

| | |
|--|--|
| | <p>>>Skinner: Hi. I'm Michael Skinner and welcome to Georgia Outdoors. We're going to visit Providence Canyon as well as some other unique places coming up next.</p> <p>>>Male Narrator: Who is devoting a great deal of effort and resources to protecting Georgia's environment? The same company that helps maintain the environment inside your home. Georgia Power, proud sponsor of programming on GPTV.</p> <p>>>Male Narrator: The landscapes of Georgia are so varied and diverse that they support a region full of natural and geologic wonders. Georgia is a land of rolling foothills and lush valleys, of roaring rivers and whispering streams, of majestic mountains and immense canyons. Many people may not know that Georgia is the largest state east of the Mississippi River or that Georgia is the 5th most naturally diverse state in the country or that Georgia is home to more vertebrates than any other state except one.</p> |
| | <p>Did you know that Georgia has its own seven natural wonders? Many, you may have heard of, or even visited.</p> <p>In the north, there is Tallulah Gorge. This deepest gorge in Georgia is nearly one thousand feet deep and almost two miles long.</p> <p>Nearby is Amicolola Falls. Amicolola is a Native American word meaning "tumbling waters" a good name for this seven hundred and twenty nine foot falls. That's 4 times higher than Niagara Falls.</p> <p>Farther south, near Atlanta, is Stone Mountain, a rounded mass of granite</p> |

| | |
|--|--|
| | <p>two miles long and one mile wide. It is the largest stone mountain in North America.</p> <p>In the farthest southeastern corner of the state is the Okefenokee Swamp, a name that means “trembling earth.” Visiting the swamp is like stepping back in time—a beautifully preserved segment of what was here when America began.</p> <p>Just northeast of the Okefenokee Swamp is Radium Springs. The waters here are sapphire blue and dip to temperatures as cold as 27 degrees. Some of the purest waters in the world can be found in the caves beneath this wonder of Georgia.</p> <p>North of the cool waters of Radium Springs is Warm Springs. The waters are a warm 88 degrees year-round.</p> <p>Of the seven wonders of Georgia, only one did not occur completely naturally. It is a canyon called Providence.</p> |
| | |
| | |
| | |
| | <p>Sometimes called the Little Grand Canyon, the steep horizontally striped walls evoke the images of the great western landscapes of Utah and Arizona conveniently located near the western border of Georgia.</p> |
| | <p>>>Joyner: The canyons here started forming about the 1830's or 1840's. The settlers came to this area around the 1820's and they farmed cotton here. They didn't know much about erosion control as they plowed their fields the same way year after year, and the soil started washing away and the canyon started forming within about twenty years. When you are looking across at the canyon walls, the different colors you see are the different</p> |

| | |
|--|--|
| | <p>geological periods. The top formation, the Clayton formation is the red soil. The red mostly has iron in it, but beneath that is the Providence sands and the perote member of the Providence sands, then on the canyon floors is a ripley formation. There are forty-three different colors of sands on the canyon walls due to the different mineral contents.</p> <p>Most of our soil here is very sandy because this area was covered underneath the ocean 80 million years ago. Each time the ocean waters rose, it deposited the soil that was in the sand at that time. The line that you see between the different colors on the canyon walls represents like a thousand year span.</p> |
| | <p>The canyons are constantly growing in size; we lose between three and five feet a year. With sixteen canyons in all, it's an inch here and an inch there. Now the canyon floors do not get any deeper because a canyon floor is an ancient sea floor. Uh, during hard rains, the canyon floor rises because of the soil that is washed down, but that soil eventually washes out, goes out into Grass Creek, Chattahoochee River, Apalachicola River, and it ends up in the Gulf of Mexico.</p> |
| | <p>>>Narrator: These canyons are ever-changing. In one hundred and sixty years a small drainage gully grew into one of the seven wonders of Georgia and who knows what this place will look like in another one hundred and sixty years.</p> |
| | <p>>>Joyner: I have really enjoyed working here at Providence Canyon because we have such natural wonders here. I love interacting with the public and showing them the special things that are here, and how they may go out and see all of the beauty.</p> |
| | <p>>>FEMALE NARRATOR: Coming up, discover a preserved rocky oasis amongst the farmlands of south Georgia, but first, visit the mountains of northwest Georgia.</p> |
| | |
| | <p>>>Male Narrator: Georgia consists of 4 geologic regions. The northwestern region is called the Valley and Ridge, or sometimes referred to as the Cumberland Plateau. This area was formed by sedimentary rocks that have folded and faulted to cause long angled valleys and ridges giving the region its name.</p> |

| | |
|--|---|
| | <p>The King of the region is Lookout Mountain and on its western edge is Cloudland Canyon, a deep gorge that cuts into the sandstone nineteen hundred feet.</p> |
| | |
| | <p>>>Narrator: One person that is learning more about the area is Shawn Elmore. As a Cloudland Canyon State Park employee, increasing his knowledge of the area is an on-the-job requirement.</p> |
| | |
| | <p>>>Elmore: The geology of Cloudland Canyon dates back to the Mississippian and the Paleozoic area, probably 325 to 340 million years ago. And back at that time, this part of the world was ocean. This area was around the shoreline. It started out with all of the sedimentation from the ocean, settled down, and over time just compacted, and the earth shifted forming ridges. Some of the pressures would form cracks. They are known as anti clines and synclines. The anti clines are uprisings and the synclines are the down risings. Wind, rain eroded away all of the softer sand. The shale layers is what forms the canyon.</p> |
| | <p>>>Narrator: Safety is a concern at cloudland canyon. The rocks here are not compact and solid, they are layered and loose, and water trickles between the layers. The sandstone rocks of the canyon are fitted together like a puzzle; if one person pulled out the wrong rock they could all come tumbling down. So it's a good idea to stay on the trail and keep your hands to yourself. Everything that is wonderful about the canyon. The flora, the fauna and the vistas, can be viewed from the trail.</p> |
| | <p>>>Elmore: Some of the wildlife that you will see here at Cloudland Canyon, we've got some white tailed deer here, we've got a real good population of wild turkeys. We've got timber rattlers, copperheads, gray rat snakes, king snakes, got a vast array of wildlife here. We've also released some peregrine falcons up here to try and introduce them here back to their natural habitat. The peregrine falcons like these rocky outcrops. We've got a red tailed hawk that was rehabbed and released here. He stays around here. There's a lot of people come up here especially over the canyon to do some bird</p> |

| | |
|--|---|
| | watching. |
| | |
| | >>Narrator: Just south of Cloudland Canyon lies the Queen of the Valley and Ridge region, Pigeon Mountain. And cut into the northern slope of the mountain lies an area known for its quiet solitude and native wildflowers called the Pocket. The Head Ranger for the area is Alan Padgett, he tells us more... |
| | >>Padgett: A pocket tends to be a round shaped valley with a narrow opening out of it. The pocket here is that way. It's a big basin with a narrow valley going out of it or a canyon because of the down cutting through the rock cliffs. And it provides very rich soil and a climate that is just right for these wildflowers, and that is why it's such a fragile area because there are so many factors that come in here that just aren't found in many other places all together in big quantities at once. |
| | |
| | >>Narrator: One person who really knows the botany of the "pocket" well is DNR botanist, Tom Patrick. |
| | >>Patrick: A lot of people say that this is the richest and prettiest part of Georgia. It is difficult for me to say that about any one particular area, but I will say that in the Spring, the flowers here are so massive in their numbers that the whole forest floor is a carpet. One person has described the charm of the pocket as looking like a Cub Scout Convention, because in the early Spring there is a massive yellow and a massive blue with blue bells and it sort of reminds those of us familiar with cub scouts as a bunch of little cub scouts sitting around. |
| | >>Narrator: The elevated wooden platform protecting the wildflowers is named after the former first lady of Georgia and wildflower enthusiast, Shirley Miller, This meandering boardwalk creates a safe place to stroll and take in the beauty of the flowers without damaging the delicate soil that allows these wildflowers proliferate here. We thought it might be fun to take a tour with Tom and put my botany skills to the test. Let's see how many plant species I can identify. |

>>Skinner: Now go easy on me. I know a lot of these flowers in here, but I know there's an awful lot that I don't know. Now I'm with an expert, so let's see how I do.

>>Patrick: Well, how about this one that looks like an upside-down pair of pants.

>>Skinner: Upside-down pair of pants?

>>Patrick: Like a pair of pants on a clothesline.

>>Skinner: Oh, the Dutchman's britches, right?

>>Patrick: Very good Michael...One of the famous plants on here is the yellow one that's just beginning to bloom.

>>Skinner: And those are celandine poppies.

>>Patrick: And here's a real special one that's just coming into bloom.

>>Skinner: This fellow right here is the trillium, and that is the white trillium. Correct?

>>Patrick: Correct. How about this other kind?

>>Skinner: The one with the variegated leaves? That's the trailing trillium?

>>Patrick: Ok. You're doing pretty good. But here's one for you, this little inconspicuous thing.

>>Skinner: Now you've come to it. Now you've come to one I don't know. What do you have here?

>>Patrick: Well most would call it the blue cohosh.

>>Skinner: Well I'm not doing too badly. I know you're going to get me though.

>>Patrick: And if it were a bright, sunny day, these little pink flowers would be looking at you. What are those little things?

>>Skinner: Now those are ones I learned a long time ago. Those are spring beauty.

>>Patrick: And these little things here with the mustard-like flowers?

>>Skinner: Right down there is a...toothwort?

>>Patrick: Excellent. Cutleaf toothwort. Now another famous plant for the pocket is this bright blue one.

>>Skinner: And one of my favorites, a Virginia bluebell. I'm kind of surprising

| | |
|--|--|
| | <p>myself. Patrick: There's a little white flower back there that looks almost like a star. >>Skinner: Chickweed. >>Patrick: Excellent. Let's see. There's sort of a grass-like leaf coming up in bunches. That's one of the real special plants in the pocket. >>Skinner: Is that one of the hyacinths? >>Patrick: It's a wild hyacinth...A bunch of little ferns at the bottom of that hophornbeam tree. Any ideas? >>Skinner: The ferns are something that I should be better at, so I'll just have to tell you that I don't know that one. >>Patrick: That's ok. That's the southern fragile fern. >>Skinner: So there's how many species of flowers here? >>Patrick: You can find on Pigeon Mountain about 60 different kinds of wildflowers in the springtime. >>Skinner: In our walk so far, I've identified how many? >>Patrick: A good many of them. You did very good. >>Skinner: Well I appreciate you working with us. Let's head on down the trail here. >>Patrick: Ok.</p> |
| | <p>I had a lot of fun today testing my knowledge of plant species and I didn't do too badly after all. Next time, Tom might not be so easy on me.</p> |
| | <p>>>FEMALE NARRATOR: Georgia consists of 4 distinct geologic regions. They are the Valley and Ridge, the Blue Ridge, the Piedmont and the Coastal Plain.</p> <p>The Valley and Ridge consist of Paleozoic sedimentary rocks, which have been pushed northwest on top of each other creating ridges and valleys.</p> <p>The Blue Ridge is made up of metamorphosed equivalents of the rocks</p> |

| | |
|--|--|
| | <p>of the Valley and Ridge. Here the mountains are steeper and many of the highest points are balds.</p> <p>The Piedmont is a region of metamorphic and igneous rock like granite. The soil of the Piedmont Region is the red colored clay for which Georgia has become renown.</p> <p>The Coastal Plain is made up of Cretaceous sedimentary rocks, which eroded from the Piedmont Region. The lower coastal plain is a series of beach complexes made up of white quartz sand.</p> <p>These four regions of Georgia exist because over 300 million years ago North American and Africa collided thrusting sheets of rock over each other. The steady hand of erosion has created the landscape we see and enjoy today.</p> |
| | <p>Next, discover an area of unique beauty and diverse flora, Broxton Rocks.</p> |
| | <p>>>Narrator: In South Georgia, nestled between rolling farmlands and pastures, lies a rocky outcropping of sandstone. This is a rare occurrence in the coastal plain. This rocky oasis supports an abundant flora. Colonies of plants that grow only in the piedmont or north Georgia mountains have found a home here. The Nature Conservancy of Georgia owns this preserve. They call it Broxton</p> |

| | |
|--|---|
| | <p>Rocks.</p> <p>>>Narrator: Waterfalls are very rare in the Coastal Plain of Georgia, where the sedimentary rock layers were eroded smooth and flat millions of years ago.</p> <p>But here, on this seven hundred and eighty acre preserve, Rocky Creek has exposed the single largest extrusion of sandstone in south Georgia.</p> <p>The Nature Conservancy is a not-for-profit organization that seeks to preserve the lands and waters that support the extraordinary diversity of our planet. One of the chief volunteers working on the Broxton Rocks preserve is Frankie Snow, a botanist at South Georgia College.</p> |
| | <p>>>Snow: My contribution to Broxton Rocks has basically been a botanical survey. In 1984 we located one of the rare shrubs in Georgia called the Georgia Plume, and after that or starting with that we have been able to locate over 500 species of shrubs, trees and various herbaceous plants that are found here, and it turns out that some of those are very rare, and so I felt like it was imperative that someone like the Nature Conservancy protect the area.</p> <p>>>Skinner: Wow, look at that.</p> <p>>>Snow: Yeah Michael, this is spiderwort. Now in many people's yards, this occurs as a weed, but not this particular species. This one is confined to sandstone outcrops. This is the hairy-leafed spiderwort.</p> <p>>>Skinner: Wow Frankie, this is really neat. What's going on here?</p> <p>>>Snow: Here we have a post oak that's rubbed against the sandstone and the post oak is growing around the rock itself where the injury took place. So it appears that the post oak itself is holding up this rock formation.</p> <p>>>Skinner: And this rock is interesting too</p> |

| | |
|--|--|
| | <p>because I'm seeing a couple of different types of sandstone.</p> <p>>>Snow: Exactly, the upper area of the sandstone is very well cemented, but as you see down here when you touch the lower area, the rock comes off on your hand and it will undermine. And eventually this rock will topple over and fall into the stream bottom.</p> <p>>>Skinner: I'm quite amazed here Frankie. This kind of reminds me of Rocktown up in Northwest Georgia.</p> <p>>>Snow: Yes. Look we have a hairy lip fern. This is one of the ferns that we don't normally expect to find in south Georgia, but it's here at Broxton Rocks in profusion. It does very well here on these dry rock outcrops.</p> <p>>>Skinner: And this is resurrection fern, is it not?</p> <p>>>Snow: Yes this is resurrection fern here that's suffering from the lack of water. It's beginning to shrivel up. However, with additional rainfall, it will immediately begin to resurrect, if you will.</p> |
| | <p>>>Skinner: we're here with Randy Tate, Director of Science and Stewardship for the Georgia Field Office of the Nature Conservancy. And we are in the middle of what here Randy?</p> <p>>>Tate: We are in the middle of a unit that was prescribed burned about a month ago, a little less than a month ago. And we are seeing some really nice fire effects from the burn that we did here, uh a lot of rejuvenation in the wire grass, this little longleaf took a lot of heat, got a lot of scorch on it and it is still going to live. Long Leaf pines loved to be burned and it gets by quite well.</p> <p>>>Skinner: Why is fire an important tool for management.</p> <p>>>Tate: Well, fire opens up the area uh that you have here, uh kills back some of the hardwood shrubs and allows the wiregrass and the other sun-loving plants light. And long leaf pine needs a bare seed mineral soil bed to germinate, so basically without fire you would lose the light to the forest</p> |

| | |
|--|--|
| | <p>floor and you would lose the ability of a lot of species to regenerate.</p> |
| | <p>>>Tate: For the future of Broxton Rocks I would like to see the restoration complete. We have a lot of restoration work to do and I would also like to see people enjoying the property and appreciating the work. We would like to involve people in our restoration projects and uh hopefully what we learn by doing restoration here can be transferred to other areas that people can get excited about bringing back the natural areas of Georgia that we are losing and have lost.</p> |
| | <p>>>Skinner: Joining me now is Steve Friedman, land protection specialist with the Georgia field office of the Nature Conservancy. What are we going to now Steve?</p> <p>>>Friedman: Well this is one of the mosses that grows on the rocks and what we'll do is just pour a little bit of water on it and just to demonstrate kind of an artificial situation obviously, but one of the things that makes Broxton Rocks so beautiful is when you come out here after it rains. And just the way these mosses just explode. You're looking at it now and it's so dark, but when it's wet, the colors that are in these mosses, the greens and the yellows. When you look over, to me, it's one of the things that really makes Broxton so special. So we're trying to kind of to create that situation.</p> <p>>>Skinner: And look at that. That is absolutely amazing. Look at just in a few seconds what's happened.</p> <p>>>Friedman: Yeah. And just imagine if you were looking at a vast expanse of the rock after a rainfall.</p> |
| | <p>There are so many reasons to protect this area. There's such an amazing diversity of plant life here. Within the Rock creek drainage system, which is where we are now, there are over 500 hundred species of plants that are living in this area. Compare that to all of Coastal Georgia where you</p> |

| | |
|--|--|
| | <p>have maybe a 1,000 species of plants. So within this small area is such a remarkable diversity. There is a number of really rare and unique animals living here. The concentration of Indigo snakes, which is a federally protected animal that is near extinction is highest in this area than you know in any other area. So if you don't protect areas like this, and animals like that, and this remarkable diversity of plant life will disappear.</p> |
| | <p>>>Narrator: This area has been described as a botanical superbowl. There is the story that a visiting scientist was once so excited to find a new species of Quillwort that he began to hyperventilate. A place that can inspire that type of physical reaction deserves the special treatment it is receiving from the folks at the Nature Conservancy. We were fortunate to see such a place. We were fortunate to visit all the places you saw today. Georgia is our state; a place of unique beauty and some still undisclosed secrets. It is our state to share and protect.</p> |
| | <p>>>MALE NARRATOR: Who is devoting a great deal of effort and resources to protecting Georgia's environment? The same company that helps maintain the environment inside your home. Georgia Power, proud sponsor of programming on GPTV.</p> <p>>>Narrator: Whether you're an outdoors enthusiast or just an armchair adventurer, gear up every week for new and exciting experiences next time on Georgia Outdoors.</p> |