



# Three Rivers Review

The official newspaper of  
Bluestone National Scenic River  
Gauley River National Recreation Area  
New River Gorge National River

## Welcome

On behalf of the National Park Service men and women working here in southern West Virginia, I am proud to welcome you to three impressive and exciting units of your National Park System. New River Gorge National River, Gauley River National Recreation Area, and Bluestone National Scenic River offer spectacular scenery and a wealth of recreational opportunities. The diversity of natural and historical resources found in these national park areas is being preserved as part of a larger family of 390 nationally significant places which make up the National Park System.

These special places within our National Park System have become sanctuaries for national pride, a sense of place, and renewal of mind, body, and soul. As one of nearly 300 million visitors to America's national parks, we hope that you not only have a safe and enjoyable visit, but that you also take away a deeper understanding and appreciation of your role as stewards of these special places.

Please join in teaching and practicing good environmental stewardship and respect for our cultural heritage, not only when visiting the parks, but wherever you live, work, or play. Only then can we hope to ensure that these same resources that you and I enjoy today will be left *unimpaired* for future generations.

Welcome to New River Gorge National River.

*Calvin F. Hite*

Superintendent



Great Blue Heron



View of the New River from Endless Wall

## Taking Part in Your Park

In 2006, New River Gorge National River began a new planning effort, revising the park's General Management Plan (GMP). The GMP will define a vision for the future of the park and will guide decisions for the next twenty years. It will determine how best to protect park resources while providing visitors with good experiences.

It has been over twenty years since the first park GMP was prepared. Since then, the park has experienced many changes. Visitation has increased from 231,295 in 1984 to over 1.1 million in 2004. Tourism has become a major industry and employer in the area. An increasingly diverse public now wants to do more things and to visit more often. Over the years, land ownership within the park boundary, as well as the boundary itself, has changed. Increases in public land have allowed the park to provide new facilities, but it is now time to reassess past accomplishments as well as future needs.

In January, March, and May of 2006, the National Park Service hosted the first three rounds of public meetings in Summers, Raleigh, and Fayette counties.

According to Park Superintendent Cal Hite, about 250 people came to the January and March meetings. "When we asked what people valued most about the park, there was a wonderfully diverse response, but some common themes did emerge. Included were the opportunities for peace and solitude, access to diverse outdoor recreation, historic resources and stories, scenic beauty, the river and clean water, education, and economic development opportunities," explained Hite.

"There is no doubt that area residents are very connected to the park. We would also encourage people who cannot attend these local meetings to submit comments. Consider these questions: 1) What issues should be considered in the General Management Plan for the park? and 2) What are your ideas for the future of the park?" said Hite.

Your concerns, interests, and opinions are crucial to the success of park planning efforts. We will keep you informed via the park website, newsletters, open houses, and public meetings. If you would like to be part of the park mailing list, please call (304) 465-6526, or visit the park website at [www.nps.gov/neri](http://www.nps.gov/neri). We look forward to hearing from you!

## 2 Your Three Parks

The three rivers, and the three parks, managed for you by the National Park Service; weather and other basic information

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Weighing a catfish prior to release

## How's the Water?

The New, Gauley, and Bluestone Rivers are all part of the greater New River watershed that extends from the North Carolina mountains, through the mountains and pastoral farm lands of southern Virginia, to southern West Virginia. The rivers and streams of the watershed are affected by mining, logging, manufacturing, agriculture, and disposal of human waste.



National Park Service  
U.S. Department of the Interior

**Bluestone National Scenic River  
Gauley River National Recreation Area  
New River Gorge National River**

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**Fax Number**

304-465-0591

**Park Headquarters**

Open M – F ; 8:00 am – 4:30 pm  
304-465-0508

**Canyon Rim Visitor Center**

Open daily 9:00 am – 5:00 pm  
304-574-2115

**Grandview Contact Station**

Open June through August  
304-763-3715

**Sandstone Visitor Center**

Open daily 9:00 am – 5:00 pm  
304-466-0417

**Thurmond Depot**

Open June through August  
304-465-8550

# Your Three Parks

## BLUESTONE NATIONAL SCENIC RIVER

In 1988, Bluestone National Scenic River was designated a unit of the Wild and Scenic Rivers System, which Congress established to preserve the free-flowing condition of the nation's rivers. This park includes a 10.5-mile segment of the Bluestone River with virtually no vehicular access into the area. The most common methods of entry are the aerial tram at Pipestem Resort State Park and the trailhead at Bluestone State Park.

The area is cooperatively managed with the West Virginia Division of Natural Resources. Wild turkey and whitetail deer are the featured species, and the area is popular with hunters.



## GAULEY RIVER NATIONAL RECREATION AREA

Established in 1988, Gauley River National Recreation Area protects 25 miles of the Gauley River and 6 miles of the Meadow River. Dropping 26 feet per mile through a gorge that averages 500 feet in depth, the Gauley is a world-class destination for whitewater boaters.

Only about 1/3 of the land within park boundaries is in federal ownership; public facilities, including river access areas, are limited and not well developed. The Tailwaters area below the Summersville Dam offers the only public facilities at this time.

*left:* The banks of the Bluestone River

*center:* Whitewater boaters on the Gauley River

*right:* An overlook of the New River Gorge



## NEW RIVER GORGE NATIONAL RIVER

New River Gorge National River was designated in 1978, protecting 53 miles of one of the oldest rivers in the world. The gorge averages 1,000 feet in depth and contains one of the most diverse plant species assemblages of any river gorge in the southern Appalachians. Cultural resources include prehistoric sites as well as remnants from the recent Industrial Age: abandoned coal mines, company towns, tipples, and coke ovens.

Annually, one million visitors enjoy a full spectrum of recreational activities. The New River is renowned for its warmwater fishery and outstanding whitewater boating. Massive sandstone cliffs challenge rock climbers, while trails and overlooks offer less strenuous opportunities for enjoyment.



## Visitor Information

### In Case of an Emergency

Call 911 from any phone in the park to report emergencies. Park rangers, as well as county sheriffs and state police, are on patrol throughout the park. Emergency care facilities and hospitals are located in Summersville, Oak Hill, Beckley, and Hinton.

### Weather and Climate

- Winters are variable, ranging from mild to frigid. Prepare for ranges from 50 degrees and mild, to -10 degrees and blizzard conditions.
- Spring is very unpredictable — generally mild and wet, it alternates between beautiful and questionable conditions.
- Summers are always warm, sometimes hot, with thunderstorms likely.
- Fall is generally the driest and most stable season, with cool mornings and mild days.
- Plan your trip to expect rain or thunderstorms; expect snow during the winter months.
- The weather can vary greatly within the region. This is particularly true during the spring and summer thunderstorm season.
- Thunderstorms are common. If caught outside during a storm, avoid high points, exposed locations, and open fields.

### Getting Around

To the Park: by personal vehicle via Interstate 77/64, U.S. Route 19; via airplane with airports in Beckley and Charleston; via train — AMTRAK stops at Montgomery, Thurmond ("flag" stop, reservations required), Prince, and Hinton.

Within the Park: personal vehicle, foot, or boat; bicycle and horseback on designated trails.

### Lodging

The park does not have any lodging facilities, but motels, cabins, bed & breakfasts, and campgrounds are available in surrounding towns. Hawks Nest and Pipestem Resort State Parks have lodges, and Babcock, Bluestone, and Pipestem Resort State Parks have cabins. For a listing of accommodations, call 1-800-CALLWVA, the Southern West Virginia CVB at 1-800-VISITWV, or the New River CVB at 1-800-927-0263.

### Camping

New River Gorge National River provides opportunities for primitive camping only. Campgrounds are located near the river. These primitive camping areas have no drinking water or hookups, and limited restroom facilities. All sites are managed on a first-come, first-served basis. There are no fees for camping, but campers are required to register with a ranger at the earliest opportunity. Stays are limited to 14 days in the same area. Developed campgrounds are available at state parks and private campgrounds throughout the surrounding area.

### Fees and Permits

*No entrance fees are charged at any of the three parks.*

Special Use Permits are required for all commercial activities (guiding, filming, etc.). Reservations are required for picnic shelters at Grandview, and group campsites at Burnwood and Dungen. Fees vary. For information concerning Special Use Permits and group campsites, call 304-465-6517. Grandview picnic shelter reservations can be made by calling 304-465-8064.

# Out and About

The three parks offer a great variety of outdoor activities — biking, fishing, hiking, paddling, rock climbing, or sightseeing. Please enjoy the parks, but also take steps to protect both yourself and the park environment. Always respect privately-owned land!



## Safety First

- Area roads are narrow. Share the road. Expect oncoming traffic.
- Railroad lines throughout the park are active and are private property. Do not cross railroad tracks or trespass on railroad rights-of-way.
- Know the weather forecast and plan/dress accordingly. If you hear thunder, you are close enough to the storm to be struck by lightning. Seek shelter and stay away from water.
- Take drinking water, and do not drink water from streams or rivers.
- Poison ivy is common. *Leaves of three, let it be!*
- Be aware of two species of venomous snakes, the copperhead and timber rattlesnake.
- Hunting is allowed within the park — wearing blaze orange is recommended during hunting season.
- Many recreation activities (paddling, climbing, etc.) require special equipment, knowledge, and skills — contact a park ranger or qualified instructor for more information.

# Park Activities

## WALKS, TALKS, AND TOURS

Ranger-led programs are offered from late spring through fall. They range from special programs and demonstrations to short walks and all-day hikes. Information is available at the park, or on the internet at <http://www.nps.gov/neri>.

## BIRDING — ON THE RIM, AT THE BOARDWALK, AND IN THE MORNING

Weekend days throughout the year  
Variable locations: Canyon Rim, Grandview, Sandstone Falls  
Strolls around the park in the company of birding enthusiasts offer an opportunity to look for and listen to our feathered friends.

## A TOUCH OF... NEW RIVER

Saturday and/or Sunday afternoons, June through August, 2006  
Canyon Rim Visitor Center  
Informal gatherings offer hands-on experiences — touching a feather, learning a bird song, “mining” some coal, “climbing” a rock, “riding” a kayak, or learning water safety.

## BLUESTONE NATIONAL SCENIC RIVER WALK

Saturdays, June through August, at 10:00am  
Mountain Creek Lodge (bottom of the tram), Pipestem Resort State Park  
A one-mile walk along the Bluestone River provides an opportunity to enjoy park flora, fauna, and scenery and to discuss local history. Bring good walking shoes, water, and a few dollars for the return tram ride.

## RANGER ON THE ROCK

June through August, except Mondays  
Main Overlook, Grandview  
At the rim of the New River Gorge, a park ranger discusses park resources and shares binoculars and brochures to enhance an informal evening visit and the superb views.

# Special Events

## EXCURSION TRAIN AND HINTON RAILROAD DAYS

October 14 – 15 and October 21 – 22, 2006

## BRIDGE DAY

October 21, 2006 New River Gorge Bridge (9:00 am – 3:00 pm)

## WILDFLOWER WEEKEND

April 2007 Locations throughout the park

# Leave No Trace



Each of us has different reasons for visiting parks. Today, more and more of us are taking the opportunity to explore these areas and the land often shows the results of this use.

You can help minimize the impact of your visit to the park by following these basic Leave No Trace principles:

- Plan ahead and prepare
- Travel and camp on durable surfaces
- Dispose of waste properly
- Leave what you find
- Minimize campfire impacts
- Respect wildlife
- Be considerate of other visitors



Put litter, even crumbs, peels and cores, in its proper place — a trash can.



Observe wildlife from a distance and never approach, feed or follow them.

## Volunteers in the Parks



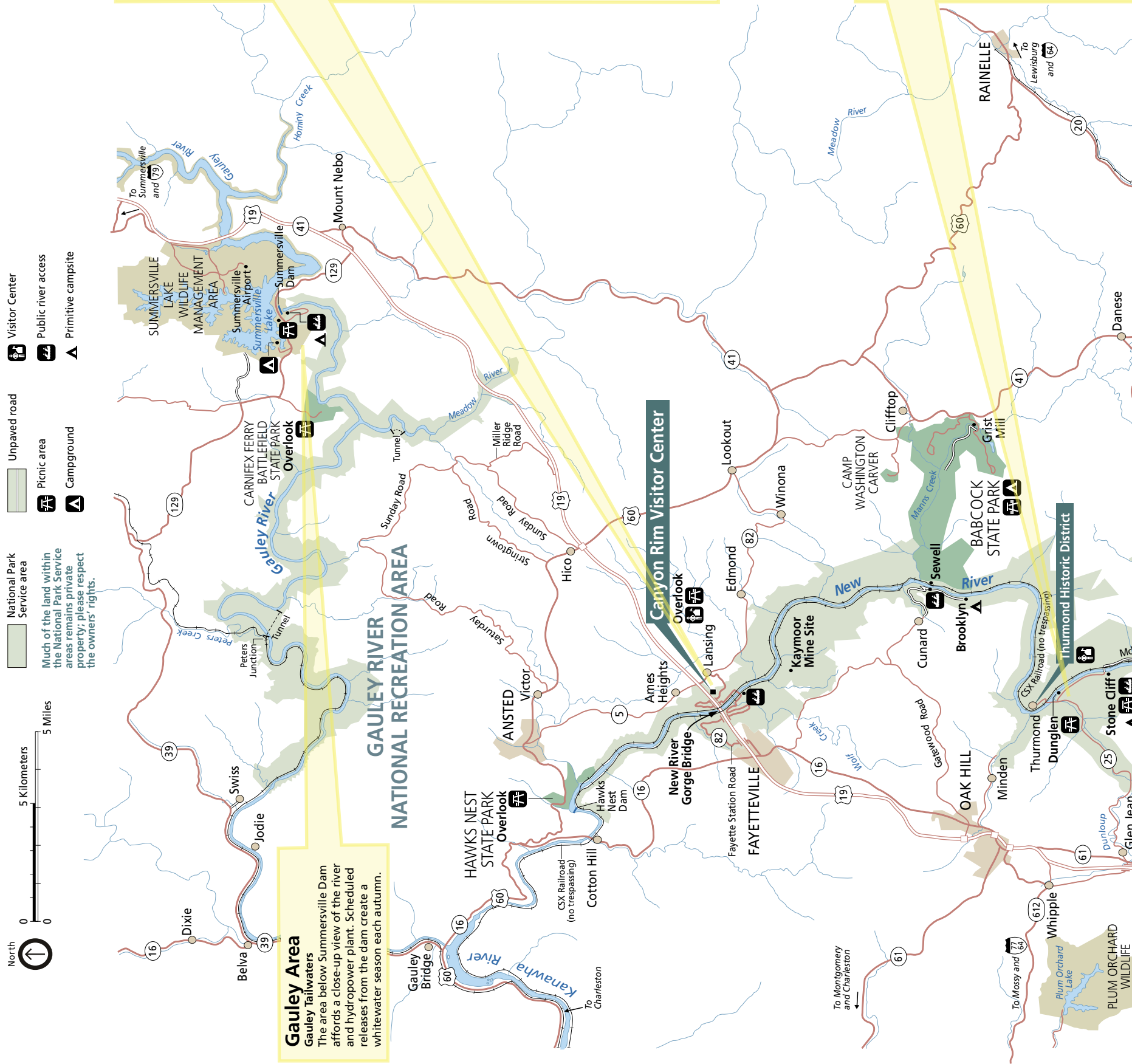
Volunteers at New River Gorge National River provide valuable service to the park and the environment with resource management projects, trail construction and maintenance, administration, interpretive activities, special events, and cleanup programs.

Volunteers of all backgrounds and skills are encouraged to become involved and contribute their talents and enthusiasm toward helping the park.

The Volunteer In Parks (VIP) program is the means by which volunteers can assist the park in a way that is mutually beneficial to the National Park Service and the volunteer or volunteer group. For more information, contact the Volunteer In Parks Program Coordinator at (304) 466-0417.



# Map and Highlights



## Gauley Area

**Gauley Tailwaters**  
The area below Summersville Dam affords a close-up view of the river and hydropower plant. Scheduled releases from the dam create a whitewater season each autumn.

## Canyon Rim Area

### Canyon Rim Visitor Center

This center has a theater, information desk, bookstore, and exhibit area highlighting park history, geology, and ecology. The gorge and bridge may be viewed from indoor and outdoor fully-accessible observation areas.

### New River Gorge Bridge

The world's second largest single span steel arch bridge carries U. S. Route 19 across the gorge. A special celebration is held there on Bridge Day, the third Saturday in October.

### Fayette Station Road

This one-way road descends into the gorge under the bridge. Parking at the river affords views of a whitewater rapid and the New River Gorge Bridge. An auto tour guide and roadside exhibits enhance the trip.

### Trails

- **Butcher Branch Trail** 0.8 mile
- Access to Long Point from Kaymoor Top
- **Cunard-Kaymoor Trail** 6.7 miles
- Hiking/biking to the mine or Cunard
- **Endless Wall Trail** 2.4 miles
- Views from rock outcrops and rugged clifflines along the rim
- **Fayetteville Trail** 4.0 miles
- Connects Fayette Station Road, Fayetteville Town Park, and Kaymoor Top
- **Kaymoor Trail** 2.0 miles
- Leads to a coal mine with trail exhibits
- **Miners Trail** 0.5 mile
- A steep descent to the Kaymoor Mine site
- **Laing Loop Trail** 1.1 miles
- A leisurely walk on this forest loop trail
- **Long Point Trail** 1.6 miles
- Field and forest trail to view of gorge and bridge
- **New River Bridge Trail** 0.9 mile
- Hike under the New River Gorge Bridge
- **Timber Ridge Trail** 0.9 mile
- Connects from Long Point Trailhead to Fayetteville Trail
- **Town Park Loop** 1.0 mile

## Thurmond Area

### Thurmond Depot

The restored depot provides a glimpse of the golden days of railroading. It serves as a summer visitor center and museum.

### Historic District

Exhibits and a self-guided walking tour brochure bring life to the once thriving town. The remaining commercial and residential buildings and their exhibit photographs help in visualizing this early 1900s railroad center.

### Dunglen and Stone Cliff Area

Enjoy fishing or a picnic near the river. Stone Cliff has primitive camping (no water).

### Trails

- **Arbuckle Connector Trail** 0.3 mile
- Steep, rocky hiking trail connecting the two trails listed below
- **Brooklyn-Southside Junction Trail** 6.0 miles

Hiking/biking along a riverside rail line  
**3.4 miles**  
**Thurmond-Minden Trail**  
 Hiking/biking along a railroad grade  
**2.7 miles**  
**Stone Cliff Trail**  
 A moderate hiking/biking trail

### Middle Gorge Area

**Army Camp**  
 Once the site of a Korean War-era military training camp, it now offers primitive camping (no water).  
**Grandview Sandbar**  
 A pleasant place along the river, the site offers a boat launch and primitive camping (no water).  
**Glade Creek**  
 The road to Glade Creek is under repair and closed to motorized vehicles; however, it is open for hiking and biking. Glade Creek has a boat launch, picnic tables, and primitive camping (no water).  
**Trails**  

- **Glade Creek Trail** 5.6 miles

 Scenic hiking trail following a trout stream

### Grandview Area

**Grandview Information Station**  
 This small summer-season center offers information and a bookstore. Picnic tables are nearby; shelters may be reserved.  
**Cliffside Amphitheater**  
 Theatre West Virginia offers outdoor dramas nightly in the summer except Mondays. Three musicals are scheduled. Call (800) 666-9142 for information.  
**Main and North Overlooks, Turkey Spur**  
 Overlooks offer panoramic views of the gorge and the New River 1,400 feet below. The main overlook is fully accessible. Turkey Spur requires a 150-step climb.  
**Trails**  

- **Big Buck Trail** 0.7 mile

 Forest loop trail includes information about local trees  

- **Castle Rock Trail** 0.5 mile

 Difficult hiking with close-up views of towering rock walls  

- **Grandview Rim Trail** 1.6 miles

 Hiking trail winds along the ridge through forest and rhododendron thickets; includes several scenic gorge views  

- **Tunnel Trail** 0.4 mile

 Shaded forest path includes cave-like tunnel and wooden steps  

- **Woodland Loop Trail** 0.6 mile

 Scenic forest loop trail

### Sandstone Area

**Sandstone Visitor Center**  
 Water and rivers is the theme of the exhibits and video program. Notable are a floor map of the New River Watershed, a bookstore, and a native plant garden.  
**River Road**  
 A narrow, uneven, 9-mile road leads north from Hinton; there is no direct connection to I-64. Halfway to Sandstone Falls is Brooks Falls, offering river views and picnic tables.  
**Sandstone Falls**  
 A fully-accessible boardwalk winds across islands to viewing areas of the river-wide falls. Boardwalk exhibits enhance the walk.  
**Trails**  

- **Gwinn Ridge Trail** 2.5 miles

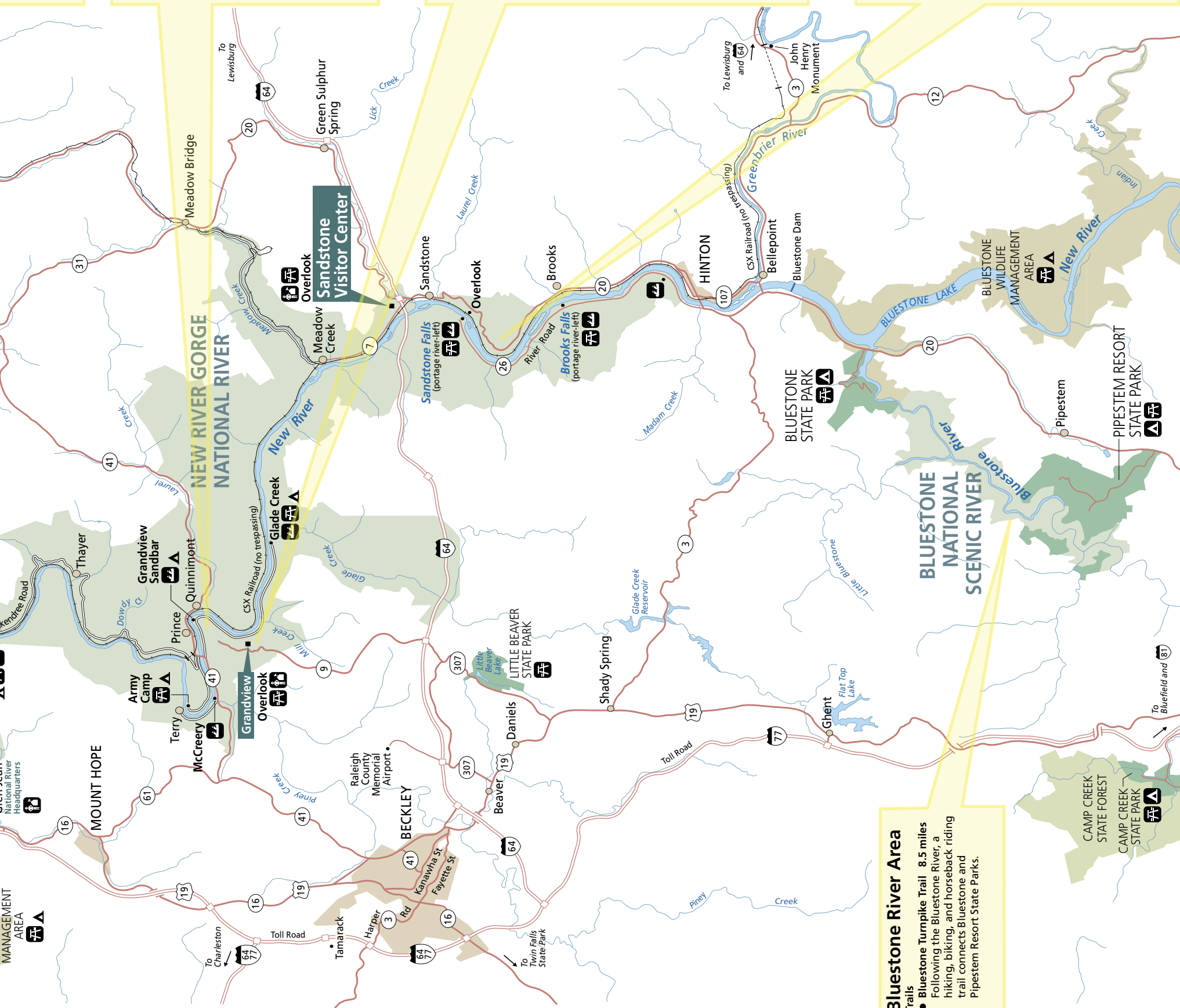
 A loop through a ridge-top forest  

- **Island Loop** 0.5 mile

 Rocky trail circles the first island  

- **Sandstone Falls Overlook**

 A short path from a roadside pull-off on Route 20



### Bluestone River Area

**Trails**  

- **Bluestone Turnpike Trail** 8.5 miles

 Following the Bluestone River, a hiking, biking, and horseback riding trail connects Bluestone and Pipestem Resort State Parks.

# Arrowheads of the Past and Present

Look closely at the National Park Service arrowhead symbol and you will see the purpose of the National Park System—the protection and understanding of all the objects illustrated there—the trees and bison for plant and wildlife, the mountain and river for landscapes and water resources, and all this inside an arrowhead representing the human history of our nation. The arrowhead is a fitting symbol for our history; it is part of the beginning of the human story of our nation.



The story of American Indians in the New River Gorge area of southern West Virginia is very rich, but often misunderstood. Most of the stories involving native peoples center on “historically” documented tribes and their interaction with the European and African peoples who came into this area in



Ancient spearpoint and scraper

the mid 1600s. What we usually consider the beginning of the story is actually an ending.

The story of American Indians in West Virginia began hundreds of generations before the written history. The keys to this amazing story are literally found in the arrowheads and multitudes of other artifacts and historic sites left behind by these ancient peoples.

The oldest artifacts from New River Gorge are Clovis points. Made more than 11,000 years ago over much of North America, these intricately-shaped stone spear points were used by ancient nomadic hunter-gatherers, Paleoindians, to kill mammoth, mastodon, and other Ice Age creatures.

Later artifacts found in excavated village sites, such as pieces of pottery, stone and bone tools, seeds, beads, and arrowheads, show the development of thriving agricultural-based permanent communities connected by a well-established system of trails.

Peoples of the Archaic and Woodland periods lived in our area for thousands of years (from approximately 8,000 B.C. to 1,200 A.D.), constructing palisaded villages and elaborate burial mounds, progressing from spears to bow and arrows, producing clay and stone pottery and art objects, and extensively cultivating corn, squash, and beans. They were the ancestors of the people we know of today in eastern North America as the Cherokee and Shawnee.

Dating artifacts and archeological sites is the first step in unfolding the history of humanity. To carelessly remove or disturb archeological sites is like tearing out chapters from an ancient book or throwing away pieces to a puzzle—the story of our past will never be complete.

The National Park Service arrowhead symbol reminds us all of our responsibility to protect and preserve our nation’s heritage. The lands of New River Gorge National River, Bluestone National Scenic River, and Gauley River National Recreation Area protect 400 documented Indian archeological sites. These sites range from temporary rock shelter campsites to small villages. All artifacts and objects in the parks are protected, and may be collected and studied only by the park archeologist, or authorized university or preservation organizations.

The Sandstone Visitor Center includes an exhibit concerning American Indian peoples and a sample Clovis point. The park occasionally offers special programs, including the display of ancient artifacts, storytelling, and demonstrations of American Indian lifestyles by costumed re-enactors.

## Read All About It!

To learn more about your national parks — read on. When you shop in one of the park visitor center bookstores you increase not only your understanding, but also your support, of New River Gorge National River. Eastern National is a non-profit organization that operates many national park bookstores. It is committed to the National Park Service and other caretakers of public lands.

Eastern National is dedicated to helping visitors find the information, materials, and experiences they need to fully understand and appreciate the places they visit. Eastern National accomplishes its mission by dispersing profits from the operation of book-



Big brown bat in the careful hands of a researcher

## Bats!

When I was studying geology in college, I would have given you a funny look if you told me that I’d be concerned about bats. Yet here I am, the park geologist, marching in the dark out one of the many mine benches in the New River Gorge with the bat survey crew to help count and identify bats roosting in old mine openings. The three-person crew is led by Josh, and we became known as “the bat guys.”

We set up two kinds of traps, harp traps and mist nests, at each of the openings. The harp trap has a rectangular aluminum frame with fishing line strung from top to bottom. In order to exit the mine opening the bat will have to try flying through this but invariably hits the fishing line and drops safely into a plastic bag below where it is collected by a bat guy, identified, and released.

The mist net is a large very fine nylon netting propped up in front of the mine opening. The net is fine enough that the bat doesn’t sense it until it’s too late and gets tangled up. A bat guy wearing thick leather gloves then spends what seems an eternity untangling the bat.

stores in parks from Maine to Puerto Rico, directly and indirectly to the National Park Service for its programs. Since its inception in 1947, Eastern National has donated over \$77 million to the National Park Service, with \$5,963,822 donated this past fiscal year.

Stop by visitor center bookstores to discover field guides, children’s books, posters, postcards, puppets, and books covering a wide range of history and nature subjects. All materials are carefully selected and must be both interesting and educational. Eastern National offers additional products on the web at [www.eparks.com](http://www.eparks.com). To learn more about Eastern National, access the web site at <http://www.easternnational.org>.

Once the bats start emerging, the evening goes pretty quickly. Josh pulls bats out of the traps, back lights them with a flashlight, scrutinizes the wing membrane, and calls out to me, “adult, male, little brown!” He pulls out pipistrels, northern, small-footed, big browns, Indianas, and Virginia big-eared bats. Josh particularly enjoys it when a big brown hits the net. “Looks like a B-52 compared to the others,” he says, wincing from the pressure of its bite through his thick leather glove.

Bats are still among the world’s least appreciated and most endangered animals. Like other wildlife, bats suffer from habitat loss and environmental pollution, but persecution from humans remains a primary cause of their decline. There are thirteen bat species documented in West Virginia; three are federally listed as endangered (Virginia big-eared bat, *Corynorhinus townsendii virginianus*; gray bat, *Myotis grisescens*; and Indiana bat, *M. sodalis*) and two are identified by the West Virginia Division of Natural Resources as rare or critically imperiled in West Virginia (Rafinesque’s big-eared bat, *C. rafinesquii*; and small-footed myotis, *M. leibii*). The abandoned coal mines, large tracts of intact forest, and reliable water sources at New River Gorge National River and Gauley River National Recreation Area serve as an important habitat for bats. Protecting these resources benefits all bats in the area.

I find it both important and fascinating to discover what is living in these old mine openings. My firsthand experience with the bats will help me to develop a range of measures to protect their habitat. Although old mine works in the park are mostly devoid of coal, they still serve an important purpose and are worthy of preservation.

*Gene Clare, NPS Geologist*

# Traveling Home

The peregrine falcon is the world's fastest bird. It can reach a speed of over 200 miles per hour in a vertical dive, and in level flight average about 40 to 55 miles per hour. The name "peregrine" comes from Latin *peregrinari*, "to travel in foreign countries," referring to the peregrine's habit of making long fall and spring migrations between its North American nesting and South American wintering habitats. Despite these travels, these majestic birds have not been seen in New River Gorge National River in many years. It is time they traveled home.



Peregrine falcon chicks in "hack" box

National Park Service and WV Department of Natural Resources staffs are "hacking" peregrine falcons within New River Gorge National River as part of a multi-year restoration program for the species. Hacking is the process of placing young falcons in a structure and caring for the birds in a manner that minimizes human exposure until the birds are mature enough to fly. The hack box simulates nesting and feeding conditions on steep rock cliffs. This cage-like structure also protects the birds from predators during the pre-flight period while allowing them to acclimate to and imprint on the Gorge. When they are ready to 'fledge'

(fly), they are released from the box, but will return for occasional feedings until their hunting skills allow them to survive on their own.



Placement in a temporary home

Peregrine falcons began to decline in the 1950s because of pesticide use, which disrupted eggshell formation and led to nest failure. The species was officially listed as federally endangered from 1970 until 1999, when recovery objectives were met in most regions. However, peregrine falcons are still very rare in the eastern U.S. and only one pair of peregrines is known to be nesting in West Virginia this year.

The goal of this effort is for the released birds to become imprinted on the New River Gorge and, once they are sexually mature, to return here to nest. The returning falcons may also attract other migrating falcons, allowing the gorge to become a center of peregrine falcon nesting activity and a source of falcons to re-colonize other portions of their historic range in the central-Appalachian region. Once again, these regal birds will have traveled home.

# How's the Water?

*continued from page 1*



Water quality sampling on the New River

To fulfill its mission to protect the natural resources of these parks, the National Park Service monitors water quality at about forty sites. Regular monitoring indicates that water quality is often impaired by fecal coliform bacteria contamination during periods of high turbidity, recent

precipitation, and high discharge. The rivers may also be negatively affected by trace metals and other compounds, sediment, and acidic runoff.

The National Park Service takes a proactive stance to maintain and improve water quality in the three parks. We share information and work with watershed associations, local communities, counties, and state and other federal agencies, environmental groups, industries, schools, and individuals to foster a sense of responsibility for these nationally important waters so that water quality is improved and maintained to inspire future generations.

For more information about water quality in the three parks, please contact the Aquatic Resources Team program leader, Dr. Jesse M. Purvis, at (304) 465-6513.

# Bearly Edible

The gastronomic delights acquired by wild animals in their nightly perusal of trash cans are detrimental to their health, and the resulting mess created by their less than epicurean manners creates a costly clean-up.

Raccoons, bears, crows, and deer are especially likely to eat the remains of picnics and parties – not a healthy foraging adaptation. Illegally feeding park animals contributes to the animal's familiarity with humans as a food source. Foods that people find edible, from popcorn to potato salad, are rarely nutritionally adequate for animals and may cause serious health problems. Bread, for instance, is almost impossible for deer to digest.

Animals that become accustomed to treats found in garbage cans may inadvertently consume plastic, paper, fishing line, aluminum foil, Styrofoam, and other indigestible products that can clog their digestive systems. And, when animals learn that humans can provide a cheap and easy food source, they often lose their natural fear of humans, and this leads to safety problems for both parties.



Black bear are common park inhabitants

While the health of park animals is a major concern, unsightly trash around the raided cans creates hours of extra work for maintenance crews. To protect wildlife and alleviate the wasted time spent cleaning up, the National Park Service has put into place a number of bear-proof cans that have made a difference in solving this unsightly and unhealthy problem.

Please make use of these cans when visiting the park. And please, please DO NOT feed the animals – it is against the law, but more importantly it is harmful to wildlife!

# Forbidden Fruits



Appalachian ginseng

Sheet moss, ginseng, black cohosh, bloodroot, redbud, cherry trees, shrub yellowroot, and grapevines... what do these plants have in common? Each occurs within New River Gorge National River and is highly desired for its commercial value. Each year, hundreds of plants are illegally harvested for medicinal use, their landscape appeal, or for the craft industry.

Ginseng, a slow-growing plant native to the hardwood forests of the eastern United States, has been harvested for centuries as a healing herb and is prized in the Orient for its purported curative properties. Today, the world demand for Appalachian ginseng is so great that the price is soaring, poaching is increasing, and the plant is disappearing.

Sheet moss, although it pays relatively little, is rapidly becoming the "quick buck" of the commercial harvester. Large sections of moss are ripped from the ground, rolled like a carpet, and stuffed into bags. The moss is used in the craft and nursery industries to line flower baskets. Traditionally, moss was used to line caskets, and is still occasionally used for that purpose today.

Although plants are taken for their short-term commercial value, they have a more important long-term role in the ecosystem of the park. Many plants are food sources; others offer shelter and shade for a variety of animal and other plant life. When one species is eliminated from the forest, it changes the dynamics of the entire ecosystem.

Occasionally plants are illegally taken from our state and national parks and forests due to unfamiliarity with park boundaries and regulations. For some, however, the money makes it seem worth the risk. Imagine the loss if every one of the over one million visitors to New River Gorge National River took one bag of moss, or one cherry tree, or one ginseng plant.

All of the plants within the park are protected forever, so that present and future generations can enjoy them, and so the ecosystem can develop and evolve. You can help. Commercial harvest is illegal. If you see someone digging plants or cutting trees within the park, please notify the park rangers. Help us to educate collectors and to protect your national park.

# Especially for Kids!



## Parks are Homes

Many different kinds of animals find food, water, and shelter in the park. Trees are animal homes and hiding places. The seeds of some trees are animal food.

Find ten animals hidden in this tree, and then use the code to find the name of each.



- |     |      |      |      |
|-----|------|------|------|
| 1=A | 7=G  | 13=M | 20=T |
| 2=B | 8=H  | 14=N | 21=U |
| 3=C | 9=I  | 15=O | 22=V |
| 4=D | 10=J | 16=P | 23=W |
| 5=E | 11=K | 17=Q | 24=X |
| 6=F | 12=L | 18=R | 25=Y |
|     |      | 19=S | 26=Z |

- |    |    |    |    |    |    |    |    |
|----|----|----|----|----|----|----|----|
| 18 | 1  | 3  | 3  | 15 | 15 | 14 |    |
| 3  | 8  | 9  | 16 | 13 | 21 | 14 | 11 |
| 18 | 1  | 2  | 2  | 9  | 20 |    |    |
| 4  | 5  | 5  | 18 |    |    |    |    |
| 7  | 18 | 1  | 25 | 6  | 15 | 24 |    |
| 19 | 17 | 21 | 9  | 18 | 18 | 5  | 12 |
| 15 | 16 | 15 | 19 | 19 | 21 | 13 |    |
| 2  | 12 | 21 | 5  | 10 | 1  | 25 |    |
| 20 | 21 | 18 | 11 | 5  | 25 |    |    |
| 19 | 14 | 1  | 11 | 5  |    |    |    |

## The Arrowhead is the National Park Service symbol.

Using what you see on the arrowhead, fill in the blanks.



The \_\_\_\_\_ represents all of the plants that grow and are protected in your National Parks.

The \_\_\_\_\_ represents all of the animals that live in parks and are protected in your National Parks.

The \_\_\_\_\_ represents the different landforms that are found in your National Parks.

The \_\_\_\_\_ shape represents many stories from the past and special places in history that are preserved in your National Parks.

N	E	W	Z	A	R	I	V	E	R	O	G	O	R	G	E	L	P	M
W	Q	N	A	T	I	O	N	A	L	Z	X	A	S	L	I	V	E	T
A	Z	W	X	S	X	E	D	C	R	F	T	R	I	V	E	R	Y	T
L	B	E	L	O	N	G	S	D	S	Q	W	E	R	T	Y	U	I	O
Q	K	J	H	G	F	M	M	T	O	G	E	V	E	R	Y	O	N	E
L	P	O	H	O	W	Q	C	A	N	Q	Y	O	U	Q	E	L	R	W
H	E	L	P	S	L	D	R	T	O	V	P	R	O	T	E	C	T	C
M	M	J	T	H	E	R	O	T	E	A	P	A	R	K	X	E	W	C

- |         |            |
|---------|------------|
| - HOW   | - RIVER    |
| - NEW   | - GORGE    |
| - TO    | - HELP     |
| - CAN   | - BELONGS  |
| - TO    | - PROTECT  |
| - YOU   | - NATIONAL |
| - RIVER | - EVERYONE |
| - THE   | - PARK     |

Find the hidden message. Can you give three answers to the question?

- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_

Arrowhead Answers: TREE, BISON, ARROWHEAD, WATER, MOUNTAIN