



Words with a Ranger

Growing up in southwestern Pennsylvania, I was constantly out in the woods chasing after snakes, catching salamanders and crayfish, or going hunting and fishing. When asked what I wanted to be when I grew up, I gave the traditional answers: things like firefighter or police officer. I had no idea I could make a career out of doing what I loved.

That changed when I was a teenager and took my first backpacking trip to Great Smoky Mountains
National Park. While I was out on the trail, I ran into one of the park's wildlife technicians at a backcountry shelter. He told me about the incredible work he was doing with the myriad of wildlife in the Smokies, and I couldn't believe he was getting paid to do the things he did. I made up my mind right then and there that I would have that job someday.

Fast-forward through 17 years of service with the National Park Service to the present, and I serve as a wildlife biologist in the very same park that inspired me to seek a career in the field. When I show up to work in the morning I could be catching newborn elk calves, darting

Continued on page 8



A bull elk lets out a high-pitched bugle, raising a challenge to another male. Ear tags like the one pictured help park biologists track and identify individual elk. *Image by Phoebe Carnes*.

Keeping Up with the Herd

Ancient rites of autumn return thanks to contemporary science

The Smokies will provide a scenic backdrop to the clashing of titans this fall as bull elk challenge each other in a heated competition for mates.

The spectacle known as the rut begins in September when male elk—the largest animals in the Smokies, capable of weighing more than 1,000 pounds—assert their dominance by vocalizing, prancing, and occasionally locking antlers with rivals. Their loud, resonant bugles signal that the annual courtship display has begun and will continue through early November. All the while, special radio collars quietly signal important details about the status of the herd to the park's wildlife biologists.

Although these high-tech collars may seem out of place on wild animals, they've become an essential part of preserving the health of the Smokies ecosystem and the elk themselves since they were reintroduced to the landscape in 2001. The data provided by devices like collars or tags allow biologists to track home ranges and develop population models based on elk survival and reproduction rates. Threats from disease remain a factor, but careful scientific monitoring is helping to ensure a thriving herd of around 200 elk can now roam, and rut, in the Smokies once again.

The best places to stop for elk viewing in the park are the pull-offs and designated areas around Cataloochee Valley and the Oconaluftee Visitor Center. Just remember that the rut is a time of heightened risk to visitors, so it's best to use binoculars or a telephoto lens. Federal law prohibits feeding or approaching elk or bear closer than 50 yards or any distance that disturbs or displaces the animals.



PARK IT FORWARD

Beginning in March 2023, parking in Great Smoky Mountains National Park will require a valid parking tag.

For more info, scan code with camera app









SMOKIES TRIPPLANNER

COVID-19

The National Park Service is working with federal, state, and local health authorities to closely monitor the COVID-19 pandemic. Check nps. gov/grsm for the latest updates on open facilities, access, and updates on mask-wearing requirements. All openings are based on available staffing. Temporary closures may occur on short notice. Play it #SmokiesSafe in the park:

- Delay your trip if you are sick
- Bring a mask and check for current mask requirements
- Send only one or two members of your party into visitor centers
- Avoid crowded areas
- Maintain social distancing six feet away from others

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Visitor centers

Hours may be modified due to COVID-19.

Oconaluftee, Sugarlands, and Cades Cove: open 9 a.m.-5 p.m. September through November; 9 a.m.-4:30 p.m. December.

Clingmans Dome: open 10 a.m.-6 p.m. September through October; 9 a.m.-5 p.m. November.

Road closures

• Cades Cove Loop Road is closed to vehicles on Wednesdays from May 4 through September 28 to allow for non-motorized recreation.

• Many secondary and higherelevation roads close in late fall and remain closed through winter. Refer to the map on pages 6 and 7 for closing dates for Clingmans Dome Road and other roads that close seasonally.

Λ

Camping in the national park

The National Park Service maintains developed campgrounds at ten locations in the park. Only Cades Cove and Smokemont are open in winter. There are no showers or hookups other than circuits for special medical uses at Cades Cove, Elkmont, and Smokemont.

Campsite reservations are required at all park campgrounds, including Abrams Creek, Balsam Mountain, Big Creek, Cades Cove, Cataloochee, Cosby, Deep Creek, Elkmont, Smokemont, and Look Rock. Sites may be reserved up to six months in advance. Make your reservation at recreation.gov or call 877.444.6777.

Site occupancy is limited to six people and two vehicles (a trailer = one vehicle). The maximum stay is 14 days.

Campsites for large groups are at Big Creek, Cades Cove, Cataloochee, Cosby, Deep Creek, Elkmont, and Smokemont. Reservations are required and may be secured up to a year in advance. For more information, visit nps.gov/grsm.

Site	No. of Sites	Elevation	Expected Open Dates	Nightly Fees*	Max RV Length
Abrams Creek	16	1,125'	4/29 – 10/30	\$17.50	12'
Balsam Mountain	42	5,310'	5/13 – 10/11	\$17.50	30'
Big Creek	12	1,700'	4/15 – 10/30	\$17.50	tents only
Cades Cove	159	1,807'	open year-round	\$25	35'-40'
Cataloochee	27	2,610'	4/15 – 10/30	\$25	31'
Cosby	157	2,459'	4/15 – 10/30	\$17.50	25'
Deep Creek	92	1,800'	4/15 – 10/30	\$25	26'
Elkmont	220	2,150'	3/11 – 11/27	\$25– \$27	32'–35'
Smokemont	142	2,198'	open year-round	\$21– \$25	35'–40'
Look Rock	68	2,600'	TBD	\$25	no limit

*Camping fees will increase effective March 2023. See QR code on page one for details.

Services

There are no gas stations, showers, or restaurants in the national park.

Firewood

To prevent the spread of destructive pests, only USDA- or state-certified heat-treated firewood may be brought into the park. Campers may gather dead and down wood in the park for campfires.

Picnic areas

Picnic areas at Cades Cove,
Deep Creek, Greenbrier, and Metcalf
Bottoms are open year-round. Heintooga closes Oct. II. Big Creek, Collins
Creek, Cosby, Look Rock, and Twin
Creeks close Oct. 3I. Chimneys closes
Nov. 29. Picnic pavilions may be
reserved for \$12.50-\$60 at recreation.gov.
Some restroom facilities at picnic areas
may be closed.

For rent

The Appalachian Clubhouse and Spence Cabin at Elkmont can be reserved for daytime events at recreation.gov through October 31, 2022.

Accommodations

LeConte Lodge (accessible by trail only) provides the only lodging in the park. Advanced reservations required. 865.429.5704 or lecontelodge.com

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Special events and ranger programs

Check at visitor centers or nps.gov/grsm for information about special events and ranger programs.

❸ Printed on recycled paper

SMOKIES GUIDE

Smokies Guide is produced four times per year by Great Smoky Mountains Association and Great Smoky Mountains National Park.

nps.gov/grsm SmokiesInformation.org **Publication dates**Spring: mid-March
Summer: early June
Autumn: mid-Sept.

Winter: mid-Dec.

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Download the free NPS App for interactive

maps, tours, and more.

Bicycling
Most park roads are too narrow and heavily traveled for safe or enjoyable bicycling. Bicycles are permitted on park roads but prohibited on trails except Gatlinburg, Oconaluftee River, and lower Deep Creek and Indian Creek trails. Helmets are required by law for persons age 16 and under and strongly recommended for all.

Cades Cove Loop Road is open exclusively to cyclists and pedestrians on Wednesdays from May 4 through September 28. Bikes may be rented at the Cades Cove Campground store. 865.448.9034.

Some 550 miles of park trails are open to horses. See park trail map for trails and rules. Horse

R Horseback riding

camps are available at Anthony Creek, Big Creek, Cataloochee, Round Bottom, and Tow String. Make reservations at recreation.gov.

Three concession horseback riding stables offer rides from March through November. Call for exact opening dates.

- Cades Cove 865.448.9009 cadescovestables.com
- Smokemont 828.497.2373 smokemontridingstable.com
- Sugarlands 865.436.3535 sugarlandsridingstables.com

Fishing

Fishing is permitted yearround in the park, but a Tennessee or North Carolina fishing license is required. Either state license is valid throughout the park, and no trout stamp is required. Fishing with bait is prohibited. Special permits are required for the Qualla Boundary and Gatlinburg, and licenses are available in nearby towns. A free fishing map with a complete list of all park fishing regulations is available at visitor centers.

Pets in the park Pets are allowed in frontcountry campgrounds and along roads as long as they are restrained at all times. Pets are not allowed on park trails, except for Gatlinburg and Oconaluftee River trails. Pets must be kept in control on a leash no longer than six feet.

Backcountry camping A Camping can be an exciting adventure for those who are properly equipped and informed. To facilitate this activity, the NPS maintains more than 800 miles of trails and more than 100 backcountry campsites and shelters throughout the park. One of the greatest challenges is deciding where to go. Here are some tools to help.

- I. Get the map. Go online to view the park's official trail map (nps.gov/grsm/planyourvisit/maps. htm), which shows all park trails, campsites, and shelters. Park rules and regulations are also listed here. You can purchase the printed version of the trail map for \$1 at any park visitor center or online at SmokiesInformation.org.
- 2. Plan your trip. Call or stop by the park's Backcountry Office from 8 a.m. to 5 p.m. for trip planning help. The office is located in Sugarlands Visitor Center, two miles south of Gatlinburg on US 441. 865.436.1297.
- 3. Get a permit. Make your reservation and get your permit through the Backcountry Office at Sugarlands Visitor Center (by

phone or in person) or online at smokiespermits.nps.gov. Note: Nightly backcountry permit fees will be increasing to \$8 effective March 2023. Scan the QR code on page one for more details.

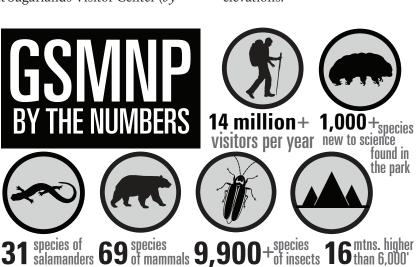
Reservations and permits are required for all overnight stays in the backcountry. The cost is \$4 per person per night. Reservations may be made up to 30 days in advance.

Fall hikers should be especially aware of abrupt weather changes and the danger of hypothermiathe dangerous lowering of body temperature. The combination of rain, cold, and wind (especially at the higher elevations) is extremely dangerous.

Carry reliable rain gear at all times. Layer clothing that provides warmth when wet (not cotton). Always carry an ample supply of water and food. Know your limits. See page 4 for more trip essentials.

Park weather
In autumn, a pattern of warm, sunny days and crisp, clear nights emerges by mid-September. However, cool, rainy days may also occur. Snow may fall at higher elevations beginning in November.

As winter arrives, days can be sunny and 65°F or snowy with highs in the 20s. Snows of an inch or more may occur at lower elevations.





Learn the BARK principles so you and your pet can have a safe and fun visit any time you go to a national park.

Take the BARK pledge:



The **only** two pet-friendly trails in the Smokies are Gatlinburg Trail in TN and Oconaluftee River Trail in NC.

Check out the BARK ranger products at SmokiesInformation.org

Anything can happen out on the trail, but you'll be prepared if you keep it **SMOKIES SMART!**

Tell someone where you're going, stay on established trails, pack the essentials, and know what to do in case of an emergency. Let the NPS Backcountry Office help you plan your hike and prepare for what you may experience along the way. Call 865.436.1297, 8 a.m. – 5 p.m.



PACK ESSENTIALS

- Navigation—map, compass, and knowledge of how to use them
- Water and food
- Extra layers
- Rain gear and pack cover or waterproof bags
- **Headlamp** or flashlight
- Traction support like hiking poles or microspikes
- Emergency whistle
- First aid kit
- Sun protection with sunscreen, sunglasses, and hat

FOR A LONGER HIKE

- Repair kit with multi-tool or knife
- Fire starter
- **Shelter**—emergency tent or tarp



IN AN EMERGENCY

- Call 911 if you can acquire a signal.
- Remain with any injured parties until help arrives.
 Use what basic first-aid techniques you know, but do not attempt invasive intervention unless you are medically trained.
- Use an emergency whistle to issue a series of three spaced blasts every few minutes to alert rescue crews. If you are in an open area, display brightly colored clothing or gear.

YOUR CELL PHONE IS NOT

- a light
- a map
- a survival kit
- always going to have service

THINGS TO DOINTHE FALL

Hit the trail

There are more than 800 miles of maintained trails in the Smokies ranging from leisurely quiet walkways to challenging mountain ascents. Just be sure to come prepared with rain gear, layers, and plenty of water and snacks.

Download a free copy of the park's trail map at nps.gov or purchase one for \$1 at a visitor center or kiosk. Visitor center bookstores offer hiking references including *Day Hikes of the Smokies* and *Hiking Trails of the Smokies*. See page 4 for pack essentials.



earn all about growing, harvesting, and preserving a Smoky Mountain staple at live sorghum syrup—making demonstrations in Cades Cove this fall. Sorghum cane is processed using a century-old mill creating juice that is then boiled to render a sweet, grassy syrup.

Demonstrations will be held near the Cades Cove Visitor Center on most weekends from September through November. Try a sample on the spot or pick up a jar of the good stuff at a visitor center bookstore.





Look out for falling leaves

Did you know that there are more than 100 different species of native trees in the Smokies that collectively produce about 13 trillion falling leaves every autumn?

Fall colors typically peak between mid-October and early November but may begin to pop in late September at the highest elevations in the park. Sunny days and crisp, cool nights are thought to bring out the best colors. Check out the views from the Foothills Parkway or park and pick a trail to enjoy the view up close. See page 11 to brush up on your leaf-identification skills.



The beautiful views don't have to end when the sun sets over the Smokies. The park's size, high peaks, and relative distance from larger cities make for some of the best stargazing in the region. Higher elevations are typically less affected by artificial light. Pull off at a scenic overlook along the Foothills Parkway or try setting up with a telescope at Newfound Gap or a visitor center parking lot.

On the evening of November 5, you can join rangers and local astronomy clubs in Cades Cove to learn more about the night sky and view the stars, weather permitting. Photo by Jessie Snow



Find the Smokies Most Wanted

Help scientists gather important information about plants, animals, fungi, and more by using the free iNaturalist app in the park.

1 Get the iNaturalist app Download the app. Log in.



Try it out.



2 Record life you find in the Smokies

Find a cool organism. Take photos or sound recordings. Post it to iNaturalist. Repeat.

Up for a challenge? Look for the target species (like this witch's butter) in the Smokies Most Wanted guide. Find the guide and more at dlia.org/smokiesmostwanted.





Driving distances and estimated times

All driving times may vary due to traffic conditions.

Cherokee, NC to:

Gatlinburg: 34 miles (1 hour)
Cades Cove: 58 miles (2 hours)
Newfound Gap: 18 miles (½ hour)
Clingmans Dome: 25 miles (¾ hour)
Cataloochee: 39 miles (1½ hours)
Deep Creek: 14 miles (½ hour)

Gatlinburg, TN to:

Cherokee: 34 miles (1 hour)
Cades Cove: 27 miles (1 hour)
Newfound Gap: 16 miles (½ hour)
Clingmans Dome: 23 miles (¾ hour)
Cataloochee: 65 miles (½ hours)
Greenbrier Cove: 6 miles (¼ hour)
Deep Creek: 48 miles (1½ hours)

Townsend, TN to:

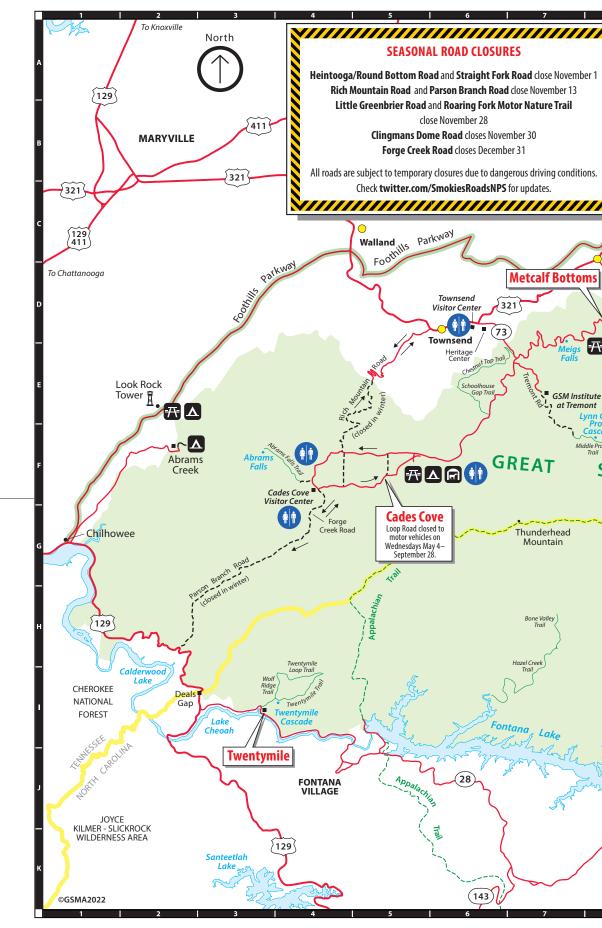
Cades Cove: 9 miles (1/4 hour)

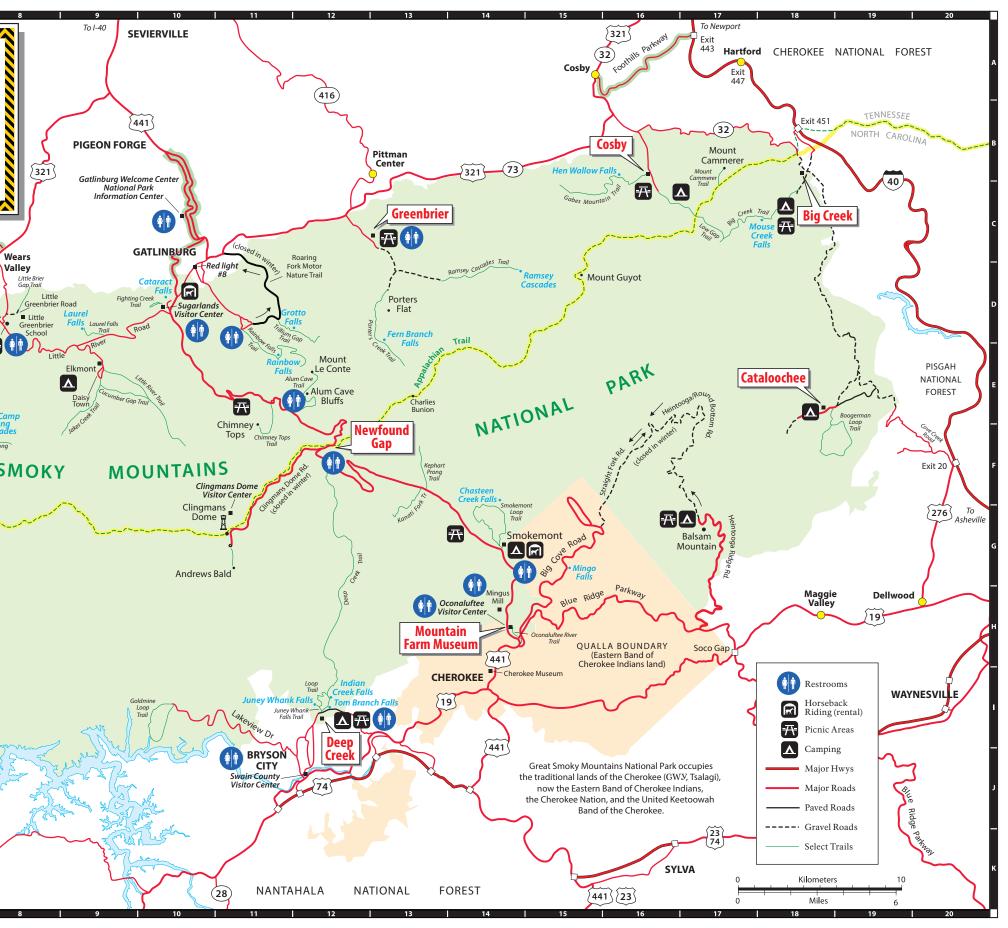
Newfound Gap: 34 miles (11/4 hours)

Gatlinburg: 22 miles (¾ hour) Cherokee: 52 miles (1½ hours) Look Rock: 18 miles (½ hour) Cataloochee: 87 miles (3 hours)

Gatlinburg, TN elev. 1,462'			Mt. Le Conte elev. 6,593'			
	AVG. HIGH	LOW	PRECIP.	AVG. HIGH	LOW	PRECIP.
Jan.	49°	27°	4.0"	36°	18°	6.7"
Feb.	53°	28°	4.1"	37°	19°	5.6"
March	n 62°	35°	5.5"	44°	25°	7.0"
April	71°	42°	4.5"	52°	31°	6.7"
May	77°	50°	5.7"	58°	39°	8.0"
June	82°	58°	5.8"	64°	47°	8.7"
July	85°	62°	6.3"	67°	50°	9.0"
Aug.	84°	61°	5.3"	67°	49°	7.6"
Sept.	79°	55°	4.7"	62°	44°	7.2"
Oct.	70°	43°	2.9"	55°	35°	4.7"
Nov.	60°	34°	3.4"	46°	27°	6.8"
Dec.	51°	28°	4.6"	38°	20°	6.4"

These temperature and precipitation averages are based on data for the last 20 years. Temperatures are in degrees Fahrenheit. An average of over 84 inches (7 feet) of precipitation falls on the higher elevations of the Smokies.





Words with a Ranger

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a bear, boating across Fontana Lake, trapping wild hogs, or fighting wildfires—sometimes all in the same week.

Although I value the variety my job offers, most of my work involves the elk herd. Elk were reintroduced to the Smokies beginning in 2001, and since I've been working here, I've seen the herd grow from around 60 animals to over 200 today. One of the most exciting times of the year is during the fall when elk are in their breeding season—also known as the rut. Large bull elk become much more visible and spend their time displaying, chasing cows, and fighting with other bulls for dominance.

This is also one of the most popular times for elk viewing, but because of the animals' behavioral changes, it also presents an increased risk to visitors. For visitor safety, and the safety of the elk, we ask everyone to follow park regulations. If you see an elk while you're driving, pull off the roadway into the next available designated area and always maintain a minimum 50-yard distance. Bring along binoculars or a telephoto lens to get an up-close look at some of the Smokies' most awe-inspiring wildlife.



Raccoon and firewood safety illustration on page 9 by Lisa Horstman. All others by Emma Oxford.

RULE OF THUMB FOR WILDLIFE VIEWING



When viewing wildlife, hold your arm out straight. If you can't cover the animal in your line of sight with your thumb, you're too close!

BREAK I DOWN

Sources:

"Hikers: Eat Bananas – but Take Your Skins Home." the guardian.com "How Long Does Your Litter Live?" slocounty.ca.gov "'Organic' Litter is Not Copacetic." hcn.org "Recycling Mysteries: Candy Wrappers." earth911.com

Packed it in? Pack it out.

What you may not know about the life of commonly littered items



Even a soft, mushy apple core can linger on the landscape for as long as 2 months. That's more than enough time to draw wildlife to places they shouldn't be.



Citrus contains a natural insecticide, which means that ants won't touch discarded orange peels. They can take 6 months or longer to break down.



Banana peels can take around 2 years to completely rot—the thick skin protects the inner fruit from the cold and resists decomposing quickly.



Cigarette filters contain cellulose acetate, a form of plastic. These frequently littered items remain intact for 5 to 10 years on average.



Most candy wrappers (and granola bar wrappers) are made of a plastic and aluminum combo that won't break down for 10 to 20 years.

Thank you for leaving no trace and taking these items (and all litter) with you when visiting the park!



PLEASE LEAVE YOUR FIREWOOD AT HOME

Use only heat-treated or dead and down wood within the park.
Harmful pests can hitchhike into the park on your firewood, which could kill millions of trees.

LEAVE ONLY FOOTPRINTS

Writing on or carving into trees, stones, or structures can cause permanent damage— it's also a crime! Taking a photo is always a better way to remember your time in the Smokies and helps preserve the park for others too.





KEEP PETS ON DESIGNATED TRAILS

Remember that the Gatlinburg Trail and Oconaluftee River Trail are the only pet-friendly trails in the park. All pets must be kept on a leash no longer than six feet at all times.

BIN IT FOR THE BEARS

Help protect bears by packing out all trash and food waste and using bear-proof dumpsters in the park.



IF YOU LOVE THE SMOKIES

Great Smoky Mountains National Park depends on four primary nonprofit partners as well as 2,800 park volunteers to help its staff meet the needs of 14+ million visitors and manage 522,000 acres of resources.

Great Smoky Mountains Association

Since 1953, the nonprofit Great Smoky Mountains Association has supported the educational, scientific, and historical preservation efforts of the park by operating the park's official bookstores, publishing books and other media about the park's natural and cultural resources. and supporting park programs. Over the years, GSMA has contributed more than \$47 million to assist with living history demonstrations, save hemlock trees, fund natural resource education internships, construct visitor centers and the Collections Preservation Center, and much more.

Association members receive a number of benefits to keep them informed about special events in the park and issues affecting the Smokies:

- Subscription to the biannual fullcolor magazine Smokies Life
- Digital access to this award-winning park newspaper and Smokies *LIVE* e-newsletter
- 15-20% discount on books, music, gifts, and products at park visitor centers and at GSMA's web store
- 10% (or more) discount at 500+ additional nonprofit public lands partner stores
- Access to member-exclusive group hikes, backpacking excursions, and educational sessions
- Invitation to GSMA's Members Weekend

Join today by visiting Smokies-Information.org or call us at 888.898.9102, ext. 257.

Friends of the Smokies

Founded in 1993, supporters of Friends of the Smokies have contributed over \$75 million to the park. Funds help the park provide more than 14 million visitors a safe, memorable experience while protecting the historic and natural resources



of the park. Every year, the park requests funding for numerous projects and programs that would be unfulfilled without the support of Friends.

Programs and projects include:

- 'Forever Places' endowment to support historic preservation
- 'Trails Forever' endowment to fund the skilled crews who lead trail rehabilitation
- · 'Trails Now,' which funds materials for 'Trails Forever' projects
- Facility improvements and visitor amenities
- Campground renovations
- · Cultural experiences and special
- · Search and Rescue vehicles and safety equipment
- Education programs to serve over 10,000 students every year
- · Air and water quality monitoring
- Conservation and wildlife management

Programs like 'Forever Places' support the park's efforts to ensure that future generations will have the opportunity to enjoy the park and walk in the footsteps of those who once called these mountains home.

Your donation makes a difference. Learn more and become a 'Friend' by visiting FriendsOfTheSmokies.org.



For information about memberships and planned giving, email: info@friendsofthesmokies.org or call 800.845.5665.

Discover Life in America

The Smokies have long been renowned for their rich variety of life. Knowing what creatures reside here helps the

ourselves and future generations

National Park Service better protect the Smokies against threats like air pollution, wild-



Join the park's partners in helping to protect this place for

fire, habitat fragmentation, invasive species, and climate change.

Discover Life in America is a nonprofit partner that was launched in 1998 to manage the All Taxa Biodiversity Inventory (ATBI), an effort to identify and learn about every variety of plant and animal in the park. The organization works with leading biologists from around the globe to conduct this massive inventory.

Volunteers and interns become 'community scientists' who help with DLiA's work. These participants get an insider's look at the park, as well as firsthand knowledge of biology, field science, and laboratory practices. Funding comes from donations by individuals and institutions.

To date, DLiA has helped add more than 10,000 species to the inventory of life in the park, including more than 1,000 species completely new to science! Today there are more than 21,000 different kinds of organisms known to the park with new discoveries happening every day. You can support DLiA by purchasing the Smokies Species-a-Day perpetual calendar. Learn more at DLiA.org or by calling 865.430.4757.

Tremont

Born out of a need for residential education programs in the park, Great **Smoky Mountains**



Institute at Tremont has offered student and adult programs that promote a connection to nature for more than 50 years. Up to 6,000 students and adults annually attend workshops, camps, and school programs at the institute that are designed to promote curiosity and inspire learning.

Adult workshops include hiking, backpacking, community science, professional and teacher development, photography, and the Southern Appalachian Naturalist Certification program. Summer camps provide youth and their families opportunities to spend three to ten days exploring the national park and its wonders. Fees include meals, lodging, and most equipment.

Call 865.448.6709 or visit GSMIT. org for program dates and information and to learn how you can support lifechanging learning experiences in the Smokies!









species of birds miles of streams

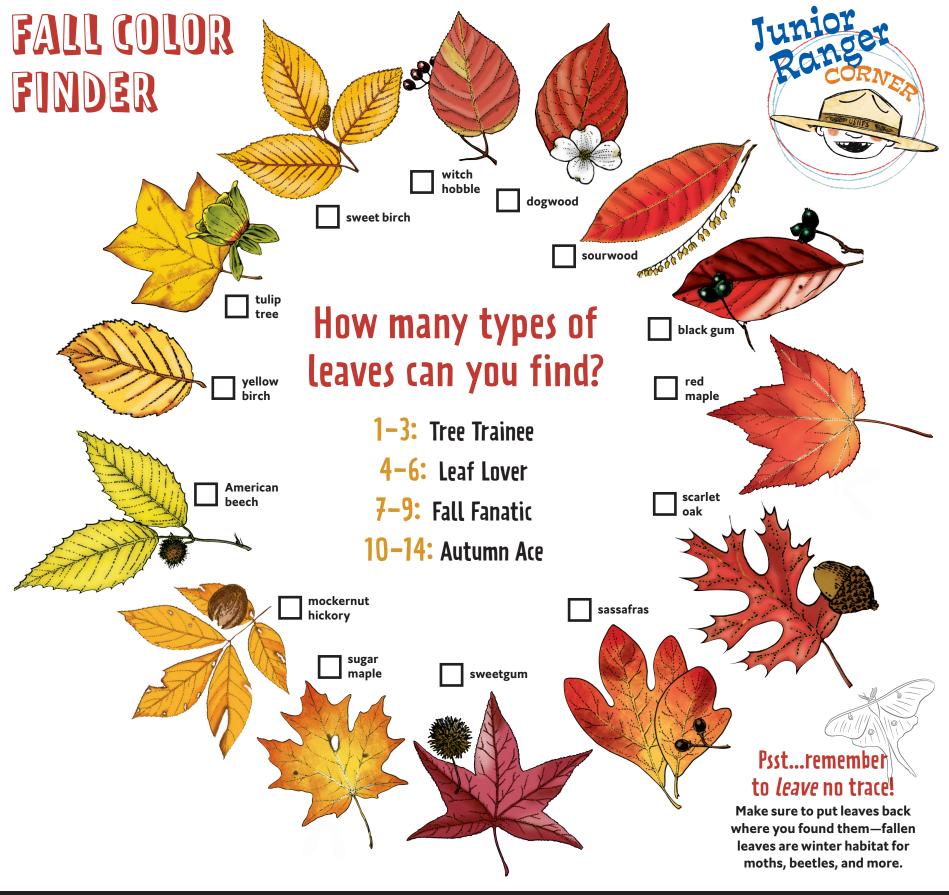


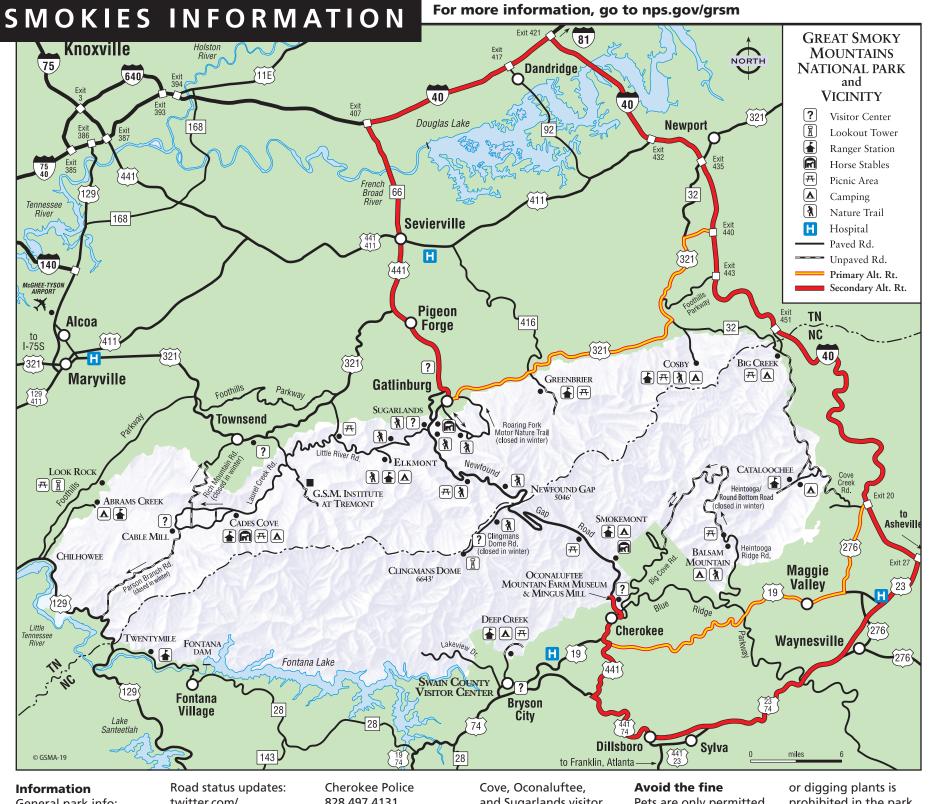






3,400+species 500,000+acres 848





General park info: 865.436.1200 nps.gov/grsm

Backcountry info: 865.436.1297 smokiespermits.nps.gov twitter.com/ smokiesroadsnps

Emergencies

911

Park Headquarters 865.436.9171

828.497.4131

Gatlinburg Police 865.436.5181

Accessibility **Restrooms at Cades**

and Sugarlands visitor centers are fully accessible. For more information about accessibility, go to nps. gov/grsm/planyourvisit/ accessibility.htm.

Pets are only permitted on the Gatlinburg and Oconaluftee River trails, which allow dogs on a leash. Persons feeding wildlife are subject to a \$5,000 fine. Picking

prohibited in the park.