



The Southern Appalachian Highlands Conservancy (SAHC)

SAHC purchases land with donated funds, seeks conservation easements, and encourages public acquisition. Its on-going land management programs are designed to protect natural features and to provide resource information to public agencies.

Cooperating with SAHC in saving the Highlands are state agencies in North Carolina and Tennessee and the U.S. Forest Service. Endorsing the program are the National Audubon Society, the Garden Club of America, the Appalachian Trail Conference, and numerous state and local organizations.

Saving these mountains is the work of all who care.

BECOME A VOLUNTEER!



SOUTHERN APPALACHIAN HIGHLANDS CONSERVANCY

SAHC is a 501(c)(3) organization and is not a private foundation. Its tax identification number is 237422309.

The Highlands of Roan are located in Avery and Mitchell Counties of North Carolina and Carter County, Tennessee, near the villages of Roan Mountain, Tennessee, and Bakersville, North Carolina. The area is most accessible from Tennessee Highway 143 and North Carolina Highway 261.

Southern Appalachian Highlands Conservancy

The Highlands of Roan



CLAPSALL

APPLICATION FOR TAX DEDUCTIBLE MEMBERSHIP

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hickory, beech, buckeye and maple. Thousands come to the Roan each June to see and photograph the wild profusion of rhododendron blossoms. Serviceberry, trillium and violets bloom in early spring. Spruce and fir send spears of darkness up the steep shoulders of the mountain in fall and winter.

In the wind-harried saddles, the long grass lays before the wind like kelp strands on a tidal plain.

Deer and bobcat, flying squirrel and New England cottontail find refuge in the Highlands. For more than 100 years geologists have worked to unravel the mountains' complex history. Botanists have studied their extraordinary flora, remnants of diverse plants which escaped the last great Ice Age.

That these mountains escape the destruction brought by a rolling glacier of population is the first concern of the Southern Appalachian Highlands Conservancy. It works in quiet dedication to preserve the mountain crest and the long, peaceful valleys which can be seen from the Trail.

Fifty-five hundred acres have been brought under protection, while 6,500 remain vulnerable to real estate development. They must be spared. Timing is critical.

You can help.

Become a member of SAHC. Founded in 1974 for the purpose of saving the Highlands of Roan, SAHC is an independent non-profit organization of volunteers. Dues and gifts are tax-deductible.



The Highlands of Roan in Tennessee and North Carolina

Renowned for their beauty and biological wealth for nearly two centuries, the Highlands of Roan are the object of a combined public and private protection effort spearheaded by the Southern Appalachian Highlands Conservancy (SAHC).

The Appalachian Trail, which stretches from Maine to Georgia, unrolls 10 miles of its length over the Highlands of Roan, through knee-deep grasses, heath and gorse, past stark outcroppings of gneiss and granite. It winds through forests of oak and



From Md Street
As told to Jim Hughes
and recorded by me 01-01-01

There was an old woman
who found a dime. So she
went to the market and
bought her a fat pig.

On her way home, she
came to a fence. She said
"Pig, Pig; jump over the
fence so I can get home
tonight!" Pig wouldn't.

So, she went up the
road and came to a dog.
She said to the dog; "Dog
Dog, Bite Pig so the pig
will jump over the fence
and I can get home tonight"
Dog wouldn't.

She went on and came to
a stick. She said; "Stick, Stick,
Beat dog, Dog, dog, bite pig"
so I can get home tonight."
Stick wouldn't.

Well, she went on met fire.
She said, "Fire, fire, burn stick;
stick, stick, Beat dog; dog, dog
bite the pig; pig, pig jump over
the fence so I can get home tonight."
Fire wouldn't!

She went on and met up
with water. She said, "Water,
Water, water, put out fire.
Fire, fire burn stick. Stick,
stick, beat dog. Dog, dog
bite the pig. Pig, pig jump
over the fence so I can
get home tonight."

Water wouldn't.

Up the road, she met an
ox. She says, "~~water~~^{ox}, ~~water~~^{ox}, drink
water. Water, water, put out fire.
Fire, fire burn stick. Stick, stick
beat dog. Dog, dog bite the
pig. Pig, pig jump the fence
so I can get home tonight.

Ox wouldn't.

She then meets a butcher.
"Butcher, butcher, kill ox.
Ox, ox drink water. Water, water
put out ~~water~~ fire. Fire, fire
burn stick. Stick, sticks beat
the dog. Dog, dog ~~dog~~ bite the
pig. Pig, pig jump the
fence so I can get home
tonight.

Butcher wouldn't.

"She went on and met a rope.
"Rope, rope," she says. "Hang the
butcher. Butcher, butcher, Kill the
ox. Ox, ox drink the water.
Water, water put out fire.
Fire, fire burn stick. Stick,
stick beat the dog. Dog, dog
bite the pig. Pig, pig jump
the fence so I can get home
tonight.

Rope wouldn't.

Up the road again and she
meets a mouse. "Mouse, mouse
gnaw the rope. Rope, rope hang
the butcher. Butcher, butcher,
kill the ox. Ox, ox drink the
water. Water, water put out the
fire. Fire, fire burn the stick.
Stick, stick beat the dog.
Dog, dog bite the pig. Pig, pig
jump the fence so I can
get home tonight.

Mouse wouldn't.

She goes on and finally meets a cat. She says, "Mr. Cat, Would you please help me get home tonight. Mr. Cat says "If you'll get ^{me} some fresh warm cow's milk, I'll help you get home tonight." So she went and milked a cow and got some fresh, warm milk. Well the cat drunk and drunk and he finished his milk.

He then began to eat the mouse, the mouse began to gnaw the rope, the rope began to hang the butcher, the butcher began to kill the ox, the ox began to drink the water, the water began to put out the fire, the fire begins to burn the stick, the stick begins to beat the dog, the dog begins to bite the pig, the pig jumps over the fence and the ^{old} woman got home that night.

524



Profile
said to
resemble
McKinley

Bottom

This was close enough to the hotel for
mother to take people on walks to
see it.

A Bit Of Mountain Levity

"Laugh and the world laughs with you;
Weep, and you weep alone;
For the sad old earth must borrow its mirth,
But has trouble enough of its own."

Ella Wheeler Wilcox

In the minds of each of us, there are worlds which no longer exist and which we can visit only in memory and in sharing with others. We can not walk the same trail twice. It has been my good fortune, however, to have some of the people of Roan Mountain share their hidden worlds of yesterday with me, especially those of the Depression era. I discovered therein a fascinating culture of isolation, independence, and great good humor.

They refer to the Depression years as "hard times but good times" and their wonderful sense of humor seems to have been the glue that kept heads on straight and held families together during those "hard times." Banter, affectionate teasing, story telling, and practical jokes were a way of life ... and still are.

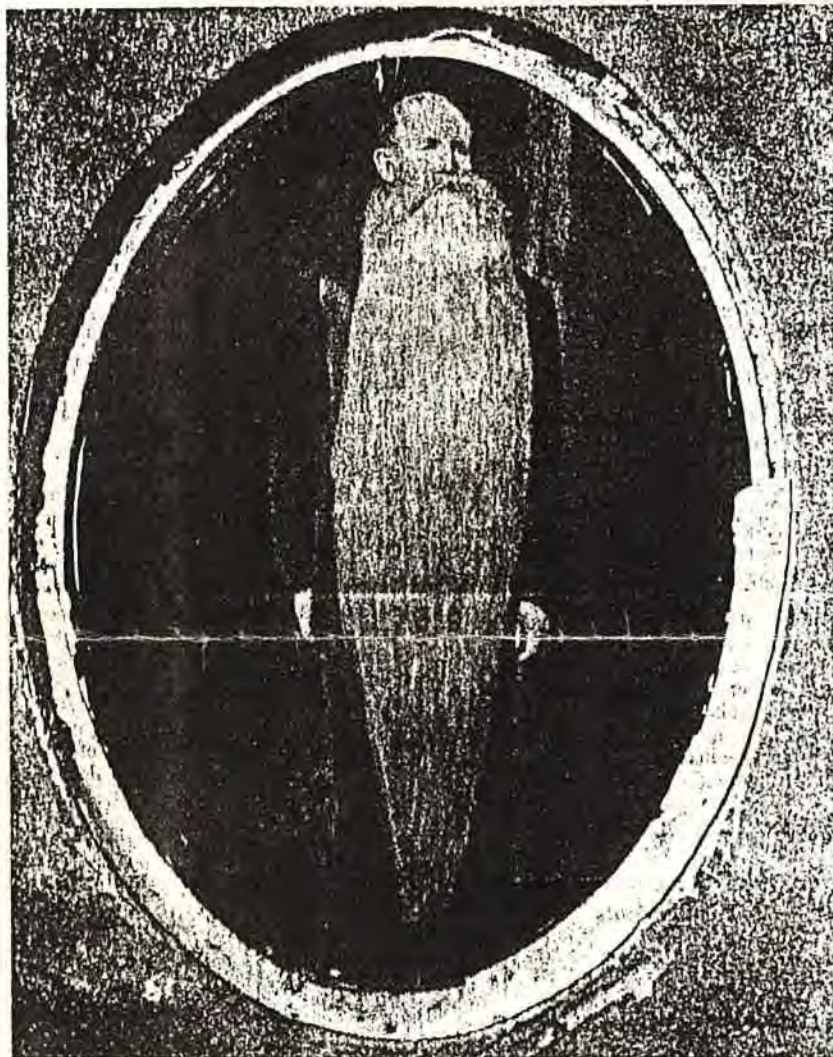
I remember one day when I became hopelessly lost in my ramblings around Roan Mountain. I stopped at an isolated country store. A porch ran the full length of the small building and held a number of ladder-backed chairs. In one of these, tilted precariously against the wall on its two hind legs, sat a very old man eyeing me a bit suspiciously. I carefully explained my predicament and asked for directions. Without changing expression, he surmized "You can't get there from here." He paused, looked very stern, then a big grin broke his face. A little levity goes a long way toward turning problems into laughter. I must have seemed really upright.

The language of their stories is filled with subtle and not so subtle humor, sometimes even a bit caustic, sometimes it bruised a bit but served as a gentle reminder of what path was allowed. Admonitions such as "Do something, if it ain't nothin' but carry water out of the branch and put it in the creek. It'll keep from wearing the rocks out," indicating that laziness was simply not allowed. For children too young to work in the fields but not out playing, "You're as lazy as a pet pig. If your breathin' didn't come and go by itself, you'd be too lazy to breathe." At the table you might hear "Let your vittles stop your mouth" when children got a bit too rambunctious. About someone who got up "feelin' poorly," "He got up cranky and hasn't gotten over it." Then there's "You look like the hind wheels of hard times" and "You sure took your time. You'd a-been a good hand to send for the doctor if the devil was sick."

Children were the target of much good natured teasing, a sort of initiation rite. Jim Street tells of one such incident when he and his brother Floyd were on the receiving end of a bit of "funnin'." Will Garland, a close friend of the family, had brought Sam Brinkley to talk with the boy's father about

buying some property. Now Sam Brinkley was famous for his long beard that reached to the ground and which he kept carefully stored in a pillowcase tucked inside his shirt. The boys, aged four and eight, had never experienced that beard. "We were playing

head and beard. It skeerd us so bad we run and jumped in the hog pen with the hogs. We couldn't find no place else to hide. Daddy then came and got us out and said 'Will, quit skeering these boys; they're already crazy enough.' Garland was always aggravating



Photograph from Sam Brinkley's Gravestone

and making cornstalk horses." Jim said. "We'd cut off a long piece and make his head and we'd use a little stick or a slip off that cornstalk and make his neck and stick it on that and then put on his legs and tail and his mane and everything and we'd have cornstalk horses. That's what we were busy a-doing and we didn't think they was anybody around. So Will Garland talked Brinkley into sticking his beard around an apple tree and a-scarin' us. We didn't know they was anybody in a mile. He was about maybe fifty feet away. We didn't see him and he stuck his head around that tree and Garland said 'Oh yes, I've got you this time' and he was hid and all we could see was the old man's

us, telling us these big stories about what was going to catch us and everything. Ever time I seen Brinkley utter that, he'd laugh, but Floyd never did like him much."

Floyd was a born prankster himself. Hear this one: Visiting preachers, especially during camp meetin's, were regular visitors at the Street family table. One day when there seemed to be an especially large number of them and the children were having to wait second table, the fried chicken seemed to be disappearing at an alarming rate. Young Floyd peered around the dining room door and called to his mother, "Don't let 'em eat all the chicken, Mom!" Turning, he ran out into

(continued on page 6)

Katana Journal, page 5

(continued from page 5)

the night. I don't know if he got any chicken or not!

Humor was not always up front, and as Malone Young so aptly put it, "Old time lying wasn't really a vice. Land Sakes! Life would have been dull as a froe if people didn't stretch the truth." Storytelling was a real art. Old men would sit around the country store and see who could top the next one or swap stories at bean stringin's or corn shuckin's. During interviews, I was not always sure if the story I was hearing was true or not. One day I asked, "Is this really a true story?" The answer came quickly "Honey, if I'm a-lyin', I'll tell you." He didn't say when.

Sometimes the story would be quite true, such as this one told by Howard Shell, but in order to make them interesting they might end with a funny questionable twist. Howard was sitting in the swing on his front porch when I asked him about witches. He immediately got a mischievous little twinkle in his eye and told me his mother was a great believer in witches. The story goes that she was having difficulty getting the milk to churn and decided that her cow was bewitched. She and her son built a big bonfire. Then she went to the woods and got two haw branches, stripping the thorns to make a good handhold but leaving them on the ends. She put her daughter on one side of the fire and her son on the other. As she poured the milk into the fire, they beat it with the haw branches and the cow was cured. Then he told me their chickens became sick and his mother decided they were bewitched. Again she built the big bonfire, put one of the sick chickens into a bag and threw it onto the fire alive. I waited expectantly for the rest of the story which didn't come. Finally I asked warily, "Well, did they get un-bewitched?" "I don't remember," he replied with a sly grin.

One charming lady has taken practical joking to a long-running high. We'll call her Anna to protect the innocent. Anna is married to a very serious, reserved, charming

holiness preacher, but this did not deter her yen for fun. Let's call her husband Joe. Every year, come April Fool's Day, Anna attempted to play a joke on Joe and much to his chagrin, she always succeeded. Joe logged and farmed, was generally hard-working and steady as you go. His horses were of much value and importance to him and were greatly cherished. Early one April 1st, Anna slipped out of bed early, just at daylight, went outside and came rushing back into the bedroom screaming that the horses were tangled in the barbed wire and were cutting themselves badly. Joe, who slept only in his wherewithals, rushed out into the frosty, cloud-heavy morning, only to find that he had been taken again.

The next year he threatened to whip the children if they helped their mother play her little game. Anna had been after Joe to move a big pile of logs stacked in the yard because she was afraid the children would get hurt playing on them, but to no avail. There they were, stacked too high for safety. Before anyone else was up, she went out into the yard, pushed the logs over so they rolled in every direction, then carefully maneuvered herself under two of them in a way to appear badly hurt. When one of the children peered out the window and saw her, he screamed for his father. When Joe saw what he thought had happened, he leaped through the window to run to her rescue, only to have her sit up when he got there and say "April Fool!" Could you live with a woman like that? He has for some 60 years!

Another one of her delightful stories involved "sitting up with the body." The custom was when a person died, the body was kept at the home until it was interred. During that time, even at night, friends and relatives "sat up." One such night Anna was a bit bored and she looked around for some mischief needing to be done. She saw two very pious women sitting in straight chairs leaning against the wall - sound asleep! She took some soot from the chimney, mixed in a

little water, and painted their faces Indian style. No one would betray the culprit who had done the dastardly deed! Recently Anna told me she asked one of the women if they wanted to know who did it. The lady replied "No, not now. I might get angry all over again." So Anna didn't tell - and her secret is certainly safe with me.

Long hours of plowing, hoeing corn, chopping wood, washing, cooking, etc. set these very bright people of devious minds to creating riddles. An article about their humor would be incomplete without at least sharing one riddle with you. Here is my favorite story of riddles shared (supposedly a true story). The wife of a man who lived back in the deep woods had disappeared without a trace. Her family became concerned and there was an investigation. The man was brought before a judge and accused of killing his wife. Apparently the judge must not have been altogether sure of his guilt and he told the man if he could make a riddle that the judge could not solve, he could go free. Here is the riddle:

Riddle to my riddle to my right,
Guess where I stayed last Friday night.
The wind did blow and my heart did ache
To see what a hole that fox did make.

The judge could not solve it and the man went free. It was later solved: He had killed his wife, dug a hole to put her in, and his name was Fox.

And then there's the story about the man who had too much moonshine and killed his cat . . . but we'll save that for another time!

They still remember, these people of the mountains, and they laugh and share their funny stories. I love to laugh and I did so enjoy listening - hope you did too.

by Barbara Wickersham

The Elements

The air is fine
for it gives me
what I need to live

The earth is good
as it prepares
the ground I stand on

The water is my mother
for it holds me
as she would in dream

Fire is my pride and foe
for when it snaps it says
it will overtake me

And stone, stone is my best friend
for it shows me the hardness of the world

- Leonard Cirino

Hard Scrabble

Appalachian mountainside,
more rocks than grass.
Three cows graze sideways round,
short legs up hill, long legs down.
Farmer says there's green enough
to put milk in their faucets,
and maybe there'll be milk enough
to put green in his pockets.

-Melba Bari

To each gal. of berries add one
qt. boiling water.

Let sit 24 hrs. then strain -

To each gal. juice add

3# sugar.

Let work ³⁰ days

strain, bottle & cork.

(Black Berry Wine)

← My
Moms
add
orange
very
good.

PEACH BRANDY - Make in 5 Gallon Crock
Take a half bushel of very ripe peaches - cut in half
and remove seeds - put few in bottom of crock and mash -
add more peaches and mash until have them all in - over
this pour the following.... take a can of malt, put
contents in dish pan with a little water, heat to dissolve,
add 3 cakes of yeast - mix this, 6 # sugar, 2# corn meal
in with the peaches - mix well....let work about 10 days -
strain - add another 5# of sugar and let work another 10
days... strain again.... if not through working after
10 days, let set a little longer...

↑
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take one gal. grapes must
up then add 3 lbs sugar
put in container crock
on wooden let set
5 days - then strain
off - put juice in
glass jug or wooden con.

Grape wine
from wine
character
- friend

Corn Wine

Cut grains from 18 ears of corn, roasting ear stage. Put corn and cobs in crock and add 3 gallons of water.

Let stand until mixture starts to ferment, usually 2 or 3 days.

Strain off juice and add 3 quarts unsweetened grape juice, 10 or 12 lbs. sugar and a package of dry yeast. Let stand until fermentation stops. Bottle and use.

very good

Dandelion Wine

1 qt blooms

1 gal boiling water

let stand 24 hours then strain.

add juice of 2 lemons, 2 oranges, and 3¹/₂ brown sugar. boil this ten minutes, let

cool and strain. add 1¹/₂ cake yeast, 1¹/₂ box seedless (not sticky) raisins to a

gallon. Let stand 5 days. Strain off and put in jars.

~~XXXXXXXXXX~~
BLACKBERRY WINE.

*I have not
tried any
of these*

Crush berries and add boiling water sufficient to cover pulp. Allow to stand 3 or 4 days. Strain.

Add 4 lbs. sugar per gallon liquid.
1 cake Flieschman yeast
crushed raisins.
whiskey or alcohol
(crushed almonds-hazelnut-walnuts-bitter almonds
(cloves-lemon-orange juice or peel to suit fancy gives flavor.

Cover and allow to ferment for about 2 weeks. Skim daily.

Just before final strain add 5 1/2 grains Salicylic Acid per 15 quart juice (338 1/2 per every 100 qt. wine) This to be added to wine after wine is considered "made" then strain into barrel or glass carboy (this was Daddy's recipe and I don't know what a carboy is do you) and cork tight (wire cork) After 6 months add whites of egg to clarify wine. Wait 8 days longer then draw off into bottles and cork tight.

(137/52 grams Salicylic Acid per gallon (14 grams)

Heres another recipe.

BLACK BERRY WINE.

Crush berries thoeoughly. Place crushed berries in large crock or wooden tub (not metal) and for each gallon of crushed berries add one qt. of boiling water. Cover and let stand 1 to 3 days - not more than 3 days.

Strain into another crock and to each gallon of juice add 2 to 4 lbs. of cane sugar. After adding sugar add 1 or 2 cakes F. Yeast to juice to insure vinous fermentation. The juice of two or three oranges adds flavor, also orange peel, cloves, crushed walnuts, almonds, raisins etc. tied in a cloth bag and kept in wine until made. Cover and skim daily until ferment is complete. Which will be in 8 or 9 days or probably a few days more.

The wine should be made in a room or cellar where the temp. is 50 to 80

After fermentation is complete add 14 grains of Salicylic Acid per ballon of wine to prevent a change from vinous to vinegar.

ORANGE WINE.

PEEL. Cruch - Strain juice and keep juice separate. Make syrup with 3 lbs. sugar for each gallon of juice, add 1 egg white and shell and 1/3 gal. water per gallon juice. Set over fire and stir until eggs begin to harden. then boil until clear under egg froth, strain, add orange rind and stand over night. Add orange juice and stand over night again. Strain and put into tight cask with cake of yeast. Leave out bung until ferment is over. Eung and let stand 9 months.

*Pumpkin Mead -
Make hole in pumpkin - clean out seeds -
pack full of brown sugar - replug -
2 1/2 mos.*

Roan Reflection

Oh! Round and beautiful round bald! What do you in store for all? Swallows flitterin here and there, must be hard to have to share.

Flowers rowin everywhere amidst the beauty of it all. Oh round and beautiful round bald! Thaanks for sharin with us all.

Lookin now toward en ine ap! Clouds and larkin , a rain perhaps. Oh round and beautiful round bald! It's all for you and you for all.

rassy Rid e, Oh rassy Rid e, protrudin forward like a brid e. And Jane is callin in between for she is near us cause it is Sprin .

Round and beautiful Round Bald, You have iven to us all. Hope to visit a ain in Fall! Thanks for havin me "Round Bald."

From THE TENNESSEE CONSERVATIONIST, XLII(7), September/
October, 1977.

KEN PERRY

Volunteers On The Highlands Of Roan

by George J. O'Neill

On the frosty Thursday morning of September 28, 1790, an army of nine-hundred, Over-Mountain men from Sullivan County, Tennessee; Washington County, Virginia; and Washington County, North Carolina, lined up in company parade formation on top of Big Yellow Mountain, one of six mile-high summits in the Highlands of Roan. Ensign Robert Campbell, who was there as an officer, made an entry in his diary about Big Yellow: "They found the sides and top of the mountain covered with snow, shoe-mouth deep; and on the summit there were about a hundred acres of beautiful table-land, in which a spring issued, ran through it and over into the Watauga."

"Here," according to the noted historian, Dr. L. C. Draper, "the volunteers paraded under their respective commanders and were ordered to discharge their rifles; and such as the rarity of the atmosphere, that there was little or no report. This body of table-land on the summit of the mountain has long been known as 'The Bald Place,' or 'The Bald of the Yellow.'"

This volunteer army of citizen-soldiers was marching across the Blue Ridge Mountains through Yellow Mountain Gap, which is on the border of present day Carter County in Tennessee and Avery

County, North Carolina, on their way to meet and defeat the British Army at King's Mountain, North Carolina. The British commander, Major Patrick Ferguson, had threatened to "lay waste their land with fire and sword" but the militia of "backwater men," as he called them, stole the march on him.

Today, Tennessee volunteers from Sullivan County and other parts of the state have joined with North Carolinians to form an army of conservation-minded citizens in the Southern Appalachian Highlands Conservancy (SAHC) with the objective of protecting and preserving over 12,000 acres of the Roan Highlands including the 5,459-foot Big Yellow Mountain.

The Highlands of the SAHC project stretch for eleven miles along the border of the Pisgah and Cherokee National Forests between U.S. Route 19E and Tennessee Route 143. No longer are they threatened by "fire and the sword" as they were 200 years ago but now it is the potential of unrestricted and indiscriminate commercial development as well as the excessive wear and tear on the delicate ecosystem caused by over 10,000 visitors each year.

To leading conservationists with the National Audubon Society in New York, the Highlands and especially Roan Mountain are "sym-



KEN PERRY

Catawba Rhododendron
(*Rhododendron catawbiense*)

bolic of the entire eastern chain, yet like no other mountain on Earth." Stan Murray, the Kingsport-based president of SAHC, says, "The Highlands offer a unique combination of natural treasures that cannot be found anywhere else, and we want all people to benefit from them forever."

One of the fascinating characteristics of the Highlands is they offer something of beauty, majesty, history or mystery to pique the interest of almost any visitor. Botany buffs will be delighted by one of the great natural gardens of North America with over 250 species of plant-life already identified. Some of the more abundant species of flowers that are found in season are wild geraniums, trillium, serviceberry, Dutchman's-breeches, doll's-eyes, bluets, violets, orchids, spring beauties, squirrel-corn and asters. Naturalists say the Highlands is one of the few places in the world where the lovely Gray's lily can be found.

On the slopes of the mountains there are the largest stands of naturally occurring rhododendrons in North America. These gorgeous flowering plants cover hundreds of acres of the Highlands and along with brilliant displays of flame azaleas are the major attraction for thousands of flower lovers and

photographers in the Springtime.

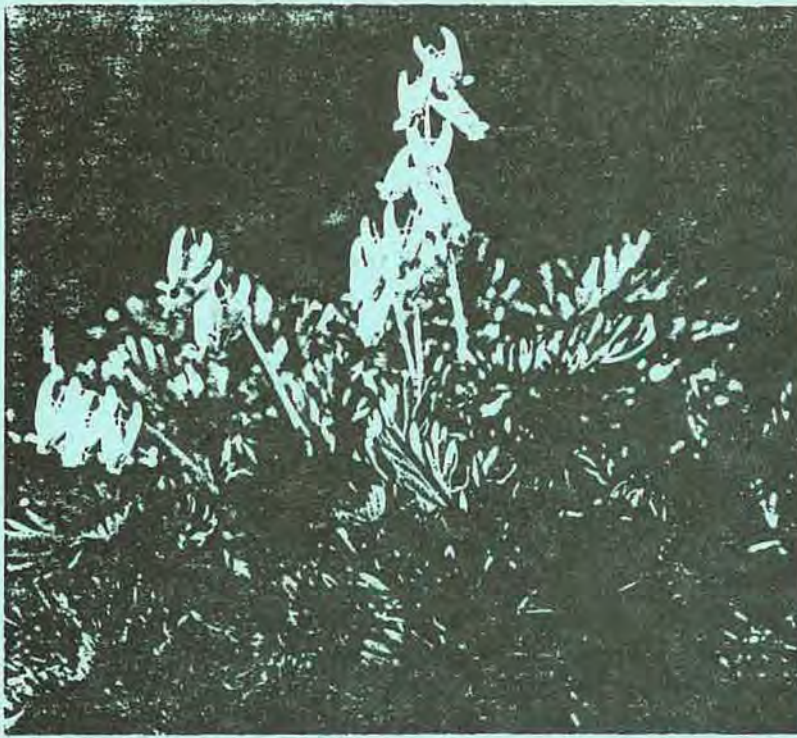
For bird watchers, a stroll along the famed Appalachian Trail, which follows the state boundaries and bisects the 12,000 acre project, might give them a glimpse of some of the over 100 species of birds. Roan Mountain is considered by experts to be the snow bunting's southernmost winter home. The climate on the peaks of the Highlands is cool, wet and windy like the weather in parts of Canada and New England.

Although the Roan Highlands have long been noted for their important role in American history as well as being the home of hundreds of species of flowers, plants and birds, their most interesting feature is a blend of scenery, mystery and legend. According to Ray Hunt and Arch Nichols, who helped prepare the trail guide for the 2,000 mile Appalachian Trail, one of the outstanding features of the southern Appalachians is the occurrences of large, treeless, grassy meadows on the summits. A hiker standing on the Highland balds has a 360-degree sweep of the horizon and on a clear day can see Mount Mitchell of the Black Mountains rising in the South; Little Rock Knob and Ripshin peaks dominating to the North; and to the East there are majestic, rugged Grandfather and sporty Beech Mountains.

To the scientist, the occurrence of these balds is a mystery that is yet to be solved, Hunt and Nichols say, "—although grazing by livestock is undoubtedly a factor. Other factors, which must be discarded because they do not occur consistently, include climate, altitude, heavy winds, tree disease and type of rock base."

To the primitive and intuitive Catawba and Cherokee Indians, the occurrence of the balds could be readily explained by their fertile imaginations. In one Cherokee legend, the balds were believed to be the home of an ulagu, a huge, hornet-like monster that swooped down on the villages of their ancestors in the valleys and carried off their children. After the Indians had killed one of these monsters, the Great Spirit was so impressed with their faith in him and their courage in facing the monster that he decreed the summits should remain unforested forever so the people could station sentinels to keep a lookout for other "ulagus."

Near the turn of the century, the outstanding scenery was not the only reason to visit the Highlands. Unscrupulous advertisements that were typical of the times claimed, "The top of Roan Mountain (6,394 feet above the level of the sea) is above dangerous storm clouds and is free from thunderbolts. No insects or reptiles are found at this



KEN PERRY

Dutchman's Breeches
(*Dicentra cucullata*)

altitude. The atmosphere is perfectly pure and as a health resort there can be no location that is more desirable. Consumption is unknown and malaria finds no refuge among these mountains."

All of the beauty and majesty of the mountains have not gone unnoticed by land developers who within the past 15 years have moved into areas surrounding Roan and established year-round sport complexes and dotted the mountains with "second homes" of the affluent. To head off this threat the SAHC and the U.S. Forest Service have been working together to take 12,000 acres of the Highlands out of the real estate market on a permanent basis.

For its part, the Forest Service will acquire the major portion of the acreage and so far has spent approximately \$1 million for 3200 acres. The remaining land will be bought by the SAHC for an estimated \$3 million. Stan Murray reports his group of volunteers have raised and spent \$300,000 for two tracts of land which include Big Yellow Bald, making the SAHC the owner of perhaps the highest, most remote parade ground and rifle range of the Continental Army of the United States.

The Conservancy plans to get the bulk of its financial support from private foundation grants with the remainder coming from

industry, gifts and memorials and SAHC dues. Another fund raising activity that has met with success on a national scale is the sale of a limited edition print of Raymond Williams' watercolor "The Highlands of Roan" which is available for \$25 per copy.

While Murray is the first to admit that fund raising is the most important task, he is quick to point out that the SAHC has begun to develop an exciting and new experimental program of volunteer stewardship of the project land. The first step was taken in the summer of 1975 when families of nearby hiking clubs camped out on the Highlands during the season the traffic from hikers and backpackers was the heaviest to implement a program to educate them in good hiking and conservation practices.

A second stage was started in the summer of 1976 when the SAHC hired Tom Gatti, a recent graduate of the University of Tennessee, as a fulltime caretaker of the Highlands. Gatti says, "The summer's work laid the foundation for a stewardship program which involves repair and maintenance of the physical resources, education of the users and good management practices that will maintain the integrity of the land and still allow people to get full enjoyment out of using it."

Rick Phelps, who heads up the SAHC committee on land acquisition and management, says, "The experiment has been quite successful and for now we are going to use Tom and the family volunteers to continue our trail education program."

Bob Bible, Brian Dillon, Darrol Nichols and Don Kreh, who are members of SAHC and unpaid volunteers like Murray and Phelps, know there is a striking difference between the modern volunteers on the Highlands and those who appeared in 1780. Their forefathers only stayed one night on Big Yellow Mountain and they moved on to fight their battle, while they have been on the Highlands for several years and are still fighting the battle to preserve and maintain the land for all to benefit from and enjoy. They are hoping history will repeat itself and make the volunteers of the Highlands winners again.

Contributions to support land acquisition and requests for the William's watercolor print can be sent directly to: Stanley A. Murray, President, The Southern Appalachian Highlands Conservancy, P. O. Box 3356, Kingsport, TN 37664.



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Yellow-Poplar: A Component of Climax Forests?

Edward Buckner and Weaver McCracken

ABSTRACT—Although classed as intolerant and requiring exposed mineral soil for vigorous regeneration, yellow-poplar (*Liriodendron tulipifera* L.) has long been considered a dominant in climax stands on good sites in the southern Appalachians. More in keeping with its silvical traits is its role as an aggressive pioneer on disturbed sites. The disturbances necessary to perpetuate this light-demanding tree in otherwise stable climax communities are explained by the species' growth habit. The trees reach great size and age at maturity, and their dominant crown position makes them highly susceptible to windthrow. Their falling thus creates openings and exposes mineral soil sufficient for regeneration.

Belonging to one of the most primitive hardwood families, Magnoliaceae, yellow-poplar is among the more valuable timber trees in North America (Harlow and Harrar 1969). It is a major component of 4 forest cover types and a minor component of 12 (Fowells 1965). Current literature and historical records do not agree, however, on its position in forest succession in the southern Appalachians, where it is one of the most widely distributed, fastest growing, and largest trees. Understanding of its seral position is essential to effective management. This article attempts an explanation.

As a Pioneer

Baker (1950) ranked yellow-poplar as intolerant, capable of withstanding only moderate shading. Its absence in the understory, even on excellent sites, supports this classification. Another silvical requirement, elevated soil temperatures for seed germination, is met only where the soil surface is exposed to essentially full sunlight. According to classical concepts of forest succession, these silvical characteristics place yellow-poplar among the pioneer trees that become established following disturbances.

Somewhat uncommon among intolerant trees is yellow-poplar's high sensitivity to soil nutrient and moisture status. It is among the fastest growing hardwoods on fertile sites that are moist but well drained. The growth rate drops rapidly, however, as conditions grade toward less fertile or excessively wet or dry (Ike 1968, Doolittle 1958).

Filling its role as a species responding to disturbance, yellow-poplar accounts for the largest net cubic volume growth of any hardwood in North America (Sternitzke 1975). Vigorous stands are found on good bottomland or lower-slope sites (McGee and Clark 1975) that were heavily cut or on good agricultural land that was abandoned. Disturbances that uniformly ex-

pose the soil on moist, fertile sites generally result in pure, even-aged stands of uniform character.

Mechanization in agriculture resulted in the abandonment of small farms in mountain valleys and on lower slopes throughout the Appalachian region. Even though cultivation adversely affects soil properties for the growth of yellow-poplar (Clark 1964), recovery is rapid where erosion is not excessive, and many old fields now support excellent stands (Boyce and McClure 1975). Mountain coves that were once disturbed but are now protected, such as are common in the Great Smoky Mountains National Park, support pure, even-aged stands in which the volume growth per acre rivals that of intensively managed plantations (Beck 1975).

Bureau of Census figures indicate that 6,155 million cubic feet of old-growth yellow-poplar were cut between 1870 and 1930. Since that time an additional 3,760 million cubic feet of largely second-growth timber has been harvested. Despite this removal of approximately 9,900 million cubic feet over the past 100 years, estimates indicate that present growing stock, approximately 9,300 million cubic feet, is almost equal to the total removal (Boyce and McClure 1975).

In Old-Growth Stands

While yellow-poplar's ecological role in second-growth forests appears consistent with its silvical requirements, its presence as a dominant in the original forest cover of the southern Appalachians is not. Climax forests on good sites are composed of tolerant trees capable of regenerating and living for many years beneath the canopy of the parent trees. According to Braun (1950), "accordance of canopy and understory is indicative of a climax" in eastern deciduous forests. Because of its intolerance, yellow-poplar is not a component of understory vegetation in fully stocked stands, and would not qualify as a component of climax forests according to classical concepts.

Yet historical records are to the contrary; yellow-poplar was described as one of the dominants in southern Appalachian forests when European settlers first arrived (Ayles and Ashe 1905). Braun (1950) listed it as one of nine dominant species in the mixed mesophytic association, the climax community on good sites in the region. She also listed it as a dominant in the former oak-chestnut association that was climax on somewhat drier sites.

Its importance as a dominant tree in the original stands became apparent to the authors as they attempted to determine the composition and structure of forests in the Great Smoky Mountains region prior to impacts from European settlers. According to oral history from people having first-hand knowledge, the earliest commercial logging in the region, around 1880, was exclusively for yellow-poplar, distinction being made between "blue" poplar that would not float and "white" poplar that could be floated downstream to mill sites. Despite this loss to highgrading, in the four decades following 1900, when highly mechanized logging removed all merchantable timber from accessible drainages, yellow-poplar still comprised 11 percent of the total and 27 percent of the hardwood volume cut (Lambert 1961).



Figure 1. Photograph of large yellow-poplar trees, from *American Lumberman* magazine in the early 1900s (photo provided by Great Smoky Mountain Natural History Association).

Carl Schenck's concern for large yellow-poplar trees in the Big Creek drainage of what is now Pisgah National Forest (then Biltmore Forest) was reported by Ovid Butler (Schenck 1974). In 1896, while marking yellow-poplar (the only species being cut) and supervising the construction of a splash dam, Schenck inspected the logging site with Baron von Ribbentrop, inspector general of forestry in India. According to Schenck, Ribbentrop felt that logging would "extinguish forever our most valuable tree species. Search as we might at that time, we could not find in the entire cove one seedling of a tulip tree, and not one of pole size. Was I committing race murder among the tulip trees?" Returning to Big Creek years later, Schenck was relieved to find vigorous young yellow-poplar regeneration where the old trees had been harvested.

Further evidence that yellow-poplar was a natural component of old-growth stands was found in early photos of massive yellow-poplar trees (fig. 1). Such scenes give the impression that the trees pictured are average ones in a forest of giants. While stands comprising several acres of large trees did, and still do, exist (e.g., Joyce Kilmer Memorial Forest near Robbinsville, North Carolina), they must represent the final stages of a pioneer stand that became established following some severe disturbance, possibly fire. The

longevity of yellow-poplar, 300 years and more, would enable pioneer trees to dominate the canopy for centuries before being replaced by more typical climax trees from the understory. As was true in Big Creek, there is essentially no yellow-poplar regeneration in Joyce Kilmer Memorial Forest.

Regeneration in Old-Growth Stands

The presence of yellow-poplar in old-growth stands over much of the southern Appalachians appears to be related to two factors: its size and the way it dies. Rapid growth throughout a long life, resulting in the most massive trees found in eastern North America, is characteristic. Record trees measure 12 feet in diameter, 198 feet high, and 122 feet in average crown spread (*American Forests* 1973, Harlow and Harrar 1969). Eastern hemlock (*Tsuga canadensis* (L.) Carr.) and, prior to the chestnut blight, American chestnut (*Castanea dentata* (Marsh.) Borkh.) rivaled yellow-poplar in size but could not match its growth rate on good sites. Beck and Della-Bianca (1972) record a 50-year site index of 130 in second-growth stands on good mountain sites.

The tolerant trees that characteristically compose climax forests on good sites develop as random individuals from seeds that chance to germinate where the tree can survive long enough to reach the more favorable upper-canopy environment (Oliver and Stephens 1977). Upon reaching physiological maturity they commonly die as standing trees and fall to the ground slowly, piece by piece, doing little to disturb the site or damage the tolerant understory trees that will replace them.

Such is not the fate of a massive yellow-poplar. On good sites it continues to grow until its crown stands well above the average upper canopy level. In this position a large crown develops, producing the photosynthate needed to keep the tree growing through a long life, but also making it susceptible to windthrow.

In falling, these massive trees not only create a large opening in the overstory but also commonly destroy both overstory and understory trees over an area approaching a half-acre. Impact with the ground exposes mineral soil to full sunlight. The warmed soil and full sunlight, for at least a portion of each day, fulfill the regeneration requirement for this "pioneer" species.

Support for this theory was found in conversations with early residents, especially former loggers in the Great Smoky Mountains region.¹ They recalled that yellow-poplar greatly exceeded common associates in average diameter and was less frequent in stands. Although it was distributed throughout hardwood forests at middle to low elevations, it was larger and more frequent in moist coves and on fertile flats. It commonly occurred as clumps of large trees in mature stands composed largely of shade-tolerant species characteristic of climax stands, such as sugar maple (*Acer saccharum* Marsh.), hemlock, and American beech (*Fagus grandifolia* Ehrh.).

Close examination of the old photographs mentioned earlier showed that large trees generally occurred singly or in groups not exceeding three or four,

¹Personal communication with Arnold Thompson, Horace Trentham, Franz Gregory, and S. P. McNeill, Sr., all of Townsend, Tennessee, and former loggers in the area now included in the Great Smoky Mountains National Park.

an indication that they developed in a single opening. Trees to the side and in the background would usually be smaller and of more tolerant species (fig. 1). The numerous pictures of very large trees, commonly with someone posing beside the biggest, suggest that such giants were out of the ordinary.

A recent example of the perpetuation of yellow-poplar in old-growth stands can be found in the Cades Cove section of the Great Smoky Mountains National Park. The "Giant Poplar" was a major tourist attraction until it fell in a windstorm in July 1974. It was on an excellent site, and yet the only other yellow-poplar in the area was a single large tree approximately 200 feet away. Very large hemlock, American beech, and basswood (*Tilia heterophylla* Went.) were the common associates.

In falling, this yellow-poplar created an opening approximately one-half acre in size. Overstory and understory trees in the path of its fall, including a dense rhododendron thicket, were crushed. Mineral soil was exposed as branches were pushed into the ground before breaking. Seed germinated that season as soil temperatures increased and the saplings are now dominants in the mixed regeneration that occupies the area.

Yellow-poplar appears to be unique among eastern hardwoods in being a dominant tree in both pioneer stands on good sites and in old-growth stands that are otherwise climax. ■

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Roaming The Mountains

Appalachian Room
Appalachian State University

Kevin Clifton

Roan Is Mountain Of Mysteries

By JOHN PARRIS

ROAN MOUNTAIN — This is the mountain of the eerie humming music and the circular rainbow.

To know about them you've got to know about the resort hotel that once stood here among the clouds that scrape the 6,286-foot Roan.

Gen. John Thomas Wilder, an enterprising Yankee, used the strange occurrences to promote his Cloudland Hotel where guests could have their meals in North Carolina and sleep in Tennessee.

Few folks had ever heard of the Roan's ghostly music or its circular rainbow until he built his resort hotel on the huge, long, bald mountain that straddles the state line.

The original structure, a small lodge built in 1878, was of handhewn logs cut from the sides of the mountain. It



JOHN PARRIS

became so popular that Wilder replaced it eight or nine years later with a four-story, 168-room building of sawn timber.

It was through the opening of the Cloudland Hotel that folks outside the hills began to know about the mountain's eerie humming music and the circular rainbow.

Guests came and heard and saw and went away to tell others.

The first to call attention to the strange music were lonely herdsmen keeping watch over their cattle on the mountain back in the 1870s.

They fetched the story of the rare phenomenon into the valley and a legend began to grow.

Folks born with the wisdom of the ageless hills allowed a body had no cause to be surprised at anything that happened on the Roan.

Why, since time out of memory, folks caught on the

—Turn To Page Seven-A

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Asheville
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