter recreational opportunities. The Forest Service maintains three trails for skiing: T 122, T 124, and the main campground road in the Silver, Saddle, and Apache Campground complex. Cross-country skiing, snow mobiling, tubing, sleigh rides, ice-skating, and various other activities are offered in the Cloudcroft area, where equipment rentals are also available. Ski Cloudcroft ski area operates when conditions permit.

These activities are dependent upon adequate snowfall, inconsistent in the Cloudcroft area. For current information about winter activities, call Sacramento Ranger District Office (575) 682-2551 or Cloudcroft Chamber of Commerce (575) 682-2733.

PUBLIC INVOLVEMENT

Due to funding shortages, Forest Service relies increasingly on volunteers. Many are retired individuals; others are students and people not otherwise fully employed. Some are supplied by organizations such as Student Conservation Association, Native Plant Society of New Mexico, Alamogordo Big Brother and Big Sisters, Boy Scouts, American Hiking Society, Roswell Wilderness Hikers, Prairie Dawgs, New Mexico Volunteers for

the Outdoors, New Mexico Rails to Trails Association, and White Sands Cycling Club. Helpers have even come from other countries!

Volunteers serve as campground hosts, office receptionists and typists, perform office-filing duties, give interpretive talks, staff lookout towers, and work with trail maintenance and cleanup crews. They also assist Forest Service staff with initiating, formulating, and implementing specified objectives and projects.

Public Lands Interpretive Association, a non-profit association and publisher of this book, provides educational and interpretive services to forest visitors thru the sale of appropriate books, posters, postcards, and topographical maps. These are sold at Sacramento Ranger District Office in Cloudcroft and, to a lesser extent, at Supervisor's Office in Alamogordo and Smokey Bear Ranger District Office in Ruidoso. Proceeds from these sales are used to aid Forest Service in its interpretive efforts, e.g., funding specific area-related publications, equipment purchases, library acquisitions, etc.

ABOUT THE AUTHOR

John W. Stockert grew up on a dairy farm near Canal Fulton in northeastern Ohio and graduated from Capital University in Columbus. For 30 years he worked for the National Park Service in 12 parks, first in visitor information services, then as a park manager. After retiring in 1989, he and his wife, Joanne, moved to the Tularosa Basin in New Mexico, having fallen in love with the Sacramento Mountains. Shortly thereafter he began taking notes of his mountain adventures, gathering information that led to this guide.

He and Joanne are authors of "Common Wildflowers of the Grand Canyon."

While at Badlands National Park, John initiated, coordinated, and published several manuscripts of which two remain in print today; "Badlands, Its Life and Landscape" and "Wildflowers of the Northern Plains and Black Hills."

John welcomes comments from users of this guide, particularly if trail conditions have changed since its publication. Call him at (505) 585-2546, or send a letter to 124 Sun Valley Road; Tularosa, NM 88352-9688.

FOR EMERGENCY SERVICES ONLY, Dial 911.

FOR NON-EMERGENCIES, use the following:

New Mexico road conditions: 1-800-432-4269

For Otero County (Alamogordo)

- Ambulance/Fire/Sheriff: (575) 437-2210 or 1-800-874-3743
- State Police/Search and Rescue/Road Conditions: (555) 437-1313
- Cloudcroft Police: (575) 682-2101

For Lincoln County (Ruidoso)

- Ambulance/Fire/Sheriff: (575) 648-2341 or 1-800-687-2419
- State Police/Search and Rescue/Road Conditions: (555) 437-1313

For Eddy County (Carlsbad)

- Ambulance/Fire/Sheriff: (575) 887-7551
- State Police/Search and Rescue/Road Conditions: (575) 622-7200

ADDRESSES AND PHONE NUMBERS FOR ADDITIONAL INFORMATION

For information about Lincoln National Forest:

Lincoln National Forest, Supervisor's Office
Federal Building, 1101 New York Ave.
Alamogordo, NM 88310-6992
(575) 434-7200

Smokey Bear Ranger District Office
901 Mechem Drive
Ruidoso, NM 88345
(575) 257-4095

Sacramento Ranger District Office
PO Box 288
Cloudcroft, NM 88317
(575) 682-2551

Guadalupe Ranger District Office
Federal Building, Room 159
114 Halagueno Street
Carlsbad, NM 88220
(575) 885-4181

For information about commercial facilities and services:

Alamogordo Chamber of Commerce
(pop. 35,500)
1301 North White Sands Boulevard
Alamogordo, NM 88310
(575) 437-6120

Carlsbad Chamber of Commerce
(pop. 24,900)
302 S. Canal
PO Box 910; Carlsbad, NM 88221
(575) 887-6516

Ruidoso Valley Chamber of Commerce
(pop. 11,000)
PO Box 698; Ruidoso, NM 88355
720 Sudderth Drive, Ruidoso, NM 88345
(575) 257-7395

Tularosa Chamber of Commerce
(pop. 4,000)
301 Central
PO Box 176; Tularosa, NM 88352
(575) 585-9858

Capitan Chamber of Commerce
(pop. 1,500)
105 West Smokey Bear Blvd. (US Highway 380)
PO Box 441; Capitan, NM 88316
(575) 354-2273

Cloudcroft Chamber of Commerce
(pop. 750)
Zenith Park
PO Box 1290; Cloudcroft, NM 88317
(575) 682-2733

Carrizozo Chamber of Commerce
(pop. 1,100)
PO Box 567; Carrizozo, NM 88301
(575) 648-2732

Historic Lincoln Visitor's Center
State Highway 380; at milepost 97.5
PO Box 98; Lincoln, NM 88338
(575) 653-4025

The following organizations have educational materials about Lincoln National Forest or other national forests in the Southwest. Choose from a variety of publications, maps (forest, USGS, BLM, and state), postcards, note cards and posters.

Public Lands Interpretive Assoc.
6501 4th Street, NW
Suite I
Albuquerque, NM 87107
(505) 345-9498

Public Lands Information Center
1474 Rodeo Rd.
Santa Fe, NM 87505
(505) 438-7542 or 1-877-276-9404
www.publiclands.org

NON-LIABILITY STATEMENT

The author has personally walked all the trails presented in this book. Every effort has been made to convey information as accurately as possible. However, errors do occur when one is dealing with thousands of pieces of data. In addition, wildfires or storms can change trail and road conditions overnight, or a trail may be closed, improved, or relocated.

When planning a hike, especially on remote or little used trails like many in this guide, it would be wise to check with the district ranger office nearest the trails you plan to hike to obtain maps and the most current information.

Injury is always possible, even on level terrain. The responsibility for being in appropriate physical condition, having adequate supplies, and being safety conscious must rest with the users of this book.

Neither the author nor the publisher can be responsible for any injuries or damages that may result.

Note from Lynn Melton: This document contains the Acknowledgements and Introduction as John Stockert prepared them and as they appeared in the 2002 edition of *Trail Guide: Lincoln National Forest*. I have made only minor editorial changes and corrections to phone numbers as needed.