Of Bears and Wildfire

When wildfires impact a forest, biologists usually receive only anecdotal information about how wildlife responds. For bear researchers in the Smokies, last year’s late November wildfires were different.

Serendipitously, researchers from the University of Tennessee, U.S. Geological Survey, National Park Service, and Appalachian Bear Rescue (ABR) were monitoring eight bears using GPS-tracking collars within the park’s burn area.

The eight bears are among 66 that have been collared as part of a large-scale study. The bears received their GPS tracking devices either because they tended to leave the park in search of garbage and other people-related food or because they had been rehabilitated by ABR. The study’s main objectives are to learn how bears become habituated to human food and determine the fate of bears that were rehabilitated at the ABR and then released.

None of the collared bears in the park’s 11,000 acre burn area were killed. However, park staff know of two male bears that were not involved in the research that did die as a result of the fires.

What did the collared bears do when the wildfire swept through their habitat? Judging from the GPS records, all of the bears chose to hunker down rather than flee. Some of the bears, particularly females, may have already been in their winter dens, either high in a hollow tree or in a cave-like ground den.

Perhaps because the wind-driven fire moved so rapidly, it was wiser to stay put rather than retreat. Researchers cannot say for sure, but black bears are excellent climbers and would have the ability to climb high into trees above most of the flames.

Fishing is open year-round in the national park. Because there is no stocking of game fish, anglers must test their skills against wild trout.

Anglers Pursue Wild Trout in Park Streams

Great Smoky Mountains National Park is one of the rare places in the southeastern U.S. where anglers can pit their skills against wild trout (even wild native trout) in free-flowing mountain streams.

Although rainbow and brown trout were stocked in park waters up until 1975, the practice has since been discontinued in favor of a more natural approach to managing streams and rivers. Hence the rainbows and browns that live in the park now are self-sustaining populations, as are populations of brook trout, which are native to the Great Smokies and southern Appalachian Mountains.

Park officials estimate that over 800,000 anglers ply the park’s waters each year. Most anglers prefer to use fly fishing gear as the flies best resemble the fishes’ natural foods. Recent angler surveys indicate that more people are fishing in the park for pure sport and fewer are actually keeping the fish they catch.

In fact, over 80% of anglers practice “catch and release,” which helps sustain fish populations. According to the surveys, the average Smokies angler catches 2-3 fish per hour.

Anglers in the Smokies who are 16-years-old or older must have either a Tennessee or North Carolina fishing license. Either license is good throughout the park.

While the late November wildfires did burn considerable acreage in the watershed of the West Prong of the Little Pigeon River, park fisheries biologists have not seen any negative impacts on fish. In fact, the burned vegetation could temporarily improve stream pH and make the waters more productive for aquatic insects and trout.
People come from all over the world to enjoy wildflowers in Great Smoky Mountains National Park. Over 1,600 types of flowering plants bloom here, more than in any other North American national park. Why such a wealth of wildflowers? Lots of precipitation, moderate temperatures, and a range of habitats associated with the height and aspects of the mountain range are the main reasons.

Wildflowers bloom most every month of the year here. The following listings show the main periods when a large number and impressive variety of flowering plants are in bloom.

- **March 15-April 15**
  - Spring Ephemerals: This is the most prolific bloom of the year, featuring favorites like trilliums, spring-beauty, dwarf crested iris, bloodroot, violets, lady’s slipper orchid, and trout lily.

- **May-July**
  - Summer Shrubs: Mountain laurel, flame azalea, Catawba rhododendron, rosebay rhododendron.

- **July-September**
  - Big, bright late summer blooms: Cardinal flower, monk’s hood, beebalm, Turk’s cap lily, jewelweed, cone flower.

- **September 15-November 15**
  - Fall flowers: Asters, New York ironweed, Joe-Pye weed, gentian, goldenrod.

Nature’s calendar. In Great Smoky Mountains National Park, this volunteer work is being done at specific monitoring plots set up by researchers near Deep Creek, Fontana Lake, Cataloochee, Clingmans Dome, Newfound Gap, Greenbrier, and elsewhere. Volunteer citizen-scientists can also help by simply taking photos from set photo points throughout the year.

The pace of spring can have profound effects on park wildlife. If trees leaf out and insects emerge before the arrival of migratory birds, the birds can miss the feast and insect populations may explode. If trees flower too early, then suffer a hard freeze, the nuts and fruits that bears and wild turkey and other wildlife depend on can fail. Since 1991, average March temperatures in the park have risen by nearly three degrees Fahrenheit.

For more information about volunteering with these projects, please contact usanpn.org or 828-497-1945.
Nine campgrounds will be open in the national park this year.

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

Campsites at Elkmont, Smokemont, Cataloochee, Cosby, and Cades Cove may be reserved. For reservations call 1-877-444-6777 or contact www.recreation.gov. Sites may be reserved up to six months in advance. Reservations are required at Cataloochee Campground. Other park campgrounds are first-come, first-served.

Site occupancy is limited to six people and two vehicles (a trailer = 1 vehicle). The maximum stay is 14 days.

Special camping sites for large groups are available seasonally at Big Creek, Cades Cove, Cataloochee, Cosby, Deep Creek, Elkmont, and Smokemont. Group sites must be reserved. Call 1-877-444-6777 or contact www.recreation.gov. Group sites may be reserved up to one year in advance.

The list below shows number of sites, elevations, fees, approximate 2017 operation dates, and maximum RV lengths. Dates are subject to change. Visit www.nps.gov/grsm for current information.

<table>
<thead>
<tr>
<th>Location</th>
<th>Sites</th>
<th>Elevations</th>
<th>Fees</th>
<th>Operation Dates</th>
<th>Maximum RV Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>Balsam Mountain</td>
<td>46</td>
<td>5,310'</td>
<td>$14, 25' RVs</td>
<td>May 10 - Sept. 27</td>
<td>35'-40' RVs</td>
</tr>
<tr>
<td>Big Creek</td>
<td>12</td>
<td>2,610'</td>
<td>$17-$22, 30' RVs</td>
<td>Apr 9 - Nov 29, 12' trailers</td>
<td>35'-40' RVs, 26' RVs</td>
</tr>
<tr>
<td>Cades Cove</td>
<td>159</td>
<td>2,459'</td>
<td>$14, 25' RVs</td>
<td>Apr 7 - Oct 9, 12' trailers</td>
<td>35'-40' RVs</td>
</tr>
<tr>
<td>Cataloochee</td>
<td>27</td>
<td>5,310'</td>
<td>$20, 31' RVs</td>
<td>May 26 - Oct 9, 12' trailers</td>
<td>35'-40' RVs</td>
</tr>
<tr>
<td>Cosby</td>
<td>157</td>
<td>2,459'</td>
<td>$17-$22, 30' RVs</td>
<td>Apr 7 - Nov 29, 12' trailers</td>
<td>35'-40' RVs</td>
</tr>
<tr>
<td>Elkmont</td>
<td>220</td>
<td>2,198'</td>
<td>$17-$20, 35' RVs</td>
<td>Apr 7 - Oct 29, reservations required, 31' RVs</td>
<td>35'-40' RVs</td>
</tr>
<tr>
<td>Gatlinburg</td>
<td>1-800-867-9246</td>
<td>Cherokee 1-828-788-0034</td>
<td>Fontana 1-800-849-2258</td>
<td>Gatlinburg 1-800-588-1817</td>
<td>Maggie Valley 1-800-624-4431</td>
</tr>
</tbody>
</table>

Pets are allowed in frontcountry campgrounds and beside roads as long as they are restrained at all times. Pets are not allowed on park trails, except for the Gatlinburg and Oconaluftee River trails. Dogs on these trails must be leashed.

bicycling

Most park roads are too narrow and heavily traveled by automobiles for safe or enjoyable bicycling. However, Cades Cove Loop Road is an exception. This 11-mile, one-way, paved road provides bicyclists with excellent opportunities for viewing wildlife and historic sites.

Bicycles and pedestrians only mornings in Cades Cove start on May 10 this year.

Bicycles may be rented at the Gatlinburg Bicycles & Hiking store. Bicycles are available for rent at other locations as well.

Dogs on Cades Cove Loop Road must be leashed and are allowed from May 10 to June 10. Dogs are not allowed on park trails or in national park roadways.

Please see pages 8-9 for locations of picnic areas. Collins Creek opens April 7; Cosby and Big Creek open April 14. Heintooga opens May 26. All others are open have charcoal grills for cooking.

Special events

April 11-15 Spring Wildflower Pilgrimage: parkwide
April 15, 16; May 27, 28 Blacksmihering @ Cades Cove 10 - 4
April 16, May 7, 21. 1 p.m. Old-Time Music Jam Oconaluftee Visitor Center
May 9-13 Wilderness Wildlife Week
May 20 Science @ Sugarlands 1 p.m. Learn about current research!
June 17 Womens’ Work Mountain Farm Museum

Spring hours of operation are, Oconaluftee & Sugarlands: 8-5 in March; 8-6 in April & May. Cades Cove: 9-6:30 in March; 9-7 in April; 9-7:30 in May. Clingmans Dome: 10-6.

Other services

There are no gas stations, showers, or restaurants in the national park. Mt. LeConte Lodge is the only lodging.
horse riding

Horseback riding is generally available from early March through November. Rates are $30 per hour. Most stables have maximum rider weight limits of 225 or 250 pounds and age restrictions for children. Please call the stables below or stop at a visitor center for detailed information.

CADES COVE (865) 448-9009 cadescovertables.com
SMOKEMENT (828) 497-2373 smokemontridingstables.com
SMOKY MTN (865) 436-5634 smokymountainridingstables.com
SUGARLANDS (865) 436-3535 sugarlandsridingstables.com

Hayrides and carriage rides ($12 per person) are available from Cades Cove Riding Stable. Wagon rides ($10 per person) are offered at Smokemont. Souvenir photos, tee-shirts, hats, and ice may be available. Soft drink vending is available.

The Park Service operates horse camps at Cades Cove, Big Creek, Cataloochee, and Round Bottom. Call 877-444-6777 or visit www.Recreation.gov for reservations.

Cassius Cash is the Superintendent at Great Smoky Mountains National Park Service.

Great Smoky Mountains National Park is managed by the United States National Park Service. The agency manages the park in accordance with its mission “to conserve the scenery and the natural and historic objects and the wild life therein, and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations.” The Park Service is in charge of over 400 natural and historic sites, including national rivers and recreation areas, seashores, battlefields, parks, and monuments.

Backcountry Camping in the Smokies

Camping at a backcountry campsite or shelter can be an exciting adventure for persons properly equipped and informed. To facilitate this activity, the National Park Service maintains over 800 miles of trails and more than 100 backcountry campsites and shelters throughout the park. One of the greatest challenges for backcountry campers is deciding where to go. Here are some tools to help.

1. Go online to view the park’s official trail map (www.nps.gov/grsm/plan-yourvisit/maps.htm), which shows all park trails, campsites, and shelters. Park rules and regulations are also listed here. If you wish, you can purchase the printed version of the trail map for $1 by stopping at any park visitor center or calling (865) 436-7318 x226 or shopping online at www.smokiesinformation.org.
2. Call or stop by the park’s backcountry office, which is open every day from 8:30 a.m. to 5:00 p.m. The office is located in Sugarlands Visitor Center, two miles south of Gatlinburg on Newfound Gap Road (U.S. 441). (865) 436-1297.
3. Make your reservation through the backcountry office at Sugarlands Visitor Center (by phone or in person) or online at www.smokiespermits.nps.gov.

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.

Spring hikers should be especially aware of the danger of hypothermia—the lowering of body temperature. The combination of rain, cold, and wind is especially dangerous. At the park’s higher elevations, hypothermia can be a threat even during summer. To prevent hypothermia, carry good rain gear at all times. Layer clothing that provides warmth when wet (not cotton). Be prepared for sudden weather changes, especially at the high elevations.
The observation tower atop the Smokies highest peak, 6,643’.

1. clingmans dome
A paved, but very steep, 0.5 mile trail leads to an observation tower that offers 360° views of the Great Smoky Mountains and beyond. To get there: turn off Newfound Gap Road 0.1 mile south of Newfound Gap and follow the 7-mile-long Clingmans Dome Road to the large parking area at the end. A visitor center is located along the trail to the tower.

The road to Clingmans Dome is closed from December 1 through March 31 due to weather.

2. andrews bald
“Balds” are mountaintop meadows of mysterious origin. Andrews Bald, on U.S. 441, offers panoramic views of the mountains and valleys of North Carolina and Tennessee. A paved, but very steep, 0.5 mile trail leads to the observation tower. A short stroll along the famous Appalachian Trail. There are also restrooms and the historic Rockefeller Memorial.

3. sugarlands visitor center
It’s fun, it’s free, and it’s easy to find. Sugarlands Visitor Center is located 2 miles south of Gatlinburg, TN on U.S. 441. Highlights include flora and fauna exhibits, a 20-minute film in the surround-sound theater, an information desk, and bookstore. Several short nature trails also begin at the center, as do ranger-led walks and talks. Open 8-5 (March), 8-6 (April-May).

4. water-powered grist mills
Two historic, water-powered grist mills operate from 9-5 daily, grinding corn into corn meal. Cable Mill sits in Cades Cove (halfway around the one-way loop road) and opens March 18. Mingus Mill is 2 miles north of Cherokee, NC on U.S. 441 (Newfound Gap Road) and opens April 9.

5. newfound gap
This gap is a low point in the mountain range and straddles the boundary of North Carolina and Tennessee. From here one can enjoy spectacular views into both states and take a short stroll along the famous Appalachian Trail. There are also restrooms and the historic Rockefeller Memorial.

6. oconaluftee museums
This history buff’s paradise now offers free indoor and outdoor museums. It also features old-time breeds of livestock (seasonally) and an heirloom garden and row crops. The new visitor center and mountain farm museum are located on U.S. 441, two miles north of Cherokee, NC. Open 8-5 (March), 8-6 (April-October).

7. deep creek waterfalls
The Deep Creek area features a campground, picnic area, mountain stream, and miles of hiking trails. Around 2 miles of walking will acquaint you with beautiful Deep Creek and three pretty waterfalls (Juney Whank, Tom Branch, and Indian Creek). The trails to the waterfalls start from the large parking area at the end of Deep Creek Road (across the creek from Deep Creek Campground).

8. Mt. Le Conte
The Rainbow Falls Trail to Mt. Le Conte and LeConte Lodge will be closed Mondays-Thursdays for trail repairs starting in early May. However, there are plenty of alternatives for hikers to this popular peak. The Boulevard Trail starts from Newfound Gap and runs 8.1 miles to LeConte Lodge. Bull Head Trail begins from Cherokee Orchard and is 6.7 miles. Alum Cave Trail starts from Newfound Gap Road and runs 5 miles to the top. Brushy Mountain & Trillium Gap trails lead 9.1 miles to the top of Le Conte.

WHERE TO BEAT THE CROWDS
If you want to beat the weekend crowds, try some of these off-the-beaten-path destinations.

9. Look Rock walking trail and tower. Great views, just off the Foothills Parkway West, 18 miles from Townsend, TN.

10. Cataloochee Valley. This remote area is accessible only by narrow, winding secondary roads. But when you arrive, there are elk to watch, historic buildings to explore, and plenty of trails to walk. 39 miles from Cherokee; 65 miles from Gatlinburg.

11. Cosby Campground, Picnic Area, and hiking trails. The campground rarely fills, and there are short and long trails to waterfalls, views, and Mt. Cammerer fire tower. The campground is 20 miles from Gatlinburg, TN.

12. Fontana Dam and Lake. A TVA visitor center and tours highlight the highest dam in the East. Fontana Marina offers boat rentals and shuttles for access to remote, historic areas of the park like Hazel Creek and Eagle Creek.
ENDANGERED GRAY BATS DOCUMENTED IN PARK

PARK OFFICIALS HAVE CONFIRMED that researchers from The University of Tennessee captured three male gray bats (\textit{Myotis grisescens}) in the Cosby area of Great Smoky Mountains National Park last year. These three individuals are the first gray bats to be captured in the park and increases the number of bat species known here to 13. Gray bats are an endangered species and year-round cave residents. Although gray bats have contracted white-nose syndrome, their populations have not declined like other cave dwelling species.

Please Leave Your Firewood at Home

WOOD-BORING INSECTS FROM EUROPE and Asia have the potential to devastate over 40 species of hardwood trees in the Great Smoky Mountains. To help prevent this catastrophe from ever happening, the National Park Service has imposed restrictions on the type of firewood that can be brought into the national park. Only certified, heat-treated firewood may now be brought into the park, though dead and down wood may still be collected inside the park for campfires here. Certified wood is now available inside and outside the park. For more information visit www.nps.gov/grsm.

WORK UNDERWAY AT ELKMONT DISTRICT

The Park Service is preserving the Daisy Town portion of the Elkmont historic district.

WORK HAS BEGUN in the Elkmont Historic District to preserve four structures and to remove 29 others as specified in the 2009 Memorandum of Agreement among the National Park Service and state historic preservation agencies. This year park crews will preserve the Levi Trentham Cabin, Mayo Cabin, Mayo Servants' Quarters, and Creekmore Cabin in the Daisy Town area. The 29 structures slated for demolition are along Little River Trail and Jakes Creek Trail. "Elkmont has long been recognized as a special place that tells the story of early logging and tourism, while at the same time harboring a rare alluvial forest that supports unique species like the synchronous fireflies," said Superintendent Cassius Cash. "I'm pleased that we have the opportunity to move forward in helping both preserve pieces of the rich cultural history and restore natural habitats." Park staff plan to complete the stabilization work of the four Daisy Town structures by this November. Workers will repaint masonry features, replace rotted wood, paint, and make needed repairs to windows, doors, and roofs. The Daisy Town area, Elkmont Cemetery, Spence Cabin, Appalachian Clubhouse, and Elkmont campground will remain open throughout the work project.

If spring weather cooperates, demolition work will be completed by May 26 for the 29 structures located along Jakes Creek Trail and Little River Trail. Both trails will be closed during the demolition work to accommodate heavy equipment. Access to the river near the structures will also be restricted during demolition.

The lower section of Little River Trail will be closed, Monday through Friday from March 27 through May 26 to remove 23 structures in the area known as Millionaire's Row. Jakes Creek Trail will be closed, Monday through Friday from March 27 through May 26 to remove 23 structures in the area known as Society Hill. Crews have already salvaged useable items from the structures for use in preserving historic structures in the park.

From 1992 through 2008, the park entered into a series of public planning efforts including an Environmental Impact Study (EIS) that led to an agreement and an amendment to the park's General Management Plan defining the disposition of the 74 remaining summer homes and other structures in the Elkmont Historic District.

The EIS defined a full range of possible actions in seven alternatives for management of the historic district with the expected impacts and projected costs of each alternative. These alternatives ranged from full removal of all buildings as described in the park’s 1982 General Management Plan to incrementally greater preservation and reuse of the buildings for a variety of purposes with costs estimated between $1.4 million to over $30 million.

As specified in the decision documents, 19 structures were designated to be preserved for public visitation, while 55 structures were identified for demolition. Park officials continue to seek funding to complete the needed work.

To date, the Appalachian Clubhouse and Spence Cabin have been fully restored and can be rented for day use activities such as wedding receptions. Visit recreation.gov to make a reservation.

RAINBOW FALLS TRAIL WILL GET MAJOR MAKEOVER

THE VERY POPULAR RAINBOW FALLS Trail to Mt. Le Conte will close four days per week beginning May 8 this year and continuing through fall. The trail will be closed every Monday through Thursday so the Trails Forever crew can rehabilitate some badly eroded sections. Hikers to Mt. Le Conte should consider alternative trails such as The Boulevard, Brushy Mountain/Trillium Gap, Bull Head and Alum Cave. The weekday trail closure will end for the season on November 16.

PARK TO HOLD LOTTERY FOR FIREFLY VIEWING

DURING THE EIGHT-DAY PEAK synchronous firefly display in the Elkmont area, the park organizes a shuttle service from Sugarlands Visitor Center to the viewing area. Due to the popularity of the fireflies and to protect their habitat, the Elkmont area is closed at night except to registered Elkmont campers and the park’s shuttle service to the viewing area. Because of high demand, passes are distributed through a lottery. Visit the website www.recreation.gov and search for Firefly Event.

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Crews Open Trails Closed by Fires

Park trail crews have now reopened eleven of the sixteen trails originally closed by the late November, 2016 wildfires. Some of these trails that have been reopened now offer hikers close-up views of how the fires impacted the forest. Old Sugarlands, Cove Mountain (lower end), and Baskins Creek, for example, offer vivid glimpses of the forest mosaic created by the wind-driven fires. Hikers on these trails this season will be able to observe and photograph how the forest recovers from the historic wildfire.

Five of the park trails that received the heaviest damage are expected to remain closed at least through spring of this year. Chimney Tops, Bull Head, Sugarland Mountain, Rough Creek, and Road Prong will all take considerable work before they can be reopened. Damages to trails include fallen trees, weakened (and therefore hazardous) trees, trail treads destroyed by the root balls from fire-damaged and windthrow trees, and even places where the rock and soils beneath the trail treads have been altered.

The ever-popular Chimney Tops Trail may be partially opened later in 2017. Trail crews are working on expanding a scenic overlook just short of the trail’s old rock spire summit. The two rock spires known as the Chimney Tops were the point of origin for the massive Chimney Tops 1 & 2 fires last November and the heat and winds obliterated the final section of trail leading to the promontory and its unobscured views.

The expanded overlook will offer hikers mountain views without the perils of scaling the sheer rock face of the Chimney Tops spires. The new trail length will be approximately 1.8 miles.

Cades Cove Bike Patrol Honored with Awards

The Cades Cove Bike Patrol team was recently awarded the Southeast Regional Group Volunteer Service Award and the national George and Helen Hartzog Outstanding Group Volunteer Service Award.

Established in 2010, the Bike Patrol was created to provide assistance and safety awareness to bicyclists riding the 11-mile Cades Cove Loop Road on Wednesday and Saturday mornings, May through September, when the road is closed to vehicle traffic. Since the program began there has been a 50% reduction in serious bicycle accidents during these morning closures, in spite of a 30% increase in bicycle use over the same time period.

"Because of the dedicated service of these men and women, our visitors have benefited greatly," said Park Superintendent Cassius Cash. "The Bike Patrol has not only prevented accidents, but they have also encouraged countless bicyclists through their knowledge, support, and assistance."

The Bike Patrol volunteers have contributed over 7,000 hours of service. Members include: John Peychal, Yvonne Peychal and Donald Bzdyl of Sevierville, TN; Tom Barnard, Janie Barnard, and Dwight Elliott of Knoxville, TN; Herb Payne and Denise Schmidt of Townsend, TN; Randall Bradley of Dandridge, TN; Johnny Warren of Seymour, TN; Wanda DeWarde of Maryville, TN; and Jim Whittle of Daleville, VA.

Every year volunteers perform a variety of activities including assisting with cultural demonstrations, providing visitor information, participating with special events, patrolling the roads and trails for visitors in need, removing litter, maintaining backcountry campsites and trails, removing non-native plants, assisting campground staff, and helping fisheries biologists monitor trout populations. The park has approximately 2,200 volunteers who provide over 117,000 hours of service to the national park.

Eclipse May Attract Too Many to Park

Park officials are anticipating the likelihood of record visitation for the solar eclipse on August 21 during the traditional tourist high season. Rangers and partners will provide guided viewing opportunities at Oconaluftee Visitor Center and at Cades Cove near Cable Mill for those who want to experience the eclipse within the park and are able to arrive early in the day. With the park’s limited roads and parking areas in the “path of totality,” though, the risk of traffic jams and road closures increases through the morning.

Managers suggest visitors plan ahead to find the right eclipse experience for their situation. Many communities outside the national park are hosting special events to observe and celebrate the celestial phenomena and those locales may be a great alternative for locals or travelers not wanting to risk traffic congestion in the park. Visit the park website for more information: www.nps.gov/grsm/plan-yourvisit/2017-solar-eclipse.
GREAT SPING DRIVING TOURS, VIEWS, AND WILDFLOWER TRAILS IN THE SMOKY MOUNTAINS

Note: Mileages are for the most direct route via park roads.

Cades Cove Loop Road: 11-mile one-way loop road offers wildlife viewing and access to a historic grist mill, churches, and log homes. Allow at least 2-3 hours.

1. Look Rock Tower
2. Townsend Visitors Center
3. Cades Cove Visitor Center
4. Smokey Mountain National Park Information Center
5. Gatlinburg Welcome Center

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www.SmokiesInformation.org Spring 2017 8
Q: What will happen to the trees scorched by the fire?
A: In about 8% of the burn area, mostly on south-facing ridges with lots of pine and oak trees, the plant mortality is 100%. These sunny sites were tinder dry from the drought, and the fire, stoked by hurricane-force winds, became an inferno. The duff on the forest floor, which was 4-6” deep, was incinerated, exposing mineral soils. Only about 900 acres in the park were severely impacted in this way.

Even these heavily impacted pine-oak sites will rebound. Fire ecologist Rob Klein expects grasses and herbaceous plants like wildflowers to green up at these sites over the next few years and within five years he foresees chest-high thickets of young, vigorous Table Mountain pine trees. Table Mountain pines, which grow only in the southern Appalachian Mountains, actually depend on fire to reproduce. Because the duff layer on the forest floor acts like mulch in your garden, impeding new plant growth, the absence of the layer allows the tiny seeds of orchids and numerous other species to get started.

Q: What about the magnificent cove hardwood forests with their huge trees and expanses of spring wildflowers?
A: Most of the moister areas in the park, like the cove hardwood and northern hardwood forests, received low- to moderate intensity fire impacts. Although even some of the largest trees in these rich woodlands may die, their absence will create major gaps in the forest canopy and increase sunlight on the forest floor. Increased energy from sunlight, combined with the greater availability of plant nutrients released from the burned vegetation, could produce a robust wildflower bloom in some areas as early as this year. Any young trees that survived the fires should get a similar boost.

Q: What about the rhododendron that burned?
A: These evergreen shrubs often grow in damp places, so fires are uncommon in their habitats. The lightly burned rhododendron has a good chance of re-sprouting, but the severely burned shrubs are unlikely to survive. It will be interesting to see what regrows in these sites that experienced such rare, high intensity fire.

Q: What other unknowns are out there?
A: A couple of large heath bald thickets burned on the slopes of Mt. Le Conte. Two of these are visible from Carlos Campbell scenic overlook on Newfound Gap Road. How these nearly-impenetrable evergreen shrub-lands originated has always been a mystery, but one theory is they got their start after severe fire. So scientists will be watching closely to see what grows back now.

Oak forest also poses a mystery. Though many oaks possess adaptations to fire, fire ecology studies in the southern Appalachians have shown mixed results regarding the regeneration of oak forests following fires. “Where the overstory oak trees have been killed, we don’t really know if oak will replace oak or if it will be replaced with species like maple, pine, and blackgum,” Klein said.

A critical factor for forest recovery and wildflower abundance will be the rainfall that the Smokies receive this season. If last year’s drought continues into 2017, more of the trees impacted by the fires could die and the overall forest recovery could take longer.
While last year’s late November wildfires killed at least two black bears (see page 1) and probably killed many small mammals such as chipmunks, squirrels, and mice in the park, the fire’s long-term impact on wildlife habitat should be positive.

“Fire creates early successional forest habitat,” said wildlife biologist Bill Stiver. “Which is good for elk, deer, bear, turkey, rabbits—and lots of other wildlife.”

Disturbances like fire open up the forest canopy and allow energy in the form of sunlight to reach the forest floor. This, along with the nutrients released by the burned vegetation, triggers a surge of growth for plants like grasses and forbs that are nutritional for wildlife.

“Wildlife flourishes when there is a mosaic of habitats, from old-growth forest to open, early successional zones,” Stiver added.

**Pollinating Insects**

The burning of the duff layer, a more open forest canopy, and the influx of nitrogen and other nutrients from burned wood should lead to a proliferation of flowering plants. These flowers will attract native bumblebees, butterflies, moths, and other insects that should in turn flourish themselves.

**Bears**

Black bears will benefit early in the year from the grasses that emerge in burn areas where the duff layer on the forest floor has been reduced or eliminated. Duff, like mulch in your garden, inhibits the growth of new plant life. The native shrubs that produce the blackberries, blueberries, and huckleberries that bears love also get a boost in the post-fire cycle of forest succession.

**Pollinating Insects**

The burning of the duff layer, a more open forest canopy, and the influx of nitrogen and other nutrients from burned wood should lead to a proliferation of flowering plants. These flowers will attract native bumblebees, butterflies, moths, and other insects that should in turn flourish themselves.

**Bats**

Most bats have a hard time flying through dense vegetation, so a more open forest makes hunting insects easier.

**Deer, Elk**

Browsers will benefit from the boost to grasses and other herbaceous plants. Root sprouts from burned trees and shrubs also make excellent browse.
**SUGARLANDS/ELKMONT AREA**

<table>
<thead>
<tr>
<th><strong>Event</strong></th>
<th><strong>Meeting Location</strong></th>
<th><strong>Duration</strong></th>
<th><strong>Difficulty</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A Walk in the Woods:</strong></td>
<td>Sugarlands Visitor Center</td>
<td>1.5 hours</td>
<td>Easy</td>
</tr>
<tr>
<td><strong>Creature Feature:</strong></td>
<td>Sugarlands Visitor Center</td>
<td>30 minutes</td>
<td>Easy</td>
</tr>
<tr>
<td><strong>Old Town of Elkmont:</strong></td>
<td>Elkmont Ranger Station</td>
<td>2 hours</td>
<td>Easy</td>
</tr>
<tr>
<td><strong>Art in the Park:</strong></td>
<td>Sugarlands Visitor Center</td>
<td>1.5 hours</td>
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</tr>
<tr>
<td><strong>What’s in the Water?:</strong></td>
<td>Sugarlands Visitor Center</td>
<td>1.5 hours</td>
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**METCALF BOTTOMS AREA**

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<th><strong>Event</strong></th>
<th><strong>Meeting Location</strong></th>
<th><strong>Duration</strong></th>
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</tr>
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<tbody>
<tr>
<td><strong>School Days at Little Greenbrier:</strong></td>
<td>Little Greenbrier School</td>
<td>1.5 hours</td>
<td>Easy</td>
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**CADES COVE AREA**

<table>
<thead>
<tr>
<th><strong>Event</strong></th>
<th><strong>Meeting Location</strong></th>
<th><strong>Duration</strong></th>
<th><strong>Difficulty</strong></th>
</tr>
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<tbody>
<tr>
<td><strong>Ranger-led Hayrides:</strong></td>
<td>Cades Cove Riding Stables</td>
<td>2 hours</td>
<td>Easy</td>
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<tr>
<td><strong>Precious Memories:</strong></td>
<td>Primitive Baptist Church</td>
<td>30 minutes</td>
<td>Easy</td>
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<tr>
<td><strong>WILD Program</strong></td>
<td>Cades Cove Visitor Center</td>
<td>30 minutes</td>
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<tr>
<td><strong>Junior Ranger Program:</strong></td>
<td>Cades Cove Visitor Center</td>
<td>45 minutes – 1 hour</td>
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**OCOALUFTEE AREA**

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<th><strong>Event</strong></th>
<th><strong>Meeting Location</strong></th>
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<th><strong>Difficulty</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Charismatic Mega-fauna:</strong></td>
<td>Oconaluftee Visitor Center Porch</td>
<td>30 minutes</td>
<td>Easy</td>
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<tr>
<td><strong>Coffee With a Ranger:</strong></td>
<td>Oconaluftee Visitor Center Porch</td>
<td>1 hour</td>
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<tr>
<td><strong>Springtime on the Farm:</strong></td>
<td>Mountain Farm Museum</td>
<td>1 hour</td>
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<tr>
<td><strong>Junior Ranger Program: Smoky Mountain Elk:</strong></td>
<td>Palmer House in Cataloochee Valley</td>
<td>45 minutes</td>
<td>Easy</td>
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**SPECIAL PROGRAMS**

<table>
<thead>
<tr>
<th><strong>Event</strong></th>
<th><strong>Meeting Location</strong></th>
<th><strong>Duration</strong></th>
<th><strong>Difficulty</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Science at Sugarlands:</strong></td>
<td>Sugarlands Visitor Center</td>
<td>2 hours</td>
<td>Easy</td>
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<tr>
<td><strong>Return of the Elk:</strong></td>
<td>Cataloochee Valley, Rough Fork Trailhead</td>
<td>1.5 hours</td>
<td>Moderate</td>
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<tr>
<td><strong>Back Porch Old-Time Music Jam:</strong></td>
<td>Oconaluftee Visitor Center Porch</td>
<td>2 hours</td>
<td>Easy</td>
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<tr>
<td><strong>Welcome Home!</strong></td>
<td>Oconaluftee Visitor Center Porch</td>
<td>45 minutes</td>
<td>Easy</td>
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## Programs and Activities in Great Smoky Mountains National Park—April 1 – May 6, 2017 Only

<table>
<thead>
<tr>
<th>ACCESSIBLE</th>
<th>MONDAY</th>
<th>TUESDAY</th>
<th>WEDNESDAY</th>
<th>THURSDAY</th>
<th>FRIDAY</th>
<th>SATURDAY</th>
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<td>1:00 P.M. April 16, May 7, &amp; May 21</td>
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<td>5:30 P.M. April 7, 21 &amp; May 12, 26</td>
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</tr>
</tbody>
</table>
if you love the smokies...

help protect this place for ourselves and future generations

become a

member

Since 1953, Great Smoky Mountains Association has supported the educational, scientific, and historical efforts of the National Park Service through cash donations and in-kind services. In 2017 alone, the association plans to provide more than $1.3 million in assistance that includes saving hemlock trees, living history demonstrations, environmental education programs, salaries for wildlife personnel, and historic preservation.

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 semi-annual, full-color magazine Smokies Life
• Digital access to the award-winning quarterly park newspaper, Smokies Guide, and the association’s newsletter, The Bearpaw
• A 15-20% discount on books, music, gifts, and other products sold at park visitor centers and at our web store
• Special GSMA “Hiking 101” outings to Twentymile Loop, Porters Creek, Gregory Bald, Boogerman Trail, Charlie’s Bunion, cemeteries, and more. All hikes are led by knowledgeable staff who love to share the park with others. Groups are limited to 20 people. Also this year, ask us about “Gear Fest” programs and special gear discounts.

Join today using the coupon to the right or visit www.smokiesinformation.org, or call us at 1-888-898-9102 x349. Memberships start at just $35. per year.

field school

An exciting variety of adventures await adults who long to get out and explore the park accompanied by expert guides. Programs are offered by the Smoky Mountain Field School and include Mt. Le Conte overnights, wildlife workshops, edible plants, wildflower photography, animal tracking, bird watching, salamanders, mountain cooking, and more. One-day programs start at as little as $79. Contact: (865) 974-0150 or smfs.utk.edu

gsmi at tremont

Great Smoky Mountains Institute at Tremont provides residential environmental education programs in Great Smoky Mountains National Park. Up to 5,000 students and adults annually attend workshops and school programs at the Institute. Tremont’s adult workshops include birding, backpacking, environmental education, naturalist weekends, and photography. Contact (865) 448-6709 or www.gsmi.org

summer camps

Great Smoky Mountains Institute at Tremont offers a variety of summer youth camps in the national park. Camps last from 6-11 days and cost from $589. Fees include meals, lodging, and most equipment. This year’s offerings include: Discovery Camp (ages 9-12), Wilderness Adventure Trek, Girls in Science (ages 12-15), and Teen High Adventure (ages 13-17). Contact: (865) 448-6709, or www.gsmi.org

SIGN ME UP!

Name(s)* ____________________________
Address ____________________________
Email (for Camp Report) ____________________________
Telephone # ____________________________

Please include your check with this form. Mail to:
GSMA, P.O. Box 130, Gatlinburg, TN 37738

support the

friends

Friends of Great Smoky Mountains National Park is a nonprofit organization that assists the National Park Service by raising funds and public awareness and providing volunteers for park projects. Since 1993, Friends has raised over $50 million for park projects and programs. These donations help:

• protect elk, bear, brook trout, and other wildlife
• improve trails, campsites, and backcountry shelters
• support educational programs for school children
• improve visitor facilities
• fund special educational services like the park movie
• preserve log cabins and other historic structures

Your donation can help make these projects a reality. Put a few coins or a few dollars in one of the donation boxes located at visitor centers, roadsides, and other locations around the park. Buy the Smokies license plate for your car (available in Tennessee and North Carolina). However you choose to give, your donation will really help protect the Great Smoky Mountains for many years to come!

Friends of the Smokies
P.O. Box 1660
Kodak, TN 37764
(865) 932-4794
1-800-845-5665
www.friendsofthesmokies.org
If you have ever seen the sunrise in Cades Cove, you know that dawn’s light illuminates an extraordinary place. As the fog rises from the stream valleys and the morning light touches the mountaintops, a few fortunate visitors behold a scene that is unusually rich in both nature and cultural history.

Black bear, wild turkey, and white-tailed deer browse among early 19th century log homes and barns. Flocks of colorful songbirds flit from historic fences to rare wetlands brimming with river cane and wildflowers. No other site in our entire national park system can boast such a rich and well-balanced combination of native fauna, flora, and human history.

Maintaining this balance, however, requires some effort. Especially while accommodating about two million visitors a year.

Without active management such as prescribed fires and field mowing, many of the open areas of the cove would revert to a forest thicket. That lack of openness would distort the Cove’s historic landscape of small farms and misinterpret the historical significance to visitors.

Consequently, most of Cades Cove is on a three-year rotation of prescribed burns conducted by National Park Service crews, and regular field mowing carefully scheduled and conducted to minimize harm to native wildlife.

To encourage the proliferation of native plants and the wildlife that depend on them, park resource management crews cultivate grasses and wildflowers in small plots within Cades Cove. They then harvest the seeds from these “increase fields” and use them to transform unproductive areas of non-native fescue grass into lush, prairie-like meadows. The quick success of this effort has been proven by the return of birds that prefer open grassland habitats like northern bobwhite quail, Henslow’s sparrow, and short-eared owl. Burning and mowing also enhance wildlife viewing opportunities for motorists, bicyclists, and walkers using the 11-mile Cades Cove Loop Road.

The historic buildings that are preserved in the Cove are there to help visitors imagine what life was like on a small farm in the mountains when much of the food you ate and the clothes you wore came from your own land and hands. The preserved structures include three churches, a working gristmill, springhouses, log and frame homes, and barns. Without the persistent efforts of the park’s highly skilled historic preservation crew, these artifacts would rapidly succumb to the weather and decay. Like the maintenance required to keep up your own home, the to-do list for the historic structures of Cades Cove is a long one and includes things like roof repairs, patching a rotting mill race, replacing broken windows, and shoring up sagging foundations.

Clockwise from top left. Members of the park’s elite historic preservation crew use hand tools and traditional methods to maintain and restore historic buildings like the Elijah Oliver place in Cades Cove. Resource management crews plant native meadow grasses in the open fields. White-tailed deer at the Tipton house. Repointing a chimney. Clearing fields with fire maintains the area’s historic integrity. Sow and cub.
**visitor information**

**General park information:**
(865) 436-1200  
www.nps.gov/grsm

**Backcountry information:**
(865) 436-1297  
www.smokiespermits.nps.gov

**To order maps & guides:**  
(865) 436-7318 x226  
www.smokiesinformation.org

**Emergencies**
For emergencies that occur in the park, call 9-1-1 or one of the numbers below:
- Park Headquarters (865) 436-9171
- Cherokee Police (828) 497-4131
- Gatlinburg Police (865) 436-5181
- Le Conte/Sevier County (865) 446-7000, Middle Creek Rd., Sevierville, TN.
- Blount Memorial (865) 983-7211, U.S. 321, Maryville, TN.
- Haywood County (828) 456-7311, Waynesville, NC.
- Swain County (828) 488-2155, Bryson City, NC.

**Hospitals**
- Le Conte/Sevier County (865) 446-7000, Middle Creek Rd., Sevierville, TN.
- Blount Memorial (865) 983-7211, U.S. 321, Maryville, TN.
- Haywood County (828) 456-7311, Waynesville, NC.
- Swain County (828) 488-2155, Bryson City, NC.

**Regulations**
Picking or digging plants is prohibited in the park.  
Persons feeding wildlife are subject to a $5,000 fine.  
Pets are not permitted on most park trails. Only the Gatlinburg and Oconaluftee River trails allow dogs on a leash.

**Accessibility**
Restrooms at all park visitor centers (Cades Cove, Clingmans Dome, Oconaluftee, and Sugarlands) are fully accessible. The Sugarlands Valley all-access nature trail is located on Newfound Gap Road just south of Sugarlands Visitor Center.

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**Great Smoky Mountains National Park and Vicinity**

- Visitor Center
- Lookout Tower
- Ranger Station
- Horse Stables
- Picnic Area
- Camping
- Nature Trail
- Paved Rd.
- Unpaved Rd.

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