



# ***The Truth About Trees***

*— Ross Spears*

Trees are so much a part of life on Earth that they are often invisible to us. Perhaps because the lifespan of trees is so different from ours, we tend to undervalue their stature as living organisms.

So present are they that we take little notice of their long history and enormous ecological and symbolic value.

As the acclaimed science writer, Colin Tudge, succinctly puts it in his groundbreaking book, *The Tree: A Natural History of What Trees Are, How They Live, and Why They Matter*, “The human debt to trees is absolute.”

The oxygen we breathe, the lumber for our homes, the shade under which we find rest, the forms that inspire our art and the ways we think are just a few of the essentials that come from trees.

Trees are not only one of the earth’s most fascinating, most beautiful, and dominant lifeforms. They are also one of the principal keys to solving the world’s climate crisis and

controlling global warming. And because trees provide habitat for millions of other species, they are also crucial to reversing the mass extinctions now taking place all over our planet.



A rich relationship exists between humans and trees, beginning with the human ancestors who made trees their home and developed dexterity, agility and binocular vision. Trees have since provided shelter, tools and sustenance, “ecosystem services” such as oxygen, pollution reduction and soil protections, as well as inspiration for art and music, symbols of life and renewal, and spiritual and religious

imagery.

*The Truth About Trees: A Natural and Human History* is the first series of films ever made on the natural and evolutionary history of trees, which also explores the social, historical, psychological and symbolic aspect of trees. This three-part series is being made for national PBS broadcast and wide dissemination to schools, museums,

Ross Spears is an award-winning filmmaker from Johnson City, TN, who has been making documentaries since 1975. Acclaim for his films include nominations for an Academy Award and an Emmy. Ross will present Part One of his documentary, *The Truth About Trees*, on Friday evening, August 30, 7:30, at the Roan Mountain State Park Conference Center.

# Patterns of Bird Migration: Some Warbler Questions

— Kenn and Kimberly Kaufman

***“Be near Asheville, North Carolina, the third week in April and you will see the warblers pour across the mountains.”***



A Tennessee Warbler in September (Photo: Kenn Kaufman)

That was the advice that legendary ornithologist Ludlow Griscom gave to naturalist and writer Edwin

Way Teale in the late 1940s, when Teale was working on his book *North With the Spring*.

Asheville is only about fifty miles from Roan Mountain, as the warbler flies, and Griscom's comment could apply equally well throughout this general region of the southern Appalachians. Although other things may have changed in the 70 years since Griscom offered that advice, the warblers (and other songbirds) still pour across these mountains in spring and fall.

The two of us live in northern Ohio, and we are only occasional visitors to the southern Appalachians. But we are very interested in bird migration. Comparing the passage of birds through the Roan Mountain area and through our part of Ohio, there are some fascinating differences that reflect different patterns and strategies of migration of various species.

The place where we live is less than 400 miles from Roan Mountain, and almost directly north (just slightly west of due north). So if birds were migrating straight north and south, we might expect the passage to be very similar. Most of these small songbirds migrate at night, covering a couple of hundred miles between nightfall and dawn. Then they come down to find a place to spend the day, or several days, resting and feeding to build up their strength for the next flight. Good stopover habitat is essential for the survival of these migrants. They find such stopover habitat in the extensive forests of the southern Appalachians, and in woodlots along the edge of Lake Erie, such as Ohio's Magee Marsh region, where we do most of our studies. There are probably some migratory birds that stop at both Roan Mountain and Magee Marsh during their spring or fall travels.

For taking a thorough look at bird occurrence in a region, there's a great resource in eBird, the massive database of sightings maintained by the Cornell Lab of Ornithology. Observers have turned in more than 26 million complete bird checklists for the United States alone, and it's easy to search and analyze those results online. To make comparisons between our two regions, we looked at the timing of warbler migration in northeastern Tennessee (Carter, Johnson, and Unicoi Counties) and northern Ohio (Lucas and Ottawa Counties). About three dozen warbler species migrate through both regions, and they're mostly the same ones, but their status in these regions shows some intriguing differences.

Magnolia Warbler. Eastern Tennessee: fairly common in spring, with some staying through early summer, and then very common in fall. Northern Ohio: Very common in spring, but less so in fall. Most Magnolia Warblers migrate straight north across the Gulf of Mexico in spring, and as they continue north, they're among the most numerous spring warblers around the Great Lakes. Smaller numbers are as far east as the Appalachians, but some do stay there to nest. In fall, they flood southward through the Appalachians, so the Roan Mountain region sees its largest numbers in September and early October.



A Magnolia Warbler in September (Photo: Kenn Kaufman)



## From eBird: Occurrence of some warbler species in northeastern Tennessee



Other trans-Gulf migrants: In eastern Tennessee, Bay-breasted Warbler and Tennessee Warbler are much more numerous in fall than in spring. The same is true of Swainson's Thrush. The situation is just the opposite in northern Ohio, where all three of these birds are more common in spring than in fall.

Wilson's Warbler. Eastern Tennessee: rare in spring, uncommon in fall. Northern Ohio: very common in late spring, fairly common in fall. Wilson's Warblers spend the winter mostly in Mexico and northern Central America. The ones that nest in eastern Canada come north through Texas in spring and spread out eastward from there, so very few of them make it to the southern Appalachians. In fall, they move south on a wider front, so more of them wind up coming through Tennessee.

Cape May Warbler. Eastern Tennessee: uncommon to scarce in spring but very common in fall, throughout September and October. (In northern Ohio, they're about equally common in spring and fall.) This is especially interesting because Cape May Warblers spend the winter mostly in the Caribbean, so they should be passing through the southeastern states and the southern Appalachians during both spring and fall. Why are their numbers so much lower in spring?

We are fascinated by these patterns of migration, and by the questions they raise. We'll be talking about such things at the 2019 Fall Rally on August 31, and we'll hope to see you there!

Kenn Kaufman, a world-renowned birder, author, editor and naturalist is the originator and editor of the *Kaufman Field Guide Series*. Kenn is a field editor for *Audubon* magazine and a Fellow of the American Ornithological Society.

Kim Kaufmann, author, editor and conservationist, is the Executive Director of Black Swamp Bird Observatory in Ohio, co-founder of The Biggest Week In American Birding, and a contributing editor to *Bird & Blooms Magazine*.

Kenn and Kimberly will present Bird Migration Patterns in Eastern North America on Saturday, August 31, 7:30 p.m., at the Roan Mountain State Park Conference Center.

# Balsam Mountain Drifters: The Journeys of Our Appalachian Crossbill

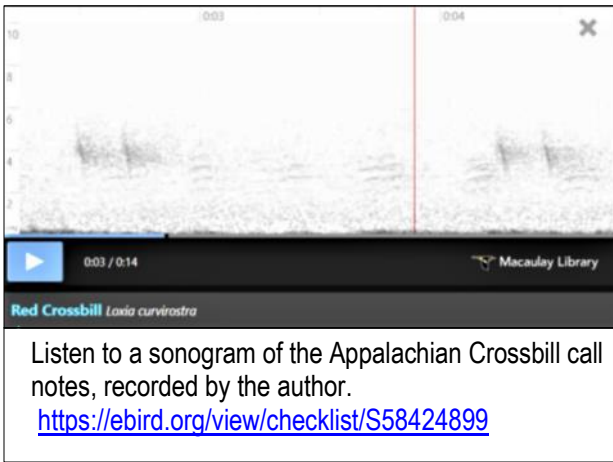
While walking or driving around Carver's Gap and the Rhododendron Gardens, listen for a sharp, "chup chup" call from the sky above and you might just catch a glimpse of a few Red Crossbills as they pass by overhead. A large, often bright-red finch, crossbills are built to withstand the harsh, subalpine treetops in which they live. They almost solely feed on the seeds of conifers, and are seldom found outside of cool, mature spruce-fir, pine or hemlock forests due to this restricted diet. However, such a diet is very convenient in habitats such as the spruce-fir forest of the Roan highlands; if you can harvest the seeds quickly and in large quantities. Crossbills have evolved to take on this challenge. Due to the constant variation in cone crop abundance, crossbills are constantly on the move. Often, they gather in large flocks, calling in more birds with the aforementioned two-note call in order to increase their chances of locating cone-laden spruces from the sky. The nomadic behavior of these songbirds is astounding. Much like Cedar Waxwings and goldfinches, crossbills spend a lot of time passing through the sky and canopy searching for very seasonal food sources.

However, in order to make use of the seed-filled spruce and fir cones, crossbills rely on their namesake beak. The Red Crossbill's lower mandible actually curves around the upper mandible, causing the beak to cross over itself. This allows an individual bird to close their mouths under the scales of seed cones with powerful biting muscles, exposing the seeds to be dislodged and scooped up in the crossbill's long tongue. But as complex and stressful as their search for food is, water is just as important to crossbills. Since they fly at such high elevations, there are few (if any) permanent water sources at which they can stop to drink on their journeys.

Consequently, puddles and bird baths are almost sacred to crossbills, and they can often be tracked down while making a stop at one of these vital temporary water sources. The Red Crossbill is a widespread species and occurs almost anywhere there are boreal spruce, pine, hemlock or fir forests worldwide. Due to this large range, crossbills exhibit variations in almost each different forest type. Roan Mountain's breeding crossbills are part of the "Type 1 Red Crossbill" population, and are affectionately known as "Appalachian Crossbills," or the *Loxia curvirostra pusilla*/minor group. These mountain crossbills are generalists compared to other localities, feeding on not only spruce and fir cones, but those of hemlocks, pines and other seeds lying on open ground. In order to efficiently harvest such a variety of food, they have short, stocky bills with a prominent overlap.

Appalachian Crossbills also have a beautiful, complex song and unique call notes. In fact, they won't respond to red crossbill calls from other regions. And since crossbills are so nomadic, many varieties (particularly from western North America) irrupt throughout the mountains when their regions undergo poor cone crops or harsh winters. Appalachian





Crossbills in particular will irrupt in other regions when the trees here in the southern mountains don't produce adequate cone crops, and our crossbills have been documented as far west as California! Due to their imposing presence and indisputably unique appearance, crossbills are pretty easy to distinguish from any other mountain bird (even though White-winged Crossbills have made appearances as rare vagrants in Tennessee). Although, be forewarned of the much more common cedar waxwings which also frequent spruce treetops in the same habitats as crossbills appear. Male crossbills range from a deep, blood red to a pale vermillion with yellow blotches. Females are typically more subtle in coloration, and

are usually yellowish-brown with darker wings. Juveniles, however, often bear a heavily-streaked breast. While the observation of juveniles in most passerine birds indicates breeding, crossbills don't follow this trend. Instead, juveniles are launched from canopy nests only a few weeks after hatching to fly with the rugged, nomadic flocks of adults. Juveniles can be seen miles away from their nesting territory only days after fledging! Rather than nesting seasonally, crossbills nest when and wherever there is an abundant food source. In fact, Appalachian crossbills are well-known for nesting in the middle of winter, sometimes miles from the high-elevation forests where they typically reside.

The remarkable movement of the Red Crossbills draws my mind to the Appalachian Trail as it crosses the spruce-fir forest of Roan Mountain, Mount Rogers and the Great Smoky Mountains National Park. Red Crossbills move along these ridges just like the hikers who come from Maine or Georgia. Both the crossbills and the hikers are searching for something out here in the wilderness. The crossbills are looking for food, and the hikers are often searching for time to think, answers or simply a good time in some amazing places. Before hikers, Native Americans and mountain men roamed these ancient hills, likely alongside many more crossbills than we see today, in search of game, new lands and prosperity. And much like the centuries of humans going across the mountains, crossbills embrace a sense of community, a lifestyle of freedom and adventure and a tendency to always return to their home in the mountains, no matter how far they roam. Maybe these mountain ecosystems have an importance that stretches beyond ecology alone, directly shaping the human culture of the mountains in addition to the plant and animal communities which call them home. Regardless, it is truly amazing to watch Appalachian Crossbills work together in order to survive the harsh mountain weather in what is debatably the world's most beautiful habitat.

Media: Photos - Male (left) and female (right) Appalachian Crossbills. Taken by author on Whitetop Mountain.

#### Sources:

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Groth, Jeffrey G. "Resolution of Cryptic Species in Appalachian Red Crossbills." *The Condor*. Vol. 90, No. 4. November 1988.

Heinrich, Bernd. "Winter World." *Harper Collins Publishers*. 2003.

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Vanner, Michael. "The Complete Encyclopedia to North American Birds." *Parragon Publishing*. 2005.

(Local eBird observations and reports to the Bristol Birds email list were also reviewed to determine the status of the birds in the immediate Roan Mountain area.) (Local eBird observations and reports to the Bristol Birds email list were also reviewed to determine the status of the birds in the immediate Roan Mountain area.)

Cade Campbell is a Tennessee Volunteer Naturalist, a Virginia Master Naturalist, a Boy Scout working toward Eagle Rank, a senior in high school and a field trip leader for our Naturalist Rallies. This summer Cade volunteered as Resident Naturalist at the Blue Ridge Discovery Center, where he first encountered crossbills.



## CONGRATULATIONS MICK !

If you have been to any of our Naturalists Rallies over the past decade you have probably seen Dr. Mick Whitelaw, where he is usually surrounded by students and young children engaged in hands-on science. During the rally lunch hour, you'll find Mick and his ETSU Geoscience Club students on the porch of the RMSP Conference Center at tables filled with fossils and fossil casting materials. Mick regularly leads geology field trips at our rallies, and he was a featured speaker at our 2016 Spring Naturalists Rally.

We congratulate Mick on being named a recipient of the Tennessee Higher Education Commission's 2019 Harold Love Outstanding Community Service Award. Mick has brought his passion for science to students throughout northeast Tennessee and is well-deserving of this honor.



### GIFTS AND MEMORIALS

**Friends of Roan Mountain gratefully  
acknowledges these charitable gifts**

#### Donations

Kathy Dougherty	Jamie Herman
Warren & Diane Edwards	Don Fisher

#### Memorials

W. Mills Dyer, Jr. for Debbie Neves  
William Huffman for Audrey Feezor Turner

### The annual meeting of the

Friends of Roan Mountain will be held during the Fall Naturalists Rally on Saturday, August 31, at 5:45 p.m. prior to the evening meal. At the meeting you will receive information regarding the activities, projects and finances of the organization. The election of board members will be held.

The following have been nominated for this year's election: Gary Barrigar, Pam Baldwin, Richard Broadwell, Guy Mauldin, Ken Turner, and Anne Whittemore. Nominations from the floor may be made at the meeting.

The annual meeting provides an opportunity for the membership to give their input concerning the policies and activities of FORM. Any member wishing to submit an item for the agenda of the annual meeting may do so by contacting Gary Barrigar, [gbarrigar@friendsofroanmtn.org](mailto:gbarrigar@friendsofroanmtn.org).



The 2019 Xtreme Roan Adventures got off to a great start with the Free Friday Night Adventures. The crowd of about eighty people enjoyed Dr. Gerardo Acero-Gomez and crew present an interactive program, Pollinators in Action. This year we added a Lightning Bug Adventure. It was a big success.

Saturday was a beautiful day. Seventy kids explored the natural world of Roan Mountain from the bottom of the Doe River to the top of Roan High Bluff. It was a lot of fun for staff and leaders too. Below are a few comments from some of the parents:

"Xtreme Roan Adventures is consistently great year over year! I've been bringing my kids for the last 4+ years and participating in the camping and adventures! They are the ones that remind me about it every year. This is such a great opportunity for kids to get hands-on experiences with the nature and wildlife in our region, and I'm very thankful for the volunteers and Friends of Roan Mountain for consistently putting on a great event each year!"  
- Shane

"I just wanted you to know how encouraged I was by what you offered and by your passion and personal investment in Roan Mountain and community. I feel so fortunate to have stumbled upon this unique opportunity, and we plan to attend again and invite more friends." - Jessie

"My family has participated in the Xtreme Roan Adventures event many times since it began. It was such a joy to see how the event has grown and blossomed. It was very organized in order to flow smoothly and the leaders of each walk were impressively knowledgeable about their subjects. No matter how many times we have attended, there is always something new to learn. And, even though they are older, my children always enjoy participating in the mid-day activities at the Conference Center. Thank you all for offering such a valuable & rewarding experience at an affordable cost for families."  
- Laura



"We had a great time at the Xtreme Roan Adventures. We look forward to coming back next year. I really love how everything is geared for the kids but the whole family can really enjoy the time together. Awesome learning experience and so fun too!" - Jan

"There is so much we love about the Xtreme Roan Adventures. Not only does it benefit the families who come to the XRA, but I make connections with folks who can help in my classroom. Mick Whitelaw has been fossil casting with my students for about 3 or 4 years now. Jeremy Stout and Lance from Steele Creek come and do a geology and habitat talk with my students. I'm hoping to make connections with the Kids in the Creek crew. Ranger Phil was amazing with the children. Thank you for another great year! We have camp site reserved for next year and look forward to seeing you again!" - Rebecca

### Xtreme Roan Adventures

Friday evening and Saturday

July 31 & August 1, 2020

Ken Turner (423) 538-3419

[Ken@XtremeRoanAdventures.org](mailto:Ken@XtremeRoanAdventures.org)

[www.XtremeRoanAdventures.org](http://www.XtremeRoanAdventures.org)



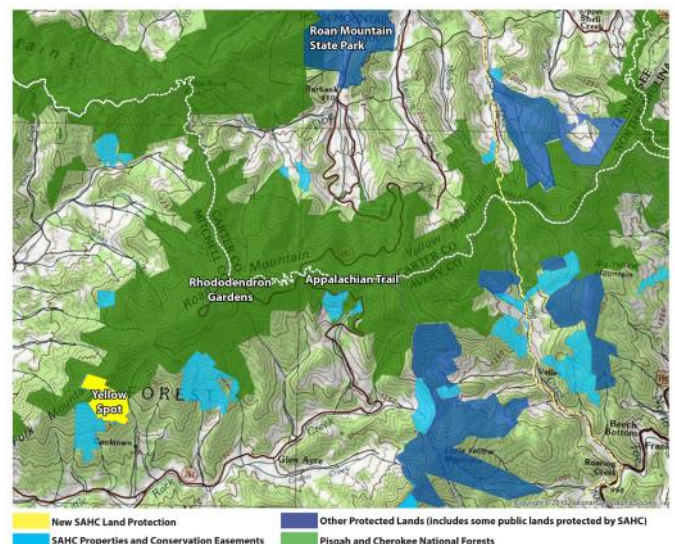


## Southern Appalachian Highlands Conservancy protects 234 acres at Yellow Spot

Southern Appalachian Highlands Conservancy (SAHC) acquired 234 acres at Yellow Spot, permanently protecting a corridor linking Pisgah National Forest with conserved land at SAHC's Fork Mountain Preserve. This acquisition protects high elevation habitat, wildlife corridors, scenic views, and sources of clean water along an important high elevation ridgeline. A biological inventory of the property identified six rare animal species and 12 rare plant species, including Bog Goldenrod and Trailing Wolfsbane. The tract contains over 2.5 miles of stream corridor, with 10 headwater tributaries of Cook Creek and Pineroot Branch.

“This property contains a remarkable combination of features that have made it a conservation priority for decades,” says Marquette Crockett, SAHC’s Roan Stewardship Director. “We conserve some properties to preserve exceptional water quality and native trout habitat and we protect others because they contain rare, high elevation open areas or exceptional forest habitat – but Yellow Spot has everything. It’s a microcosm of the Roan Highlands. SAHC’s acquisition of this tract secures a perfect puzzle piece, surrounded by National Forest and protecting the main spine of the Roan Massif.”

Located within the state-designated Roan Massif Natural Area, the property rises to 5,100 ft. elevation at the peak of Yellow Spot and will provide a buffer for sensitive habitat in Pisgah National Forest. The Audubon Society’s Roan Mountain Important Bird Area covers approximately two-thirds of the tract.







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## Between Friends



**Deadline for Spring Rally Meal Orders** – Payment for rally dinners and lunches must be received by **Tuesday, August 27**. The reservation form can be found in the brochure or on our website. Mail your check and reservation form to Nancy Barrigar, 708 Allen Avenue, Elizabethton, TN 37643.

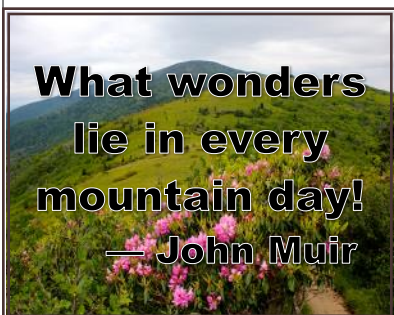
**You can now register online. Follow the link on our website's homepage.**



**Door Prizes** -- We gladly accept items donated for door prizes. These will be given away on Friday and Saturday prior to the evening programs. Ideas: nature-related books, photos or art, outdoor gear, plants, homemade goodies . . .



Get the latest updates on FORM events and listen to interviews with Rally presenters and leaders on Roan Mountain Radio with Ken Turner.  
<http://www.roanmountainradio.com/>



	Spring Rally	Last Friday - Sunday in April	April 24 - 26, 2020
	Youth - XRA	Last Friday—Saturday in July	July 31 & Aug 1, 2020
	Fall Rally	Friday - Sunday in September before Labor Day	Aug 30 - Sept 1, 2019
	Winter Rally	Saturday in February near Valentine's Day	Feb. 8, 2020

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