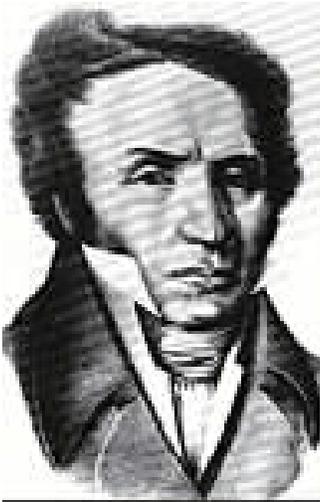


## MICHAUX



André Michaux

The Roan Mountain Naturalists' Rally is part of a long tradition of natural history explorations in the southern Appalachians. The Roan highlands have been a magnet for scientists studying the area's flora and fauna for over 200 years. The first to arrive was the French botanist André Michaux who visited when George Washington was our President and Tennessee was not yet a state. Several historical highway markers in North Carolina and one in Tennessee take note of Michaux's journeys, but information about this early explorer is elusive.

A dozen years ago the late Charles Kuralt delivered a stirring eulogy to Monsieur Michaux to mark the 200<sup>th</sup> anniversary of the Frenchman's climb of Grandfather Mountain. Kuralt saw in Michaux some of the best qualities of man, courage, determination, physical and intellectual achievement and called him "...one of the most remarkable human beings of the 18<sup>th</sup> century or of any century".

On the summit of Grandfather the usually taciturn botanist was so overcome by the scene of endless mountains stretching below him that he broke into song and shouted into the wind his hope that America, and France, and liberty, would long endure. If scenery could move him to sing, what must he have done when he came upon his first Catawba rhododendron in flower? He would have immediately recognized that this was a new and undescribed species of rhododendron and been delighted with his find.

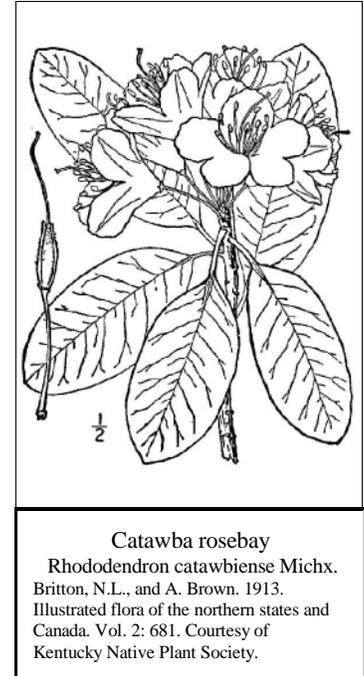
Plants were this man's very life. In a journal and letters he recorded the many hazards and difficulties he overcame in his search for the new and different in the world of plants. No mountain was too steep, no river too broad, no distance too great for this French farmer whose intelligence, persistence and vision enabled him to rise from simple cultivator of the soil to the front rank of Enlightenment scientists.

The French king sent Michaux to America to gather seeds and young trees for the forests of France. He did that, sending more than 60,000 seeds and trees to his homeland. Moreover, in Michaux we had a man with the boldness and energy to explore all across eastern North America and the skill to draft the continent's first flora. Michaux authored the first scientific descriptions of hundreds of species of our native plants and many retain the scientific names that he chose for them over 200 years ago. This was a remarkable achievement in an ever-changing discipline.

Today a row of metal cabinets twelve feet high in the French National Museum of Natural History holds the physical records of Michaux's American plant discoveries. There in a worn manila folder like so many other folders in his herbarium, is a carefully dried and preserved specimen, a flower and leaves to which he attached the new name *Rhododendron catawbiense*. Michaux's note reveals that this was the rhododendron he found on the highest mountains in North Carolina.

Writing in the *Tennessee Conservationist* in 1998, Bob Fulcher advanced the idea that Michaux must have first seen the Catawba rhododendron on his initial journey to the Roan highlands on the 24<sup>th</sup> or 25<sup>th</sup> of June 1789. Since Michaux did not record the date, we can never be certain, but Fulcher's suggestion is an insightful, educated guess. Michaux was at the right place at the right time to make the discovery. What must this Frenchman who had grown up in the shadow of the gardens of Versailles have thought of the natural gardens on the summit of Roan painted purple with this rhododendron? It was among his most beautiful discoveries. Michaux loved plants, so it is safe to say he would have thought his exertions to climb the mountain worthwhile just to record this one lovely new species.

--Charlie Williams  
3-7-2006 (the 260<sup>th</sup> anniversary of the birth of André Michaux)



**Charlie Williams, from The Andre Michaux International Society of Charlotte, North Carolina, will be our featured speaker at the Friday evening program of this year's Spring Rally. Charlie will give a first-person presentation of this famous botanist.**

## Some Facts About Bog Turtles in the South

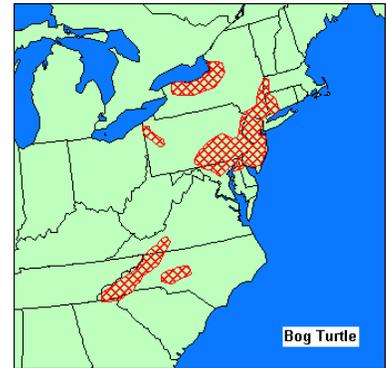


— Bern W. Tryon

The beautiful little bog turtle is the smallest of North American turtles and the average adult size is about 3½-4 inches in shell length. It can be readily identified by a dark mahogany to nearly black shell and with bright yellow or orange patches on both sides of the head.

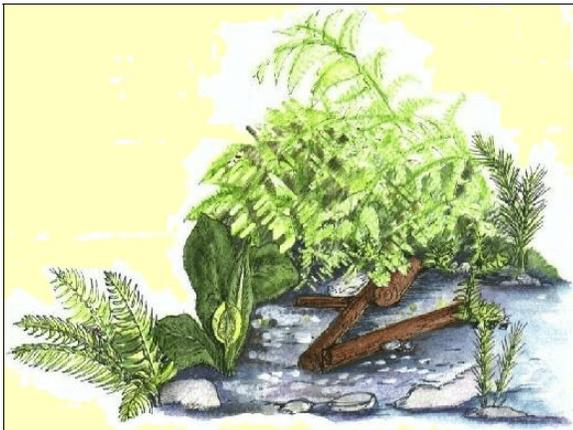
These turtles are known to occur in 12 eastern states, seven in the northeast and mid-Atlantic, and five here in the south.

A gap of about 250 miles separates the “northern” and “southern” populations of this species. In the south, it has been documented in 33 counties and all records have come from the Southern Appalachians, Blue Ridge, and upper Piedmont regions of western North Carolina, SW Virginia, NW South Carolina, NE Georgia, and upper east Tennessee. North Carolina appears to be the stronghold in the south and it has a very peripheral range into each of the other four states.



Protected as either threatened or endangered in all 12 range states, the bog turtle received federal protection in 1997 when the U. S. Fish and Wildlife Service placed the northern population on its list of federally “Threatened” species, while here in the south it is considered “Threatened by Similarity of Appearance.” In reality, the species continues to decline range-wide, primarily due to habitat destruction through development and alteration of the existing hydrology, and through illegal commercial collection.

Bog turtles are extremely habitat specific, and all populations are known from spring-fed wetlands characterized by shallow, flowing water over a deep layer of peat mud and corresponding vegetation such as sphagnum moss and a wide variety of sedges. Such habitat is often called a “Mountain Bog” here in the south, but many of the largest populations are known from “Pasture Bogs” or “Meadow Bogs” (ie, wet meadows) in areas that are mostly open to full sunlight and have been or currently are lightly or moderately grazed by livestock. Mountain Bogs are considered an imperiled and disappearing ecosystem, and the bog turtle is considered a “Flagship Species” of this habitat. Most bogs in the south average about three acres in size, and under ideal conditions, turtle populations may number 15-20 per acre of habitat.



Bog turtles are long-lived and “old” turtles are undoubtedly 50+ years of age. Sexual maturity is reached at 8-10 years, females produce egg clutches numbering 1-6 eggs, and the average clutch size is three eggs. Reproductive recruitment is very minimal for a number of reasons. First, females do not lay eggs annually, and often during the 60+ day incubation period the eggs are eaten by various predators. Should eggs hatch, the tiny (about one inch in shell length) hatchlings and juveniles routinely fall prey to predators as well. It is estimated that probably less than 10% of all hatchlings will survive to reach sexual maturity.

In Tennessee, this species is known to naturally occur in only one county, and studies there over the past 20 years have shown that currently fewer than 100 turtles are known to exist in this population. In order to

boost the number of bog turtles surviving in our state, an experimental captive-breeding/release program was initiated by the Knoxville Zoo in 1991, and to date 113 turtles have been released into a large Mountain Bog that did not contain a naturally-occurring population of these turtles. Recapture studies there have demonstrated that minimally, 50% of this young population is surviving well. In 2005, the first turtle nest was documented, and although these three eggs proved to be infertile, this reproductive activity provides much optimism for the future of this experimental program.

**Bern W. Tyron, Director of Animal Collections for Herpetology, Knoxville Zoological Gardens will present our Saturday evening program, “Conservation, Restoration and Management of the Bog Turtle in Tennessee”.**



I rose up this morning  
early as usual, and went to my desk.  
But it's spring,

and the thrush is in the woods,  
somewhere in the twirled branches, and he is  
singing.

And so, now, I am standing by the open door.  
And now, I am stepping down onto the grass.

I am touching a few leaves.  
I am noticing the way the yellow butterflies  
move together, in a twinkling cloud, over the field.

And I am thinking: maybe just looking and listening  
is the real work.

Maybe the world, without us,  
is the real poem.



Excerpt from Mary Oliver's *The Leaf And The Cloud*: a poem,  
Da Capo Press, 2000.

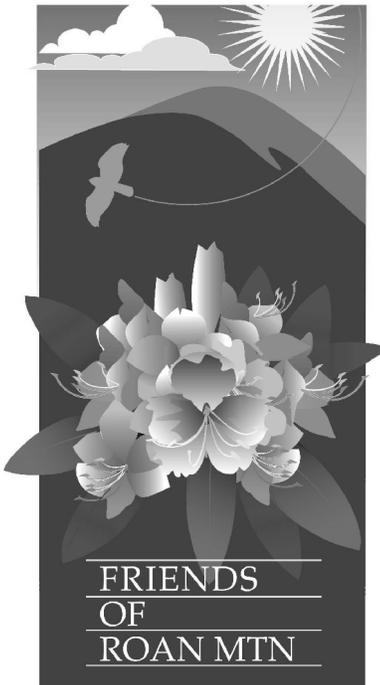
**Don't forget to send in  
your reservations for the  
Rally dinners and lunch  
Deadline is  
Wednesday, May 3.**

You can find a reservation form on our  
website

<http://www.etsu.edu/biology/roan-mtn/>



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*Editor  
Nancy Barrigar  
708 Allen Avenue  
Elizabethton, TN 37643  
(423) 543-7576  
barrigarn@earthlink.net*

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