

STATE
OF THE
PARKS®



June 2010

KING'S MOUNTAIN NATIONAL MILITARY PARK

A Resource Assessment



National Parks Conservation Association®
Protecting Our National Parks for Future Generations®

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Center for State of the Parks®

More than a century ago, Congress established Yellowstone as the world's first national park. That single act was the beginning of a remarkable and ongoing effort to protect this nation's natural, historical, and cultural heritage.

Today, Americans are learning that national park designation alone cannot provide full resource protection. Many parks are compromised by development of adjacent lands, air and water pollution, invasive plants and animals, and rapid increases in motorized recreation. Park officials often lack adequate information on the status of and trends in conditions of critical resources.

The National Parks Conservation Association initiated the State of the Parks program in 2000 to assess the condition of natural and cultural resources in the parks, and determine how well equipped the National Park Service is to protect the parks—its stewardship capacity. The goal is to provide information that will help policymakers, the public, and the National Park Service improve conditions in national parks, celebrate successes as models for other parks, and ensure a lasting legacy for future generations.

For more information about the methodology and research used in preparing this report and to learn more about the Center for State of the Parks, visit www.npca.org/stateoftheparks or contact: NPCA, Center for State of the Parks, P.O. Box 737, Fort Collins, CO 80522; phone: 970.493.2545; email: stateoftheparks@npca.org.

Since 1919, the National Parks Conservation Association has been the leading voice of the American people in protecting and enhancing our National Park System. NPCA, its members, and partners work together to protect the park system and preserve our nation's natural, historical, and cultural heritage for generations to come.

- * More than 325,000 members
- * Twenty-three regional and field offices
- * More than 120,000 activists

A special note of appreciation goes to those whose generous grants and donations made this report possible: G.D.S. Legacy Foundation, Ben and Ruth Hammett, Alec Rhodes, Lee and Marty Talbot, Ray Bingham, and anonymous donors.

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Cover photo: Detail of the United States Monument, courtesy of Kat Byerly.



INTRODUCTION



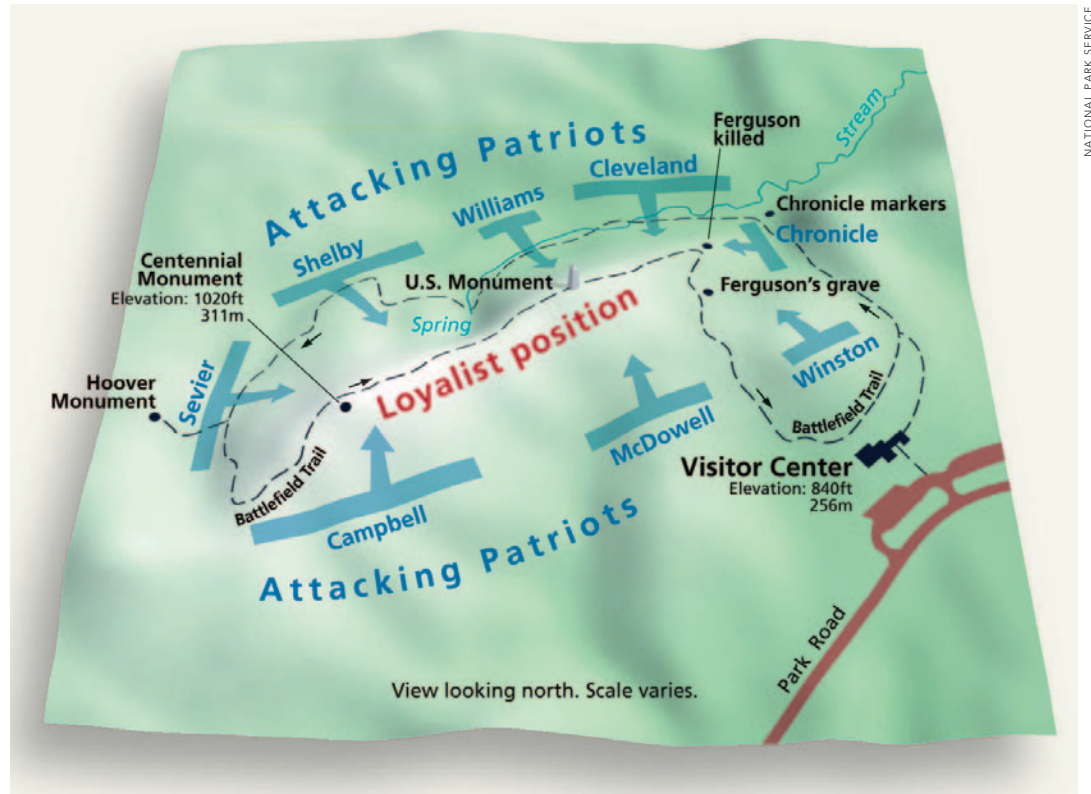
KAT BYERLY

The Battle of Kings Mountain, which took place on October 7, 1780, is often referred to as the turning point of the American Revolution. Victory at this battle in the colony of South Carolina raised Patriot morale and inspired the Americans to continue the struggle against the British, even after previously suffering disheartening defeats at Charleston in May 1780 and Camden in August 1780. Following these British victories in Charleston and Camden,

British Major Patrick Ferguson was sent to rally the men of the Carolina backcountry to the Loyalist cause. He attempted to use aggression and fear to acquire support and quell the growing unrest of the largely neutral Carolinians. His threats caught the attention of several North Carolina and Virginia militias and angered many militiamen, who mustered along the Watauga River in Tennessee on September 25, 1780, and began a grueling

Patriot forces approached Kings Mountain on an old Cherokee trail, now called Colonial Road. This is the only historic structure in the park remaining from the time of the battle.

This map shows troop movements during the Battle of Kings Mountain, as well as the location of contemporary park features.

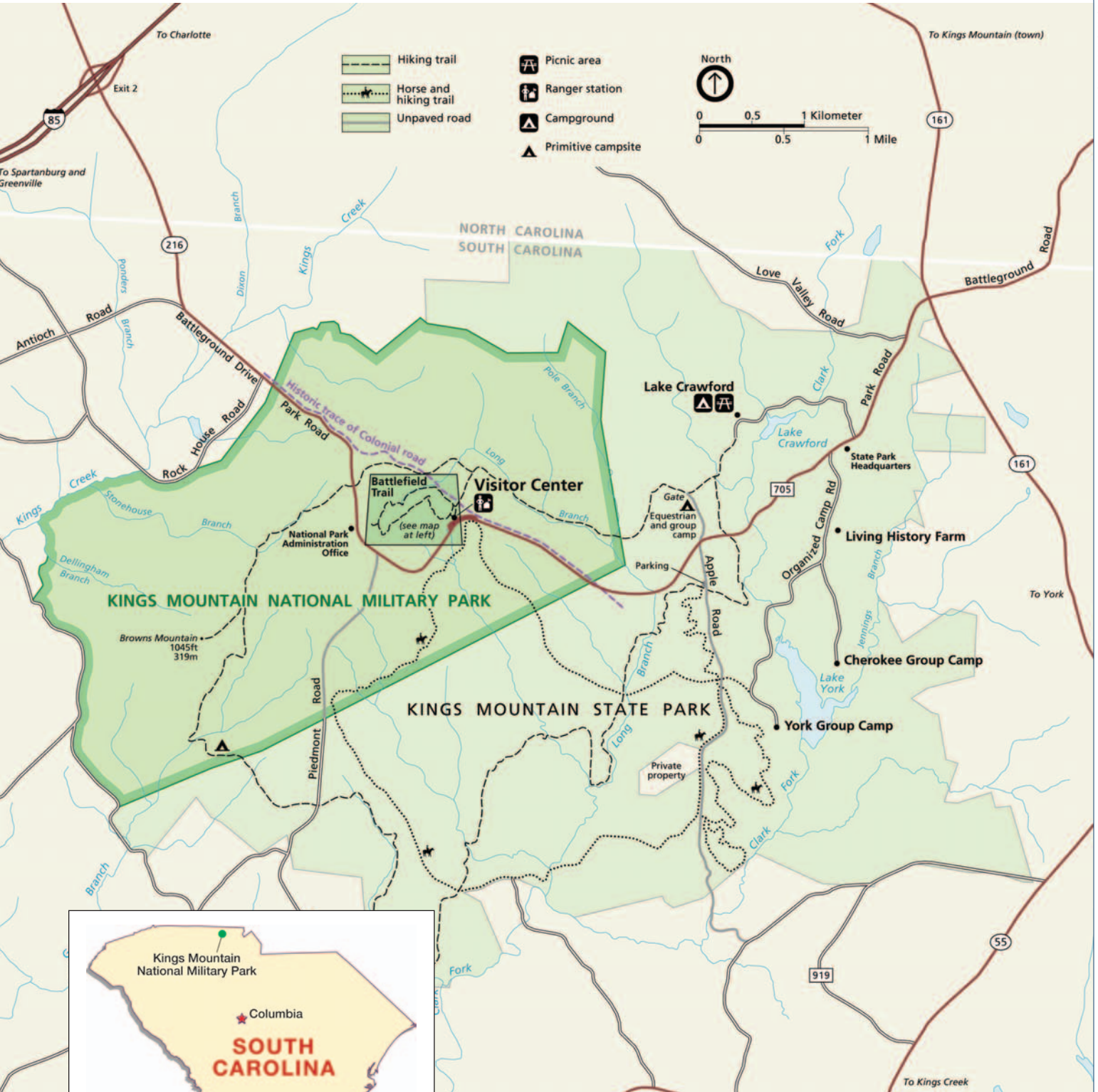


march across the Appalachian Mountains in pursuit of Ferguson and his Loyalist troops. Over the course of two weeks they covered more than 200 miles. These militiamen became known as the Overmountain Men. They were led by Colonels Isaac Shelby, John Sevier, Charles McDowell, William Campbell, Benjamin Cleveland, and James Williams and Majors Joseph Winston and William Chronicle.

The opponents met in South Carolina at Kings Mountain, a 60-foot-high ridge at the southern end of the Kings Mountain Range. Ferguson had chosen to rest his troops on top of the ridge, allowing the pursuing Patriots to easily take aim at the Loyalist soldiers' silhouettes. The Patriots approached the ridge on an old Cherokee trail that is now called Colonial Road. Using the cover of the hardwood trees that grew around the ridge, the Patriot forces surrounded Ferguson's troops and quickly ascended the hill. The battle lasted only an hour. Major Ferguson, the only non-American who fought at Kings Mountain, was shot from

his horse while attempting to retreat, and the Loyalists surrendered soon after that. At the battle's end, 225 Loyalists were dead, while only 26 Patriots, including Major William Chronicle, had been killed. Major Ferguson (promoted posthumously to Lieutenant Colonel) and Major Chronicle were both buried on the battlegrounds. Other soldiers were also buried on the battlegrounds, but the locations of those graves are unknown.

This American victory had devastating effects on the British. General Charles Cornwallis, the British commander in charge of the Southern Campaign of the war, was forced to retreat and hold a defensive position in Winnsboro, South Carolina, to await reinforcements. This allowed Patriot forces to reorganize and develop a new offensive in the south, leading to a decisive win at the Battle of Cowpens in January 1781, and, eventually, the final triumph of General George Washington's forces over Cornwallis at Yorktown in October of that year.



MATT KANIA

BATTLE COMMEMORATION AND PARK ESTABLISHMENT

After the battle, the battlefield itself, owned by the State of South Carolina, lay largely dormant, except perhaps for some grazing. The surrounding countryside was used as pasture and agricultural land. The battlefield was under the ownership of the State of South Carolina until 1797, when Governor Charles Pinckney granted the land to local resident John Alexander, who then sold it to Kings Mountain veteran Colonel Frederick Hambright that same year. The first commemorative celebration for the Battle of Kings Mountain was held in 1815, privately funded by Dr. William McLean, a senator from South Carolina. He also paid for the Chronicle Marker, which was placed at the (supposed) burial site of Chronicle and three other Patriot soldiers who died during the battle. This is the second-oldest battlefield marker in the United States.

The battlefield and surrounding acreage passed through several more hands before

being acquired by the Kings Mountain Centennial Association (KMCA), which was created in 1880 by delegates from South Carolina, North Carolina, and Georgia to commemorate the 100th anniversary of the battle. This group raised funds from both private sources and state governments for a 29-foot-high Centennial Monument that was unveiled at the celebration and still stands today. The KMCA disbanded shortly after the celebration, and the land was donated to the Kings Mountain Chapter of the Daughters of the American Revolution (DAR) in York, South Carolina.

In 1906, the DAR secured \$30,000 from the U.S. Congress to erect another monument, with the stipulation that after the monument was placed, responsibility for the site would transfer to the Kings Mountain Battle Ground Association, of which the DAR was the primary member. The funds appropriated from Congress went toward the construction of an 83-foot obelisk known as the United States

These markers, the one on the left placed in 1815 and the one on the right in 1915, denote the supposed burial site of Major William Chronicle. More archaeological investigations are needed to determine if Chronicle was actually buried in this location.



Monument. It is a quintessential example of early 20th-century war commemoration.

A highlight in recognition for the battle and its importance occurred in 1930 when President Herbert Hoover attended the battle's sesquicentennial celebration. The president emphasized the importance of the battle in both American and British history and the need to preserve the historic site. Ironically, the site was cleared of trees to accommodate the 74,000 people who gathered to hear the president's speech, which greatly altered its historical appearance. In a show of friendship toward Great Britain, he dedicated a new stone marker at the gravesite of Major Ferguson (an older marker and cairn likely date to sometime before 1909), and Ronald Campbell from the British Embassy delivered the acceptance speech. It was at this time that President Hoover announced his intention to create a park to preserve the history of the battle.

Congress established the 40-acre Kings Mountain National Military Park on March 3, 1931. The park was administered by the secretary of war, who was authorized to acquire any necessary lands through donations or purchase in order to ensure the preservation of the entire battlefield site. Control of the park was transferred to the National Park Service in 1933. Between 1936 and 1940, Congress authorized the purchase of up to 4,000 additional acres to augment the park and further protect its natural and cultural resources.

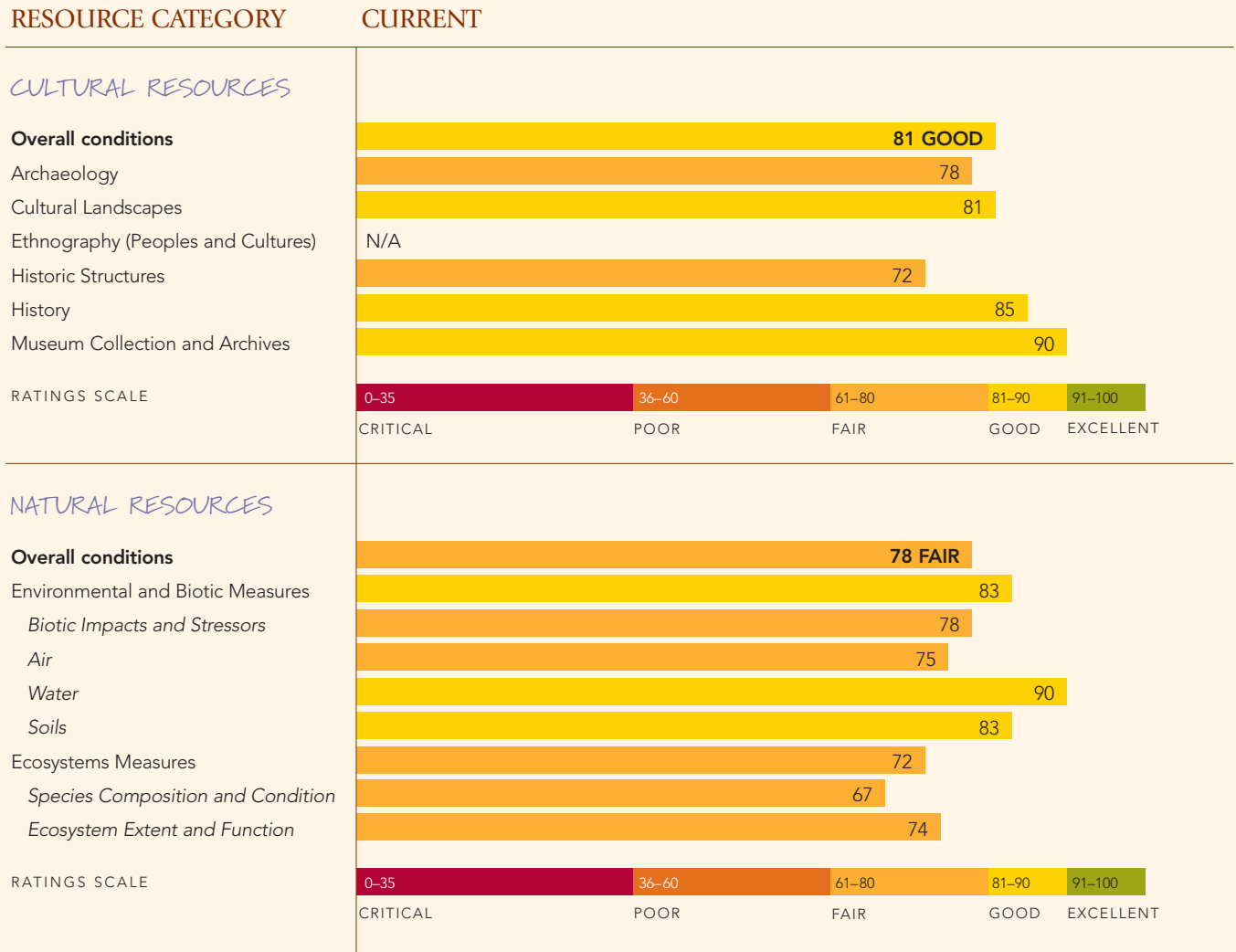
As part of the New Deal during the Great Depression, the Civilian Conservation Corps built several buildings and roads with money allocated to the park. In addition, a 6,000-acre recreation demonstration area was created adjacent to Kings Mountain National Military Park in order to provide ample recreation opportunities for visitors and aid in the preservation of the historic nature of the military park. This recreation demonstration area became Kings Mountain State Park in 1941.

KINGS MOUNTAIN NATIONAL MILITARY PARK AT A GLANCE

- **Cultural resources:** The park's museum collection and archives contain items such as buttons, fired and unfired shot, weaponry, clothing, and records relating to the battle. One of the highest profile items held by the park is an original Ferguson Rifle, the synthesis of a traditional 18th-century rifle and a British musket that was developed by Major Ferguson. While there is no evidence that such a weapon was used during the Battle of Kings Mountain, this extremely rare weapon exemplifies a historic development in 18th-century weaponry.
- **Natural resources:** Kings Mountain National Military Park is located in northwestern South Carolina in what is traditionally called the Piedmont, a semi-open prairie with sections of mixed hardwood forest stretching from the Atlantic Coastal Plain to the Appalachian Mountains. The park is home to a number of plant species that are considered to be "species of concern" in South Carolina due to their rarity. Examples include creeping spike rush, joe-pye weed, Georgia aster, smooth sunflower, and eastern turkeybeard.
- **Recreational activities:** Visitors to the park can learn about the Battle of Kings Mountain and the role of the Carolina backcountry in the American Revolutionary War through wayside exhibits along the shaded, 1.5-mile interpretive trail, living history demonstrations conducted by volunteers, interactive museum exhibits, and a new visitor center film. In addition, there are miles of hiking and horseback riding trails that pass through the adjacent Kings Mountain State Park. The park's hiking trail system is also now linked to Crowders Mountain State Park in North Carolina via the Ridgeline Trail.

Kings Mountain National Military Park	
Park location	Northwestern South Carolina, near Blacksburg
Park size (acres)	3,945
Park establishment	1931
Recreational visits (2009)	277,576

Note: When interpreting the scores for resource conditions, recognize that critical information upon which the ratings are based is not always available. This limits data interpretation to some extent. For Kings Mountain National Military Park, 90 percent of the cultural resources information was available, and 61 percent of the natural resources information was available. Ethnography was not rated because the park does not have an active ethnography program and has not completed baseline research such as an ethnographic overview and assessment.



The findings in this report do not necessarily reflect past or current park management. Many factors that affect resource conditions are a result of both human and natural influences over long periods of time, in many cases before a park was established. In addition, some park resources (e.g., air quality and water quality) can be affected by factors that are outside the park and beyond the Park Service's control. The intent of the Center for State of the Parks is not to evaluate Park Service staff performance, but to document the present status of park resources and determine which actions can be taken to protect them into the future.



Living history programs presented by volunteers are favorite ways for visitors to gain a better understanding of park history.

RATINGS

In recognition of the important historical and natural resources protected within Kings Mountain National Military Park, the National Parks Conservation Association's Center for State of the Parks conducted an assessment to determine current conditions of the park's resources. According to this assessment, the park's known **cultural resources** rated a "good" overall score of 81 out of a possible 100. The scores for cultural resources are based on the results of indicator questions that reflect the National Park Service's own *Cultural Resource Management Guideline* and other policies related to cultural and historical resources (see "Appendix" on page 36 for more information on the assessment methodology).

Challenges facing cultural resource managers include the lack of baseline archaeological research and historic structure documentation, the lack of inventories for two of the park's cultural landscapes, the lack of

adequate storage space to protect and preserve museum and archival collections, and the need for additional staff, such as a museum technician and possibly a historian to be shared with other nearby Revolutionary War park units. But perhaps the greatest need is for updated plans to guide park management strategies and resource interpretation. The park is in the process of developing a new general management plan, which is scheduled to be completed in early 2011. Also in the works is a long-range interpretive plan, which should be completed by September 2011, depending on funding. These plans will address topics such as management and preservation of the Howser House (a 19th-century historic structure), management of invasive species, restoration of the cultural landscape, and development of prospective interpretive themes.

Despite the above challenges, the park's staff is doing a good job managing the park with the resources available. For example, Kings

Ranger Justin Skewes teaches children about the park's fire management program.



NATIONAL PARK SERVICE

Mountain National Military Park received the third-highest Museum Collection and Archives score (90 out of 100) of any park assessed by the Center for State of the Parks to date (Fort Donelson and Stones River National Battlefields scored slightly higher at 93 and 91, respectively). Partnering with the University of South Carolina in 1999 to conduct a massive archival assessment contributed to this high score. The project included organizing and preserving the entire archive and cataloging it. In addition, the park renovated its museum in 2005 in order to better interpret and preserve artifacts.

Current overall conditions of the known **natural resources** at Kings Mountain National Military Park rated a “fair” score of 78 out of a possible 100. Ratings were assigned through an evaluation of park research and monitoring data using NPCA’s Center for State of the Parks comprehensive assessment methodology.

Challenges facing the Park Service include

restoring the landscape to its Revolutionary War-era appearance and battling invasive non-native species that are encroaching on native plants. The Park Service is making headway in both arenas. Prescribed burns help restore forests to their 18th-century species composition, and the park’s staff has been eliminating heavy concentrations of various invasive non-native species since the 1990s and is now focusing on maintenance treatments and elimination of other invasive plants, especially in critical habitats. Additionally, park staff are attempting to create a geographic information systems (GIS) database of all known populations of invasive plants.

See the “Key Findings” on pages 10 and 11 for more information on resource conditions and challenges.

RESOURCE MANAGEMENT HIGHLIGHTS

- **Prescribed burns restore natural and historical landscape.** In 2000, the park implemented a prescribed burn program to alleviate wildfire pressures caused by increased vegetation density in the forest and understory and to re-create the historic views, lines of sight, and general landscape that made the Patriot victory possible. The burns also improve park habitats for birds. The landscape at the time of the battle was largely the area's natural setting of large hardwood trees and Piedmont prairie. Assistance with burning operations comes from a wildland fire module based out of Great Smoky Mountains National Park. A fire ecologist and fire effects crew, also based out of that park, provide monitoring data that ensure the health and safety of resources. Close cooperation among all disciplines is necessary to ensure both natural and cultural resources objectives are met. For example, before each prescribed burn, surveys are conducted to assure that artificial fire breaks (i.e., breaks in vegetation to limit the extent or control the direction of prescribed burns) do not destroy archaeological sites.
- **Education program reaches teachers and their students.** The park participates in the Teacher-Ranger-Teacher program, which gives teachers an opportunity to work in a park setting and learn about cultural and natural resources. The information they gain is taken back to their classrooms.
- **Archaeological surveys shed new light on battle events.** The park's most recent battlefield archaeological surveys, conducted in 1999 and 2000 using metal detectors and remote sensing, uncovered five new clusters of artifacts, mainly fired and unfired shot. The locations of some of these sites confirmed what historians, archaeologists, and park staff already believed about troop movements and events during the battle, while the locations of other sites indicated that the outlines of the battlefield were much larger than park staff originally thought and that troop positions may have been different than what has been previously recorded. Additional information is needed to contribute to the understanding of events, including the location of the hitching ground where Patriot forces tied their horses prior to the battle and the location of mass burials.
- **Historic house used to teach visitors about 19th-century life in the Carolina backcountry.** Though built in 1803, 23 years after the Battle of Kings Mountain, the historic Howser House is used to educate visitors about backcountry living. The Park Service completely restored the exterior of the house in 1977 and now uses it periodically to host living history programs. Staff have requested Park Service funds to complete a historic furnishings plan, which would inform work to be done on the interior of the structure, such as ensuring the colors of moldings are historically accurate.
- **Museum renovations allow park to display valuable artifacts.** In 2005, the park renovated its museum and installed updated security, fire-suppression, and climate-control systems to better protect items on display. These improvements have made it possible for the park to showcase its Ferguson Rifle. The weapon was stolen from the park in 1964 and recovered in 1992, but security concerns prevented the park from displaying it until the 2005 renovations were completed.

KEY FINDINGS

- **Archaeological overview and assessment would expand knowledge base.** This work could locate other potentially significant historic sites as well as prehistoric sites that could inform park staff about possible American Indian use of the area. Other archaeological work the park would like to complete includes surveys of the Colonial Road. Both armies used this road to reach Kings Mountain prior to the battle, and it might be possible to identify the location of the hitching ground used by the Patriots. Continued surveys are also needed to locate the mass burial site of Loyalist soldiers as well as the graves of Major Chronicle and those reburied with him during the commemoration ceremony in 1815. To date, there is no evidence that Chronicle was buried at the exact location where the burial marker was placed in 1815.
- **Nineteenth-century historic structures need further documentation.** The Howser House and Homestead, examples of early 19th-century Pennsylvanian-German architecture not commonly found in the Carolinas, could be better preserved and interpreted with the completion of additional studies. These might include a cultural landscape report, an updated historic structure report, a historic furnishings report, or other studies deemed appropriate by park staff. In fact, park staff have already requested Park Service funding for a cultural landscape report and a historic furnishings report on the Howser House, but no funds have yet been received.
- **Further research could explore possible connections between park resources and American Indian groups.** An ethnographic overview and assessment could determine to what extent the area surrounding Kings Mountain was used by or was important to American Indians prior to the Revolutionary War battle, and it could identify any potential traditionally associated people. The Colonial Road is thought to follow the route of an older Cherokee trail, and research may be able to clarify and expand on this story.
- **Museum and archival collections would benefit from the addition of a museum technician.** Currently, one of the park's rangers cares for museum and archival collections in addition to shouldering full-time interpretation duties. The park has requested operational funds to hire a museum technician to help catalog and manage the collections.
- **Additional work needed to address some remaining museum deficiencies.** Although the park does a good job managing its museum collections, additional curatorial and storage space and updated security measures are needed for collection items not stored in the recently renovated museum. According to the park's collection storage plan, at least 500 additional square feet of storage space are needed and Park Service project funds have been requested to address this need. Another potential solution would be to construct a facility to store collections from Kings Mountain and nearby parks pertaining to the American Revolutionary War and related themes. However, no plans are yet under way for such a facility.

- **Park's forests have changed since Revolutionary War times.** Kings Mountain is primarily forested, but clearing of trees in 1930, fire suppression, pests, and disease outbreaks have modified the forest community so that today it is only somewhat representative of the forest present during the Battle of Kings Mountain. Fire suppression has led to the dominance of fire-intolerant species and a decline in shade-intolerant pine species. Some pine species have succumbed to pine beetle outbreaks. Furthermore, the formerly dominant canopy tree in this region, the American chestnut, has been essentially extirpated by the chestnut blight. Some species such as maple, sweet gum, and sourwood are now present in higher numbers than they were at the time of the battle.
- **Invasive non-native plant species threaten native plants.** More than 10 percent of the park's 508 vascular plant species are not native to the area. The park has identified 11 of these non-native species as being aggressive and capable of invading areas. Forests, open areas, and riparian areas have all been affected by invasive non-native species. Several invasive non-native plant species are common in the power line right-of-way in the park, one of the few remaining open habitats in the park that supports species of concern such as the Georgia aster. Invasive non-native species are also the main threat to the riparian systems within the park. Already, these areas have been invaded by non-native Nepalese browntop and Chinese privet.

- **Park waters appear healthy.** Many of the surface waters flowing through Kings Mountain National Military Park originate within the park, which largely protects them from pollution sources. A preliminary survey of benthic invertebrates, small organisms that live at the bottom of water bodies and can be indicators of ecological health, confirms that water resources have a high level of integrity. The park's wetlands have been inventoried, but further study is necessary to determine the role that these areas play in supporting wildlife populations and maintaining natural hydrologic processes.
- **Park's air quality could be at risk.** No direct air-quality monitoring occurs inside the park, but the park's location between two major metropolitan areas (Charlotte, North Carolina, and Greenville, South Carolina) may make it vulnerable to declining air conditions. Nearby power production also might affect air quality at Kings Mountain National Military Park. Regional ozone measurements indicate levels of this pollutant could be high enough at Kings Mountain to damage plant foliage. Monitoring is needed to determine if park plants are being affected by ozone; a survey for foliar damage is scheduled for 2013.

Nepalese browntop is a non-native plant species that has invaded riparian areas within the park and poses a severe threat to native ecosystems. Park staff work to eradicate non-native species where possible, and they have requested Park Service funds to study the role of prescribed burns in these control efforts.



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THE KINGS MOUNTAIN NATIONAL MILITARY PARK ASSESSMENT



The Centennial Monument was erected in 1880 to commemorate the 100th anniversary of the Battle of Kings Mountain.

CULTURAL RESOURCES—LANDSCAPE RESTORATION IS A TOP PRIORITY

Kings Mountain National Military Park scored an overall 81 out of 100 for the condition of its cultural resources, which include archaeology, cultural landscapes, history, historic structures, and the museum collection and archives. This score indicates that the resources are in “good” condition.

Staff at Kings Mountain National Military Park are making great strides to protect the park’s cultural resources. Significant recent projects, such as an archival assessment and remote sensing archaeological surveys, have increased the ability of park staff to manage and preserve important cultural landscapes, historic structures, and museum and archival collections. In addition, because of the significance of the battle in the American

Revolutionary War, much of the history of the battle and those who fought in it has been thoroughly researched and documented. However, gaps in research and the need for preservation projects do exist. The park would greatly benefit from baseline archaeological research and historic structure documentation, inventories of two of the cultural landscapes in the park, additional storage space and staff to protect and preserve museum and archival collections, and continued support to restore the cultural landscape, historic viewsheds, and lines of sight present during the battle.

HISTORY—MUCH RESEARCH HAS BEEN DONE; ADDITIONAL WORK WOULD SUPPLEMENT KNOWLEDGE BASE

There is an extensive body of research that provides a thorough record of the Battle of Kings Mountain, including troop positions and movements, battle background, results, and detailed descriptions of the landscape that helped make a Patriot victory possible, as well as explanations of the battle's significance in American history. Recently, historians Bobby Moss and Michael Scoggins coauthored two accounts of African-American participation on both sides of the battle at Kings Mountain, as well as various other battles in the Southern Campaign of the Revolutionary War. These books are titled *African-American Patriots in the Southern Campaign of the American Revolution* and *African-American Loyalists in the Southern Campaign of the American Revolution*. Park staff use these and other available research materials in their efforts to interpret and preserve park resources. For example, Lyman C. Draper's *Kings Mountain and Its Heroes* (first published in 1881), which discusses in great detail the Battle of Kings Mountain and its background and aftermath, is the primary resource for the park's cultural landscape management and restoration plans. Historic resource studies, which provide historical overviews of a park and evaluations of its cultural resources, were completed at Kings

Mountain in 1974 and 1995. These also inform resource management at the park.

Even with the broad body of research available to park staff, there are still several gaps in research that would aid in preservation and interpretation of the park's resources. Notably, the Howser and Morris Homesteads—the former built in 1803 and the latter built around 1902—cannot be fully used as resources, nor can their significances be determined, without cultural landscape reports to guide management. In addition, the park's administrative history, written in 1985, is out-of-date; updating this history through the present would allow park staff to better understand what resource work has already been done and to focus on contemporary issues, notably the restoration work taking place on the battlefield cultural landscape. In addition, the park has requested Park Service funding to study the oral histories of Civilian Conservation Corps participants,

Wayside exhibits along the park's 1.5-mile Battlefield Trail teach visitors about the historic battle that took place there 230 years ago.



BRUCE JOHNSON

whose work during the 1930s added greatly to the ability of the park and its managers to interpret the battle. These studies would enhance the ability of the park to interpret the history of the battle's commemoration.

The park does not employ a historian, so necessary historical research is conducted through the Park Service's Southeast Regional Office or in conjunction with outside historians as funds allow. Having a historian available to the park on a more regular basis would be helpful to maintain public interest in the battle, the battlefield, and the historic structures located in the park. A historian would conduct ongoing research, providing new information for interpretation and public programs, and be able to answer visitors' questions in greater detail and on a wider array of historical topics than can be provided by interpretive signage or scripted programs. One way to provide this type of expertise would be to hire a historian to serve Kings Mountain and nearby parks with similar interpretive themes (e.g., Cowpens National Battlefield).

CULTURAL LANDSCAPES— CONTROLLED BURNS HELP RESTORE THE HISTORICAL LANDSCAPE

Cultural landscapes are places where people have interacted with their surroundings, shaping them to meet their needs. They are also places where the natural surroundings have influenced people's lives and actions. There are three identified cultural landscapes at Kings Mountain—the battlefield, the Howser Homestead, and the Morris Homestead. All three cultural landscapes are listed in the National Register of Historic Places as contributing features of the Kings Mountain National Historic District. The battlefield cultural landscape—the land on which the battle was fought—is the most visible and most significant cultural resource at Kings Mountain. The battlefield sits on a ridge above the surrounding countryside, which allowed a distinct advantage

to Patriot forces who were able to take aim at the silhouettes of the Loyalists perched on top. The lay of the land and the forests that cloaked the slopes of the ridge upon which Loyalist forces were camped were also key factors that contributed to the Patriots' victory in the battle.

A cultural landscape report completed in 2003 documents the three eras of significance for the battlefield—the battle events, the commemorative period, and the Park Service development period—and provides treatment and management recommendations. Included within the landscape are the battlefield ridge, the surrounding historic roads, the archaeological sites, and the historic markers and monuments erected later to commemorate the battle. Park staff consider the re-establishment of the battlefield's historical landscape—a mature, hardwood forest with interspersed Piedmont prairie—as a top priority. The historical landscape was basically destroyed in 1930 when much of the area was cleared of trees to accommodate the 74,000 people who attended President Herbert Hoover's speech at the sesquicentennial battle commemoration. Subsequent management strategies allowed the land to lay fallow, and now much of the park is covered with the thick undergrowth that is common in a successional landscape.

Cultural and natural resource managers work together to restore the natural setting that also represents the historic landscape present during the battle. Prescribed burns are among the primary tools resource managers are employing to restore both the historic setting and views and the native plants and natural habitat that once supported a diverse community of bird species. These burns also reduce the buildup of vegetation that could fuel wildfires. The park began implementing prescribed burns in 2000. Recent activities include two prescribed burns that were conducted in March 2008, covering a total of 429 acres on and around Battlefield Ridge. These controlled burns resulted in a more open understory similar to that which existed in the area

during the late 18th century. Later that year, the treated landscape helped protect the park's other cultural resources by preventing the spread of a fire that originated on a neighboring property. The park conducted four prescribed burns in 2009 and has completed four in 2010 so far. Continued use of prescribed burns is key to restoring the battlefield and removing excessive vegetation. If funds for these activities decline, the park will be forced to conduct fewer or smaller burns each year.

The park's other identified landscapes are the Howser Homestead and the Morris Homestead. The former is a tract of land that was owned by stonemason Henry Howser, who built the main home on the property in 1803. The stone house and its associated buildings are unusual examples of Pennsylvanian-German architecture in the Carolina backcountry. The Morris Homestead was built around 1902. Neither landscape has been comprehensively documented in a cultural landscape report and the structures have no up-to-date historic structure reports, both of which would provide preservation and treatment options and management strategies for these sites. At this time, there is little guidance for their preservation or maintenance.

Through the Park Service's Southeast Regional Office, the park has access to a historical architect who advises the park to ensure the historic integrity of the structures on the cultural landscape is maintained. The historical architect visits the park as needed and was last at Kings Mountain in 2001, when the roof on the Howser House needed to be restored.

Urban encroachment along the park's north and west borders threatens to destroy historic viewsheds. The views from the top of the ridge are important resources that the park's staff actively manage. They are critical to the visitor's understanding of how the surrounding forest and landscape helped the Patriots surround and attack Ferguson's troops, who thought they had the advantage because of their position on higher ground. For more information on adjacent land concerns, see "Historical and Contemporary Land Use" on page 24.



The park has been conducting prescribed burns since 2000 to help restore both the historical and the natural landscape.

HISTORIC STRUCTURES—FUNDS NEEDED FOR REPORTS ON HISTORIC STRUCTURES AND MAINTENANCE PROJECTS

There are 29 historic structures listed on the National Park Service's List of Classified Structures for Kings Mountain National Military Park. This database includes all the prehistoric and historic structures managed as cultural resources in each park unit. Most of the 29 structures relate to the battle, its commemoration, or early park development. The only historic structure in the park remaining from the time of the battle is the Colonial Road, which was the road the armies used to reach Kings Mountain prior to the battle.

Historic structures commemorating the battle and its participants include the Centennial Monument erected to commemorate the 100th anniversary of the battle and the U.S. Monument erected in 1909. Additional commemorative structures include but are not limited to markers indicating the locations where Major William Chronicle and Major

The Park Service Headquarters building at Kings Mountain was built in 1940–41 in the Colonial Revival architectural style.

Patrick Ferguson were thought to have fallen during battle; a marker commemorating President Hoover's visit to the battlefield; a marker commemorating Colonel Asbury Coward, who established the Kings Mountain Centennial Association; and markers commemorating Colonel Frederick Hambright and Lieutenant Colonel James Hawthorne, both Patriot commanders during the battle. Such structures are significant because they typify the war commemorative architecture and style of the late 19th and early 20th centuries; they are used to interpret the significance of the Battle of Kings Mountain in the commemorative period.

Additional historic structures relate to the National Park Service development of the park and Civilian Conservation Corps work in the park in the 1930s: the historic Yorkville-Shelbyville Road, redeveloped in 1938 as a fire road; the Main Park Road; stone rubble swales along the road; the superintendent's residence, now used as offices; the administration building; the parking lot at the park's headquarters; the stone headwalls along the Main Park Road; and the administration building flagstaff. The structures are prime examples of the Colonial Revival style of architecture the National Park Service used for buildings in the East because the rustic style, preferred in the West, did not blend well into the cultural landscapes of Eastern parks.

Kings Mountain's remaining historic structures are not directly related to the battle, its commemoration, or the development of the park. These include those structures within the Howser Homestead: the Howser House, the Howser Cemetery headstones, the Howser Road, and the Howser Terraces; as well as those structures that are part of the Morris Homestead: the Morris House, the Morris Shed, and the Gordon Cemetery headstones. As previously mentioned, Henry Howser constructed the Howser House in 1803, employing a unique Pennsylvanian-German style that is distinctly different from the typical Carolina backcountry



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architecture of the 19th century. The Howser House is an exceptional example of this type of architecture. In 1977 the Park Service restored the house to its appearance as recorded in 1900 in order to protect its historic significance and integrity. Park staff use the site periodically to host interpretive programs and living history demonstrations.

The Morris House was built around 1902 by the Morris family, who were tenant farmers on the Howser property. It was constructed from the chimney remains of a house that burned there in 1900. Little else is currently known about the history of the property, but according to the park's 1995 historic resource study, the architecture represents the typical postbellum Carolina style and the transition from antebellum subsistence farming to "postwar cash crop and absentee land ownership." It is the only example of such a style and transition inside Kings Mountain National Park. This historic structure is not interpreted; it is used as a residence for park staff.

Historic structure reports provide guidance for the treatment and use of historic structures. Though the park includes 29 historic structures, just one historic structure report—for the Howser House—has been completed at Kings Mountain. It was done in 1974 and is now outdated due to restoration of the house in 1977. Due to this lack of baseline research, there is no formal guidance for the preservation and interpretation of historic structures. Park staff and volunteers provide occasional tours of the Howser House and use it during periodic living history demonstrations, but there is little guidance to extend these activities, and the house remains an underutilized resource. Park staff have sought funding for a historic furnishings report with no success. Such a report would establish a framework for furnishing the Howser House as authentically as possible, which would greatly improve the park staff's ability to interpret the house. More accurate representation could also increase visitor inter-



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est in the site, which is currently low. Without a historic furnishings report, up-to-date historic structure report, or cultural landscape report, the staff at Kings Mountain cannot take full advantage of this unique historic resource.

Staff from the Park Service's Southeast Regional Office inspect historic structures about every other year, taking note of preventative and repair needs, and they conduct cyclical cleaning and maintenance of historic structures. The park's on-site maintenance staff manages day-to-day preservation of historic structures and is trained to conduct a majority of maintenance

This stone marks the gravesite of Major Patrick Ferguson (promoted posthumously to Lieutenant Colonel).

Patriot and Loyalist forces clashed at the Battle of Kings Mountain, fighting along this 60-foot-high ridge at the southern end of the Kings Mountain Range. Two large monuments, the Centennial Monument (lower left) and the United States Monument (upper right), commemorate the battle.



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projects, which often consist of repair work. In addition, several staff members have training in historic preservation, and the park's facility manager has training in historic masonry.

While Kings Mountain does not have a historical architect on staff to conduct major historic preservation projects, one from the regional office travels to the park as needed. Historic preservation specialists are also sometimes hired on a contract basis. Though the park has access to a historical architect and other historic preservation staff through the regional office, structures still suffer from more than \$2.7 million in deferred maintenance costs. These projects include re-pointing stone CCC structures, installing fire suppression systems, repairing the floor in the Morris House, and repairing the headstones in the Howser Cemetery. Each project requires a maintenance crew with different specialized skills in order to preserve the historic integrity of these sites, and funds are needed to support such experts and projects.

ARCHAEOLOGY—ARCHAEOLOGICAL OVERVIEW AND ASSESSMENT NEEDED

In addition to cultural landscapes and historic structures, Kings Mountain also includes significant archaeological sites. The park's largest, most visible, and most visited archaeological site is the battlefield. The site is 600 yards long, ranges from 60 to 120 yards wide, and marks the location of a majority of the fighting during the Battle of Kings Mountain. Park staff use archaeological surveys to help re-create the battlefield scene and interpret it for visitors. In the most recent surveys of this area in 1999 and 2000, archaeologists found five clusters of artifacts, such as fired and unfired shot, indicating that while many of the historical accounts of the battle accurately portray troop positions and movements, the fighting actually extended beyond what park staff and historians previously thought. An extensive report on these excavations was published in 2006. This new information has been incorporated into ranger-

led talks, but funds are needed to update brochures and wayside exhibits.

Twenty other archaeological sites have been located in the park, one of which is the Howser House. Including agricultural land and outbuildings, the Howser House grounds have been excavated numerous times, largely for compliance projects in the 1970s. While only 20 percent of the park has been systematically surveyed for archaeological sites, park staff adhere to compliance regulations and take all precautions to ensure that significant archaeological resources are not damaged during park projects. For example, archaeological staff from the Park Service's Southeast Archeological Center conduct surface surveys and shovel tests to determine if activities related to the park's fire management program (e.g., creation of fire breaks before prescribed burns) will affect archaeological resources. Many of the park's other archaeological sites, including homesites, stills, and dumps dating to the 19th and early 20th centuries, were discovered during these compliance activities. Several prehistoric artifacts were also found.

Despite previous surveys and ongoing compliance work, there are still large gaps in the archaeological record of Kings Mountain. For example, the graves of Major Chronicle and those men reburied with him during commemoration activities in 1815 have never been located, despite several attempts in the 1970s and again in 1999. The Colonial Road has never been systematically surveyed or studied and might contain sites such as the hitching posts used by the Patriots en route to the battle. It is also important to determine the location of a mass burial site of Loyalist soldiers. Numerous archaeological sites not related to the battle or colonial life (e.g., moonshine stills and 19th-century home sites) could also be interesting to survey and study. In addition, there is little information on the prehistoric use of the area.

An archaeological overview and assessment could help fill these gaps and locate other

potentially significant historic sites as well as prehistoric sites that could inform park staff about possible American Indian use of the area. The need for such research was formally identified in the Southeast Archeological Center's *Regionwide Archeological Survey Plan*, which was published in 1996 and outlines several future plans for archaeological investigations at Kings Mountain. Although Park Service funds for an archaeological overview and assessment for Kings Mountain were requested in 1996, the project has not yet been funded. In addition to an archaeological overview and assessment, the *Regionwide Archeological Survey Plan* calls for a comprehensive historic archaeology survey, including a survey of any possible prehistoric sites as identified by surface collections, and a total survey of archaeological sites.

To best serve archaeological sites that have already been identified, the park needs to document them. At this time, just seven sites have treatment recommendations and only nine have been located using Global Positioning System coordinates. Most sites are only known through the location of visible site features and have little documentation. Even the Howser House, which has been extensively excavated, lacks a detailed site map and good survey records.

Kings Mountain does not employ any archaeological staff; instead, the park relies on partnerships with the Park Service's Southeast Archeological Center based in Tallahassee, Florida, or the University of South Carolina at Columbia for their archaeological needs. Archaeologists from the Southeast Archeological Center have traveled to the park about once each year since the park implemented a fire-management program in 2000. Though they are readily available to complete compliance projects, none have been available to aid in interpreting the park's archaeological sites or to complete an archaeological overview and assessment.

After renovations to the visitor center and museum in 2005, park staff deemed it was safe to display its original Ferguson Rifle, which had previously been stolen and returned years later.



MUSEUM COLLECTION AND ARCHIVES—RENOVATED MUSEUM PROVIDES SECURE PLACE TO DISPLAY ARTIFACTS

Buttons, fired and unfired shot, weaponry, clothing, furnishings relating to the Howser House, prehistoric objects such as a chert point and various types of debitage (i.e., the reduction waste created during the manufacturing of stone tools), and much more comprise Kings Mountain National Military Park’s museum collection of more than 5,300 objects. The archives are even more extensive with an excess of 37,700 items, including park records and documents relating to the battle, such as an original copy of Lyman Draper’s 1881 book *Kings Mountain and Its Heroes*.

One of the highest profile museum items held by the park is an original Ferguson Rifle, the synthesis of a traditional 18th-century rifle and a British musket that was developed by Major Ferguson. The Ferguson Rifle was the first

breech-loading rifle to be used by a regular army unit; it could be reloaded much faster than the then-standard muzzle-loading weapons, and a skilled user could fire it several times in a minute. While there is no evidence that such a weapon was used during the Battle of Kings Mountain, this extremely rare weapon exemplifies a historic development in 18th-century weaponry. The story of the weapon and its place at the park is a remarkable one: In 1964, the weapon was stolen from a park display. In 1992, the rifle was recovered and returned to the park. Because of inadequate security, park staff were unwilling to display it for fear of another theft. The weapon sat in storage until 2005, when renovations to the museum and visitor center, including new climate-control, fire-suppression, and security systems, provided the necessary protection to safely display this valuable artifact.

Other historical items the park would like to acquire for its museum collection include Ferguson’s personal military whistle—used at

the battle and since lost to collectors, microfilms of Cornwallis's papers, and the original film of President Hoover's historic speech in 1930. The Tennessee State Museum holds many artifacts from the battle, though not the items just listed; the museum donated some artifacts to the park following the 2005 renovation, and park staff would like to obtain more of their battle-related items.

Through a project in 1999 with the University of South Carolina, the park's then entire archival collection held at that time was organized, properly preserved in an acid-free environment, and cataloged. Today, just 5 percent of the archives have not been cataloged. The uncataloged items were acquired after the 1999 project. The only items from the park's museum collection not yet cataloged are a number of archaeological artifacts. Each year, the park makes progress cataloging the remaining archives and artifacts.

Even though the park renovated its museum and visitor center in 2005, there is still not enough curatorial and storage space. According to the park's collection storage plan, another 500 square feet or more of storage space are needed to better accommodate collection items

not currently on display. The park has requested but not yet received Park Service funds to address this need. Another way to meet this need would be through a facility that would store museum collection items from several parks. This facility could be dedicated to collections pertaining to the American Revolutionary War and the surrounding period themes (such as 18th- and 19th-century backcountry lifestyles). This idea is being discussed by the staffs of Kings Mountain and other parks, though there are no funding requests or formal plans for such a facility at this time.

An interpretive ranger acts as the park's curator and is trained in the Park Service's collections cataloging database and in integrated pest management. The park has requested operating funds to hire a museum technician to help manage and catalog the collections. For some of its more extensive projects the park contracts outside experts, such as those at the University of South Carolina and other institutions. For example, experts from Texas A&M University are nearly finished treating and preserving 75 at-risk museum objects, such as those that have in the past been inappropriately displayed or stored.

JAMES D. NATIONS/NPCA



Visitor center exhibits educate the public about the Battle of Kings Mountain and its historical context.

ETHNOGRAPHY—RESEARCH NEEDED TO IDENTIFY GROUPS OF PEOPLE WITH TRADITIONAL ASSOCIATIONS TO PARK RESOURCES

Kings Mountain does not maintain an active ethnography program nor has it completed an ethnographic overview and assessment, a baseline report that analyzes information on known ethnographic resources and the groups of people with traditional connections to those resources. This lack of ethnographic research is largely due to the fact that the land inside the park was considered to be neutral territory between the Cherokee and the Catawba prior to and at the time of the Battle of Kings Mountain. While it is thought that neither tribe used the area regularly, the Colonial Road supposedly followed the route of an older Cherokee trail. Ethnographic research might help develop a greater understanding of the uses of “neutral territory” and the role of travel corridors in American Indian life prior to and during the colonial era.

The only prehistoric artifacts found inside the park include a small handful of lithic debitage and a partial chert point that were found during compliance projects. However, according to staff from the Park Service’s Southeast Regional Office, the lack of known prehistoric and American Indian sites within the boundaries of Kings Mountain does not indicate that there was no American Indian presence, but rather that there has not been enough research and data to locate sites. In fact, one of the only areas lacking in formal research or interpretation, as identified by park and regional staff, is the pre-settlement history of the area (the period prior to European and Euro-American settlement). Park staff have requested project funding for such research.

Without baseline data on the possible American Indian or prehistoric significance of the park, staff cannot adequately address the preservation of sites or the cultivation of relationships with potential traditionally associated

people. Even though traditionally associated groups of people have not been formally identified, park staff invite members of the Catawba Nation, whose reservation is located along the North Carolina-South Carolina border, to various educational and interpretive programs (e.g., living history demonstrations conducted by volunteers). While members of the Catawba Nation do participate in these demonstrations, indigenous people have not expressed any other interest in the park.

In addition to examining relationships between park resources and American Indians, Park Service guidelines encourage acknowledgment of African-American history and experience within national parks. Staff at Kings Mountain are aware that the park could contain resources important to African Americans, and in 2004 and 2005, researchers from outside the Park Service conducted a massive project to identify and study the African-American participants in the battles of the Southern Campaign of the American Revolutionary War. Revolutionary War scholar Dr. Bobby Moss and local historian Michael Scoggins published two volumes on this topic. Although a number of African Americans participated in the battle, on both sides, park staff do not know if there is any contemporary African-American interest in the park.

Another possible area of study for an ethnography program at Kings Mountain relates to more recent cultural associations with the park. Park staff have submitted Park Service funding requests to conduct oral histories of Civilian Conservation Corps (CCC) participants who worked inside the park and the adjacent Kings Mountain State Park. Collecting these interviews is urgent as fewer and fewer CCC participants remain to share their experiences.



KAT BYERLY

NATURAL RESOURCES—PARK FOCUSES ON RESTORING HISTORICAL SPECIES AND BATTLING INVASIVE ONES

NPCA’s assessment rated the overall condition of natural resources at Kings Mountain National Military Park a 78 out of 100, which ranks park resources in “fair” condition. The park is working to reverse changes to the vegetation that have occurred due to past land-clearing activities, fire suppression, and forest pests and diseases. Different plant species have become dominant in the landscape when compared to historic vegetation patterns, while invasive

species have gained a foothold in many parts of the park. Fire and the mechanical removal of vegetation are primary tools the park uses to restore the landscape to its historical condition. Additional natural resources staff are needed to manage non-native plant eradication efforts, spearhead GIS projects, and assist with other duties. The park has requested funds to support two positions.

The park is home to 42 reptile and amphibian species, including this green anole.

Virtually the entire park was cleared of vegetation at some point during the past 230 years. This area was cleared to accommodate those who attended President Hoover's speech in 1930. Trees have grown back, but the forest composition is different from what it was at the time of the battle.



MARK CLIFTON

HISTORICAL AND CONTEMPORARY LAND USE—ADJACENT STATE PARK PROVIDES HABITAT CONTINUITY

When the Battle of Kings Mountain was fought, the battlefield and surrounding countryside consisted of open forests and meadows with some scattered homesteads. After the war ended, the land was used for homesteads, grazing, logging, and agricultural crops such as corn and cotton. There are still some terraces visible within the park as well as cultural resources such as the Howser House and Homestead, but agriculture was not commercially viable due to shallow soils, poor fertility, steep hillsides, and unsustainable farming practices. Even so, some small farms and timber operations continued in the area until Kings Mountain National Military Park was created in 1931. Prior to the park's creation, the battlefield was cleared of vegetation in 1930 to accommodate those who attended President Hoover's speech commemorating the 150th anniversary

of the battle. In sum, virtually the entire park has been cleared of vegetation at some point during the past 230 years. The effects this clearing had on the natural vegetation, as well as the effects of subsequent fire suppression, are discussed in the following section titled "Park Ecosystems."

Kings Mountain State Park borders Kings Mountain National Military Park to the south and east, while agricultural lands, industry devoted to mineral extraction and power generation, and minor urban development border the national military park on the north and west. Kings Mountain State Park is managed as a natural recreation area for hikers, horseback riders, mountain bikers, and those who enjoy fishing and canoeing. Despite different management objectives between the state and national parks, the two areas combined represent relatively contiguous Piedmont habitat.

Urban development along the park's western and northern boundaries in Cherokee County is

scattered but increasing, while development in York County to the east is more concentrated but somewhat separated from Kings Mountain National Military Park due to buffering by Kings Mountain State Park. According to the U.S. Census Bureau, the total population of Cherokee County grew 2.6 percent from 2000 to 2006 while the total population of York County grew 20.9 percent from 2000 to 2006. Although housing and developed infrastructure adjacent to the park are currently limited, population growth and associated development are real threats on the horizon. Increased development associated with the Charlotte, North Carolina, metropolitan area and the Greenville and Spartanburg, South Carolina, areas, all within an hour's drive of the park, has led to increased numbers of small-acreage holdings in the region and associated loss of natural vegetation. Continued regional growth is likely, and contact with the urban interface along the northern and western boundaries will present challenges.

Industrial development has increased in the region as populations have grown. There are several gas-fired power plants and nuclear energy generation facilities located within an hour's drive of the park. During the last five years Duke Energy constructed a gas turbine plant a few miles from the park. These facilities could potentially affect air quality in the park; however, no direct measurements have been made about the effects of these facilities on the park. There is a kyanite extraction facility about 20 miles southwest of the park in Cherokee County. This mineral is used in the manufacture of ceramics, electronics, and other products. No direct impacts on park resources from the mining operation have been assessed or recognized to date.

The park's vegetation management plan outlines the need for research on how the impacts of increasing population will affect the park's ecosystem and interpretive capabilities. The Park Service has begun assessing and moni-

toring landscape dynamics (e.g., land use data, land cover data, and population growth statistics) for parks within its Cumberland Piedmont Network, a subset of regional parks that includes Kings Mountain. This work, which is in the early stages, will provide important information about how the park fits within the larger landscape.

PARK ECOSYSTEMS—LANDSCAPES DIFFER FROM HISTORICAL SETTING

Kings Mountain National Military Park includes ecosystems typical of the western Piedmont, a semi-open prairie with sections of mixed hardwood forest stretching from the Atlantic Coastal Plain to the Appalachian Mountains. In general, the park is predominantly forest and woodland, with riparian areas and some open areas.

The park's forests differ from those that were present during the Battle of Kings Mountain. Clearing land for agriculture, cutting trees to supply lumber, widespread tree death caused by introduced pests and diseases (e.g., pine beetles, chestnut blight, and Dutch elm disease), and fire suppression greatly altered the forest structure within and around Kings Mountain, resulting in the loss of mature hardwood forests and changes in forest composition. Loss of the American chestnut (*Castanea dentata*) and decline of the American elm (*Ulmus americana*) opened up spaces in the forest canopy, allowing other species, such as white oak (*Quercus alba*), tuliptree (*Liriodendron tulipifera*), chestnut oak (*Quercus prinus*), black oak (*Quercus velutina*), and scarlet oak (*Quercus coccinea*), to dominate the forest canopy. Suppression of fire has allowed fire-intolerant species to proliferate, and pines have declined due to pine beetles and the trees' inability to tolerate shade from other canopy species. Composition of the forest understory communities has shifted mainly due to denser forest canopies that allow less light to penetrate the understory. The decrease in light has caused native herbaceous plants to decline and instead

KINGS MOUNTAIN'S "VITAL SIGNS" WILL BE MONITORED

As part of the Centennial Challenge (a Park Service initiative to bring funds to parks in time for the centennial anniversary of the organization in 2016), and through participation in the Park Service's Inventory and Monitoring Network, Kings Mountain National Military Park is working on the last phase of a three-phase "Vital Signs" ecological monitoring plan. Significant natural resources have been identified (phase 1), vital signs that represent or have a bearing on resource health have been selected (phase 2), and a protocol is being implemented for monitoring the selected vital signs (phase 3). Vital signs selected for active monitoring at Kings Mountain are air and climate (ozone and ozone impact), water (water quality and quantity), biological integrity (invasive plants early detection, forest pests, vegetation communities, plant species of concern), and landscapes (adjacent land use).



Water quality and quantity at Kings Mountain will be periodically measured and recorded as part of the Vital Signs monitoring program.

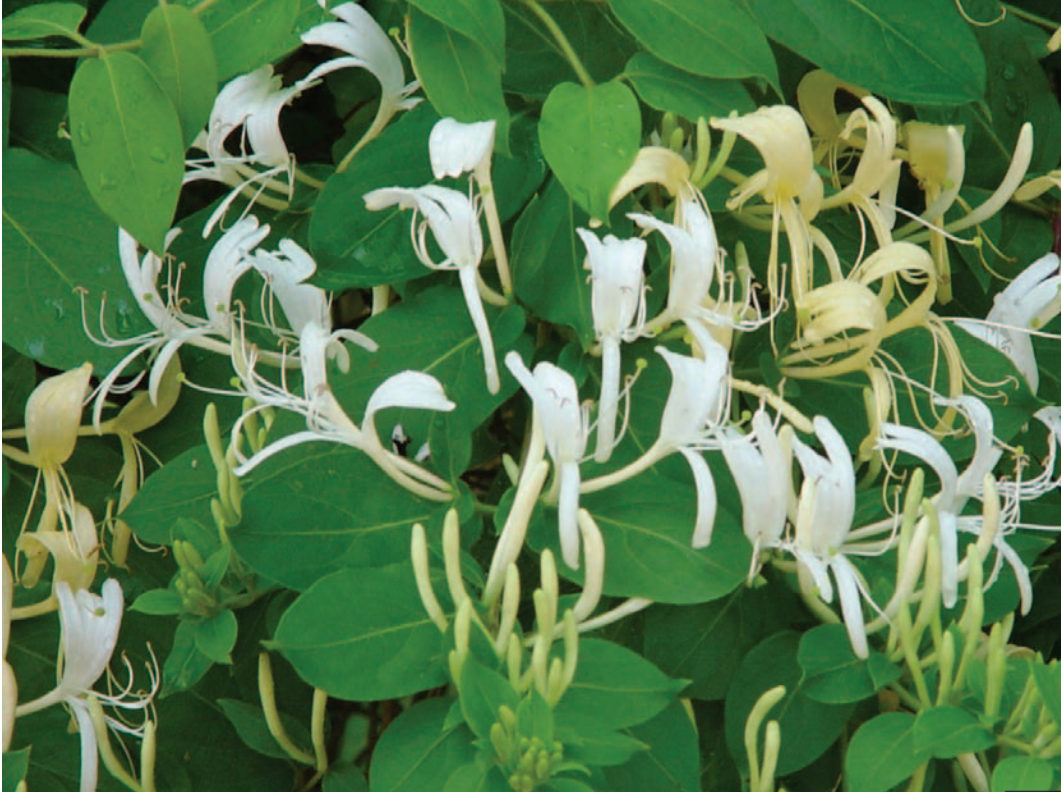
has favored the growth of shade-tolerant invasive non-native species. Essentially, forests and woodlands in the park today are comprised of a higher percentage of oaks (*Quercus* spp.), shade-tolerant trees, species such as red maple (*Acer rubrum*) and sourwood (*Oxydendron arboretum*), and woody shrubs such as mountain laurel (*Kalmia latifolia*) than historically.

Studies indicate that the increased vegetation density in forests and understory, and the resulting loss of open areas, has reduced available habitat for some native fauna. Birds that prefer open oak woodland savannah, such as the eastern kingbird (*Tyrannus tyrannus*) and horned lark (*Eremophila alpestris*), are found on open lands surrounding the park, but they have low documented numbers within the park.

Open areas within the park, such as old agricultural fields, have been dominated by invasive non-native species, such as bromes (*Bromus japonicus* and *B. secalinus*), yellow sweetclover (*Melilotus officinalis*), and green bristlegrass (*Setaria viridis*), at the expense of native plants.

The park's main natural resource goal is to restore the pine-oak savannah habitats thought to be dominant during the Battle of Kings Mountain. As discussed in "Cultural Landscapes" on page 14, prescribed burns are one tool resource managers are using to help achieve this goal. Currently, the park's pine populations are recovering from recent pine beetle outbreaks. Park staff monitor the situation and mechanically remove infested trees.

Riparian systems within the park remain relatively unaltered by past land uses. All drainages, except for Kings Creek, originate within the park, reducing the potential for pollution and degradation. The main threat to the riparian systems within the park is invasive vegetation. Additional threats include potential sedimentation resulting from management activities such as mechanical thinning and prescribed burns, though the park takes steps to prevent sediment from entering waterways.



Park staff believe that Japanese honeysuckle, along with 10 other invasive non-native plant species, poses a severe threat to native ecosystems. All 11 species are able to invade ecosystems and outcompete native species.

NON-NATIVE PLANTS—INVASIVE SPECIES THREATEN RARE NATIVE PLANTS

Agriculture, timbering, construction, and other land-clearing activities have affected the lands within Kings Mountain National Military Park over the past few centuries. These disturbances have altered the park's ecosystems and made them more vulnerable to invasion by non-native plant species. In addition, a large percentage of the non-native plants that inhabit the park were introduced as ornamentals on many of the old farmsteads. According to a 2005 survey by the nonprofit organization NatureServe, there are 58 non-native vascular plant species found in the park. The Park Service has identified 11 of these as posing severe threats due to their ability to invade ecosystems and outcompete native species. These include Japanese honeysuckle (*Lonicera japonica*), Nepalese browntop (*Microstegium vimineum*), Chinese privet (*Ligustrum sinense*), and eight others.

Non-native plants have already invaded the

park's forests, woodlands, open areas, and riparian areas. These invasions are a concern because native plants—including some species of concern—could be eliminated from park ecosystems. Species of concern are those species that might be in need of some kind of conservation action, such as monitoring or possible listing as threatened or endangered, often due to their rarity or declining status. Non-native species such as tree of heaven (*Ailanthus altissima*), multiflora rose (*Rosa multiflora*), princess tree (*Paulownia tomentosa*), Chinese lespedeza (*Lespedeza cuneata*), and several others are common in the power line right-of-way in the park, one of the few remaining open habitats in the park that supports species of concern such as the Georgia aster (*Aster georgianus*) and smooth sunflower (*Helianthus laevigatus*). Unfortunately, the disturbances that make these open areas suitable for the aster and sunflower also make the areas vulnerable to invasive non-native species that compete with native plants.

RECENT INVENTORIES DOCUMENT PARK WILDLIFE AND PLANTS

According to inventories completed to date through the Park Service's Inventory and Monitoring Program, Kings Mountain National Military Park hosts 42 amphibian and reptile, 19 fish, 26 mammal (including bat), 508 vascular plant (58 are non-native), and more than 119 bird species. One species, the wild turkey (*Meleagris gallopavo*), was reintroduced to the park in the 1980s through a cooperative effort between the park and the South Carolina Department of Natural Resources. The park would like to reintroduce the bobwhite quail (*Colinus virginianus*) to supplement individuals that are returning to the park due to habitat improvements brought about by the park's prescribed burns. Park staff have requested Park Service funds for this reintroduction project.

Of the 19 fish species documented in the park, six are priority conservation species for South Carolina. Five of the priority conservation species documented within the park—

highback chub (*Hybopsis hypsinotus*), greenfin shiner (*Cyprinella chloristia*), Carolina darter (*Etheostoma collis*), seagreen darter (*Etheostoma thalassinum*), and Carolina fantail darter (*Etheostoma flabellare*)—are endemic to the southern Atlantic Slope. The Atlantic Slope is the part of the country east of the Appalachian Mountains where rivers drain east instead of draining west toward the Mississippi River.

The park does not have any federally listed threatened or endangered species, but a number of plants are South Carolina species of concern. These include creeping spike rush, Georgia aster, smooth sunflower, eastern turkeybeard (*Xerophyllum asphodeloides*), and several others. The park is seeking funds to help restore Georgia aster and has been working with the North Carolina Botanical Garden to collect aster seeds. Park staff also continually evaluate new potential projects that could help increase populations of rare plants.

The park is seeking funds to help restore the rare Georgia aster, and staff have been working with the North Carolina Botanical Garden to collect seeds from the plant.



Several of the park's other plant species of concern, such as creeping spike rush (*Eleocharis palustris*) and joe-pye weed (*Eupatorium fistulosum*), are found in riparian areas. Non-native species, including Nepalese browntop and Chinese privet, have invaded riparian areas. These invasive species can quickly take over areas and eliminate native vegetation. The park's 2005 vascular plant survey indicates that non-native species are the greatest future threat to ecological integrity within the park.

The park's staff has been eliminating heavy concentrations of various invasive non-native species since the 1990s and is now focusing on maintenance treatments and elimination of other invasive plants, especially in critical habitats. Non-native plant management teams from the Park Service's Southeast Region occasionally assist park staff with eradication efforts, and the park hires temporary seasonal help during the summer as well. The park continues to seek base funding to hire two natural resource staff who would spend a large part of their time on non-native plant eradication. Additionally, park staff are attempting to create a geographic information systems (GIS) database of all known populations of invasive plants.

The park's 2006 vegetation management plan identifies research needs related to invasive species control. These include the need to explore biological controls for non-native plants and insects. Cooperative arrangements with the U.S. Department of Agriculture's Agricultural Research Service, Clemson University's Integrated Pest Management Program, or other agencies and programs dedicated to alternatives to chemical control could be an effective way to pursue biological control solutions for non-native plants and insects. If pursued, funding for research and subsequent control program implementation will be needed.

The vegetation management plan also highlights the need to develop risk analysis tools to evaluate potential threats—including the spread

of non-native plants, pests, and diseases—to park ecosystems.

The park's fire monitoring plan indicates that if invasive non-native species were no longer present in the park, it is possible that the park's forests and woodlands could naturally return to historical conditions.

AIR QUALITY—SURVEYS NEEDED TO DETERMINE IF OZONE IS HARMING PARK PLANTS

Air quality at Kings Mountain National Military Park is estimated using data from monitoring stations located throughout the region, some as little as nine miles from the park and some as far as 90 miles from the park. National Atmospheric Deposition Program/National Trends Network stations monitor the wet deposition and concentration levels of sulfates, nitrates, and ammonium in rainwater. One of the monitoring stations closest to the park shows a decrease in sulfates, but no trend for nitrates or ammonium. The Clean Air Status and Trends Network, which monitors dry deposition of sulfur and nitrogen, has two monitoring stations in the vicinity of the park: One is about 75 miles northwest of the park and the other is 90 miles east of the park. Data from these two stations indicate no trends in dry deposition of sulfur or nitrogen. However, an analysis of more recent data is needed to better evaluate current air quality at the park.

Ozone is monitored in York County, South Carolina, nine miles southeast of the park, and at Cowpens National Battlefield, about 22 miles west of the park. Readings from these stations indicate that ozone levels are high enough to cause cumulative foliar injury to vegetation within Kings Mountain National Park. Staff from the Park Service's Inventory and Monitoring Network plan to survey the park in 2013 for foliar damage due to ozone. Ozone and ozone impact have been selected as parameters to be monitored through the network's Vital Signs program. Information

Kings Creek runs along part of the park's northwest boundary. Researchers are currently collecting water-quality data in all of the park's major drainages.

on visibility in the region is not available at this time.

There are several gas-fired power plants and nuclear energy generation facilities located within an hour's drive of the park. One gas turbine plant is just a few miles from the park. These facilities may potentially affect air quality in the park; however, no direct measurements have been made about the effects of these facilities on the park.



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WATER QUALITY—RESEARCH WILL ADDRESS SOME DATA GAPS

Surface water, wetlands, and groundwater comprise the hydrologic resources of Kings Mountain National Military Park. Surface water sources include multiple seeps and five small drainages: Dellingham Branch, Stonehouse Branch, Long Branch, Garner Branch, and Kings Creek. All drainages except for Kings Creek originate within the park. Kings Creek comprises about 0.6 miles of the park's northwest boundary. More than 100 small wetlands, each smaller than about a third of an acre, are found within the park and are fed through groundwater discharge.

Water-quality monitoring has been completed intermittently throughout the last 35 years within the park, and until recently, no records or measurements were made consistently. Water-quality assessments are currently being conducted in the park on all major drainages. Basic parameters being recorded include temperature, pH, turbidity, dissolved oxygen, and fecal coliform counts. Researchers have identified data gaps that need to be addressed to fully assess water quality. Recommendations for additional monitoring include stream chemistry analysis for assessing the effects of atmospheric deposition, adjacent land uses, and management activities. As part of the Park Service's Natural Resource Challenge and the Inventory and Monitoring Network's Vital Signs monitoring program, limited parameters of water quality (e.g., temperature, pH, and dissolved oxygen) are scheduled to be recorded consistently into the future.

Based on studies that have been conducted to date, water quality within the park is generally good to pristine, suffering very few impacts from anthropogenic disturbances. All but one of the drainages originate within the park. Park staff monitor upstream activities and take precautions when conducting management projects within the park itself to ensure water quality remains good.



STEWARDSHIP CAPACITY

FUNDING AND STAFFING—MONEY FOR RESOURCE REPORTS AND STUDIES NEEDED

For fiscal year 2010, Kings Mountain National Military Park has an operational budget of about \$1.17 million. Additional funds are needed to support numerous research projects, reports, and resource management activities. A variety of cultural resource reports and studies are needed to determine the extent and significance of archaeological resources and historic structures. These include but are not limited to an archaeological overview and assessment;

cultural landscape reports, historic structure reports, and a historic furnishings report for the Howser House and Homestead; and an ethnographic overview and assessment.

In addition to funds for cultural resource reports and studies, the park would benefit from funds to support additional storage space to house portions of its museum collection. Another potential solution to this need would be a facility to store collections from Kings Mountain and nearby parks pertaining to the American Revolutionary War and related themes. No plans are yet under way for such a facility.

To bolster natural resource protection and

Ferguson led Loyalist forces at the Battle of Kings Mountain. He perished during the fighting and is buried at the park.

Volunteers dressed as Loyalist soldiers stand before Ferguson's gravesite.



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management, the park has a list of projects yet to receive funding. These include projects to restore oak savannas, reintroduce American chestnut trees, reintroduce bobwhite quail, evaluate the role of prescribed burns in controlling non-native species, and many more.

In early 2009, through the National Park Service Recovery and Reinvestment Act, \$26,000 was earmarked for Kings Mountain National Military Park to fund replacement of garage bay doors and replace tile flooring in the library conference building, a historic park facility.

The park has requested funds to hire a museum technician to help catalog and manage the collections, which include more than 5,300 museum objects and more than 37,700 archival items. In addition, having a historian available to the park on a more regular basis would help maintain public interest in the battle, the park, and its resources. Hiring a historian to serve Kings Mountain and nearby parks with similar interpretive themes (e.g., Cowpens National

Battlefield) could be one way to provide this needed expertise. For natural resources, the park has requested funds to hire two staff positions. One would focus on non-native plant management and the other on GIS as well as other duties such as non-native plant eradication.

PLANNING—PRIMARY PLANS UNDER WAY

Kings Mountain National Military Park is in the process of developing a new general management plan and a long-range interpretive plan to replace outdated plans. The new plans, which will be completed in 2011 or early 2012, will put the park in position to develop management and preservation strategies for the Howser House, management strategies for invasive species and the current successional landscape, and management strategies for prospective interpretive themes not currently covered by the park. Beginning in 1999, the park embarked on a series of projects to improve park resources, from intensive archaeological surveys to a

massive archival assessment to the renovation of the museum and visitor center. The completion of the general management plan and long-range interpretive plan will allow park staff to take full advantage of the new facilities and interpretive possibilities.

Two recent plans for fire management (2005) and vegetation management (2006) are largely aimed at restoring the park's ecosystems to the conditions they were in during the Battle of Kings Mountain. The park, with assistance from a fire management crew based at Great Smoky Mountains National Park, has been conducting prescribed burns since 2000. These burns are intended to alleviate wildfire pressures caused by a buildup of vegetation, thereby reducing threats to historic structures, and to recreate the historic views, lines of sight, and general cultural landscape that made the Patriot victory possible.

The park's vegetation management plan provides an overview of the existing natural resources within the park and states the preferred actions the park may take to better manage its natural resources, while ensuring management actions complement the park's cultural significance. The vegetation manage-

ment plan addresses restoring vegetation present during the battle, monitoring and removing invasive plant species, and developing partnerships with outside institutions (e.g., York County branch of the Clemson University Cooperative Extension) to assist with park projects and developing integrated invasive species control efforts.

RESOURCE EDUCATION— INTERPRETATION ENRICHES VISITOR EXPERIENCE

Interpretation is key for visitors to have the most meaningful experience possible at Kings Mountain National Military Park. Without interpretation, visitors might miss parts of the crucial story that played out on the landscape during that pivotal battle on October 7, 1780.

The park's four rangers, a supervisory ranger, and various volunteers provide interpretive programs and tours. The park's friends group, the Kings Mountain Brigade of Friends, and their reenactment counterpart, the Backcountry Militia, provide living history demonstrations regularly throughout the summer and on weekends in the spring and fall as volunteer capacity allows. A 1.5-mile interpretive trail that winds

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The Backcountry Militia, the park's volunteer reenactment group, brings the park's history to life through programs during the summer and on weekends in the spring and fall.

Participants in the park's Junior Ranger program earn a badge and take an oath after completing an activity booklet.



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through the battlefield includes about 20 wayside exhibits that explain both the logistics of the battle as well as its significance; various monuments and markers indicate the significance of the battle, its participants, and its commemorators; the park offers a cell phone tour ("On-Cell") that visitors can dial into and get interpretive information as they walk the interpretive trail; a Junior Ranger program allows kids to earn a badge by completing an activity booklet; and the park's newly updated visitor center includes an interactive museum display and a new film.

The park participates in anniversary celebrations each year, beginning with a reenactment of the march of the Overmountain Men on what is now called the Overmountain Victory National Historic Trail. This National Park Service site was established in 1980 to commemorate the route that Patriot militia took through Virginia, Tennessee, North Carolina, and South Carolina as they pursued

the British before clashing at Kings Mountain. The reenactment begins the last week in September and concludes with living history and weapons demonstrations on October 7 at Kings Mountain.

Aside from interpreting the Battle of Kings Mountain, the Revolutionary War, and associated commemorative activities, park staff also address the international politics of the war and 19th-century lifestyles, though the latter subject is considered to be a low priority as it is the primary interpretive theme of the adjacent state park.

EXTERNAL SUPPORT—PARTNERSHIPS PROVIDE ESSENTIAL ASSISTANCE

Community involvement with Kings Mountain National Military Park benefits resources and gives members of the public an opportunity to become resource stewards. Eagle Scout groups have completed several projects in the park, including construction of bat houses and trail

maintenance. The park's Volunteers in Parks program offers opportunities for people to assist park staff and support the park's mission by staffing the visitor center information desk, presenting interpretive programs to the public, maintaining trails, and assisting with maintenance and resource management projects. The park even offers some limited volunteer housing and a trailer pad with hookups for a mobile home.

Agreements with universities and research institutions, such as the Clemson University Cooperative Extension, Florida A&M University, the South Carolina Native Plant Society, and the Plant Conservation Alliance's Alien Plant Working Group, have proven fruitful for the park and continue to develop. A research agreement with Clemson University for the study of fuels management provides the park with two or three interns each year, and researchers from the university have conducted a number of biological surveys, including ones for butterflies and dragonflies. A team from Tennessee Tech University conducted a wetland survey in the park. The park's vegetation management plan details the park's goals for increased outreach through the development of cooperative partnerships. For cultural resources, the University of South Carolina partnered with the park to complete an archival assessment in 1999, and Texas A&M University has nearly finished work to treat and preserve 75 at-risk museum objects.

In addition to volunteers and partner groups, the park is fortunate to have support from the Kings Mountain Brigade of Friends, a nonprofit organization founded in 2000. The group provides services and funding for special projects aimed at preserving the park's history and environmental integrity, and at enhancing visitor experience and enjoyment.

WHAT YOU CAN DO TO HELP:

- **Participate in park planning efforts:** The public is invited to provide input on all park plans and studies. Check www.nps.gov/kimo for information on park planning work and ways to participate.
- **Support or become a member of a group helping to protect the park:** Kings Mountain Brigade of Friends (2641 Park Road, Blacksburg, South Carolina, 29072) or NPCA (www.npca.org/support_npca).
- **Volunteer in the parks.** Many parks are looking for dedicated people who can lend a helping hand. To learn about opportunities for volunteering at Kings Mountain National Military Park, contact the park at 864.936.7921.
- **Become an NPCA activist and learn about legislative initiatives and protection projects affecting parks.** When you join our activist network, you will receive *Park Lines*, a monthly electronic newsletter with the latest park news and ways you can help. Join by visiting www.npca.org/takeaction.



APPENDIX: METHODOLOGY

To determine the condition of known cultural and natural resources at Kings Mountain National Military Park and other national parks, the National Parks Conservation Association developed a resource assessment and ratings process. The assessment methodology can be found online at NPCA's Center for State of the Parks website: www.npca.org/stateoftheparks.

Researchers gather available information from a variety of research, monitoring, and background sources in a number of critical categories. The natural resources rating reflects assessment of more than 120 discrete elements associated with environmental quality, biotic health, and ecosystem integrity. Environmental quality and biotic health measures address air, water, soils, and climatic change conditions, as well as their influences and human-related influences on plants and animals. Ecosystems measures address the extent, species composition, and interrelationships of organisms with each other and the physical environment.

The scores for cultural resources are determined based on the results of indicator questions that reflect the National Park Service's own *Cultural Resource Management Guideline* and other Park Service resource management policies.

Stewardship capacity refers to the Park Service's ability to protect park resources and includes discussion of funding and staffing levels, park planning documents, resource education, and external support.



KAT BYERLY

The Centennial Monument commemorates the 100th anniversary of the Battle of Kings Mountain.

For this report, researchers collected data and prepared a paper that summarized the results. The draft underwent peer review and was also reviewed by staff at Kings Mountain National Military Park.

NPCA's Center for State of the Parks represents the first time that such assessments have been undertaken for units of the National Park System. Comments on the program's methods are welcome.

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For more information about the
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Appalachian National Scenic Trail (various)
Appomattox Court House National Historical Park (VA)
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Big Bend National Park (TX)
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Hopewell Furnace National Historic Site (PA)
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Isle Royale National Park (MI)
Joshua Tree National Park (CA)
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Knife River Indian Villages National Historic Site (ND)
Lake Clark National Park and Preserve (AK)
Lassen Volcanic National Park (CA)
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Lewis and Clark National Historic Trail (various)
Little Bighorn Battlefield National Monument (MT)
Longfellow National Historic Site (MA)
Missouri National Recreational River (NE)
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Nez Perce National Historical Park (WA, ID, MT, OR)
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