

On the Edge: The Atlantic White Cedars of Mormon Branch

by Marc C. Minno and Maria Minno

Any well read student of biology will tell you that where the Atlantic white cedar (*Chamaecyparis thyoides*) grows, rare plants and animals are likely to be found. This peculiar tree occurs in disjunct populations along the Atlantic coast from Maine to South Carolina, and also along the Gulf coast from the Apalachicola National Forest westward into Mississippi. There are a few stands in west-central Georgia and north-central Florida that are highly isolated from all others. The southernmost stand of white cedar grows along Mormon Branch in the Ocala National Forest, Marion County, Florida. Here at the edge of the species' range, the white cedars of Mormon Branch live within a sliver of habitat only about as wide as a typical roadway.

The one thing you're not likely to forget about a visit to a white cedar stand is the ticks. The first time we visited Mormon Branch was during the fall of 1985, in the company of Dr. Archie Carr. As we approached the creek, the ticks became more abundant, and we began plucking them from our pants. Dr. Carr noticed our predicament and offered a solution. He explained that the Mosquito Indians of Costa Rica keep ticks off by beating themselves with branches. We picked a few leafy branches and began to beat our pant legs. Dr. Carr looked dismayed, mentioned that we were not using proper authority, then showed us how to do it right.

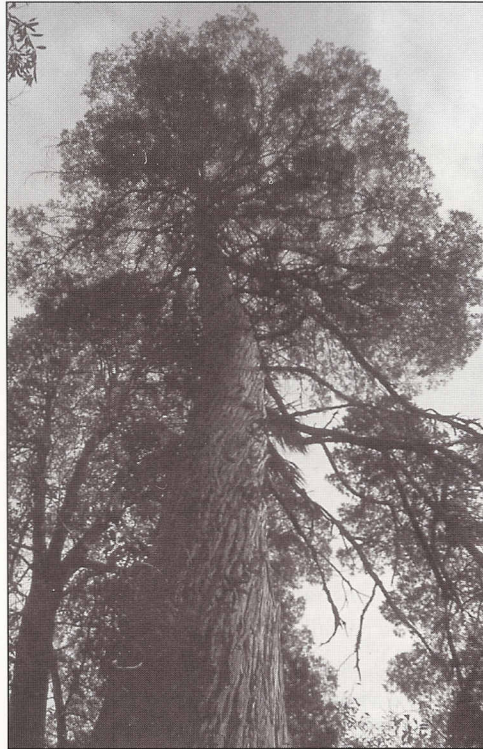


Photo by the authors

A large white cedar at Mormon Branch.

The technique has its limitations, but does seem to help!

The Mormon Branch area is a land of contrast. Reaching the white cedars requires a walk along a sandy road through a scrub forest composed of sand pine (*Pinus clausa*), silk bay (*Persea humilis*), Chapman's oak (*Quercus chapmanii*), myrtle oak (*Quercus myrtifolia*), sand live oak (*Quercus geminata*), scrub holly (*Ilex opaca* var. *arenicola*), rusty lyonia (*Lyonia ferruginea*), and scrub hickory (*Carya floridana*). The coarse sand is highly permeable. All of the rain that falls on the scrub is either released back to the atmosphere through evapotranspiration or percolates downward to the aquifer. The limestone that forms the aquifer is riddled with cavi-

ties and channels, some of which are connected to the surface by sinkholes and discharge groundwater via springs.

Mormon Branch is such a spring-fed creek. The water is clear, near neutral in pH, and relatively constant in flow, unlike the white cedar stands in the Panhandle that occur along acid, blackwater streams. Sandwiched between the xeric scrub hills, Mormon Branch makes its way northward for just a few miles before joining Juniper Creek. The narrow band of bottomland forest along the creek is a dense tangle of mostly evergreen shrubs such as yellow anise (*Illicium parviflorum*), agarista (*Agarista populifolia*), fetterbush (*Lyonia lucida*), swamp azalea (*Rhododendron viscosum*), and highbush blueberry (*Vaccinium corymbosum*). Taller shrubs or small trees of wax myrtle (*Myrica cerifera*), dahoon holly (*Ilex cassine*), and an occasional Florida willow (*Salix floridana*) fill in the gaps. Thickets of needle palms (*Rhapidophyllum hystrix*) grow at the edges of the bottomland forest, where groundwater seeps out of the hills. The forest canopy is mostly composed of loblolly bay (*Gordonia lasianthus*), swamp bay (*Persea palustris*), sweet bay (*Magnolia virginiana*), cabbage palm (*Sabal palmetto*), diamond-leaf oak (*Quercus laurifolia*), and red maple (*Acer rubrum*). Along the banks of Mormon Branch grow Virginia willow (*Itea virginica*), swamp rose (*Rosa palustris*), and, of course, white cedar.

Rolling down out of the scrub, the sandy road cuts across Mormon Branch, bends to the south, then scampers up the opposing hill. The road forms a transect across the bottomland forest. A rusting culvert channels the stream under the roadway. Just upstream from the culvert is a little glade where the creek widens out. White cedars are particularly abundant around the rim of the glade. Beds of tape-grass (*Vallisneria americana*) and water-cress (*Nasturtium officinale*) ripple in the cool water.

The white cedars grow on moist, peaty soil. This species is intolerant of the occasional fires that ravage the scrubby uplands, and is also killed by extended periods of flooding. All stages of its life cycle can be seen at Mormon Branch. Seedlings are common on mossy stumps and hummocks, but most are destined to die unless a tree fall creates a gap in the canopy.

Middle-aged white cedars are shaped like spruce trees in a boreal forest, tall and narrow. The older trees are bowed at the base and have lofty, rounded crowns. At Mormon Branch, the largest white cedars range from about two and one-half to three feet in diameter. The bark has an interesting pattern of gray ridges and reddish-brown crevasses, often partly flaking

from the trunk in narrow strips. The scale-like leaves are appressed (pressed close or flat) to the branches and resemble the common Southern red cedar (*Juniperus silicicola*), but the branchlets of white cedar are flat rather than round. The small winged seeds of white cedar are dispersed by the wind. Red cedar may be more widely distributed be-

bark. The white, blueberry-like flowers are produced in the early spring. Grass-of-Parnassus is a state endangered species and occurs along the edges of Mormon Branch. The white flowers of Grass-of-Parnassus appear during the fall.

A rare and ephemeral butterfly, Hessel's Hairstreak (*Mitoura hesseli*), may also occur at Mormon Branch. Adults of this small species fly only for a few weeks during the spring and fall. The undersides of the wings are a beautiful dark green with white spots, and closely match the leaves of white cedar. Caterpillars of Hessel's Hairstreak eat only white cedar leaves. Due to their close association with Atlantic white cedar, short adult lifespan, and habit of perching near the tops of the trees, this is one of the most difficult butterflies to find. So far, it is known in Florida only from white cedar stands in the Apalachicola National Forest.

A few years ago, we visited Mormon Branch in hopes of finding the hairstreak. After a few hours of staring upward, our neck muscles were just about ready to give out. Suddenly, we spied a hairstreak perched on a "low" branch of white cedar. Our net, which had a 20 foot handle, wouldn't quite reach the spot. But after careful consideration, Marc leapt from a stump and snatched the hairstreak from its perch. Imagine the thrill of discovery, only to be dashed to pieces when the butterfly proved to be Margaret's Elfin (*Incisalia henrici maragetae*). Although a local and interesting species in its own right, it was not the prize for which we were looking. The elusive Hessel's Hairstreak remains to be discovered at Mormon Branch. ✨

AUTHOR'S NOTE: For further reading about white cedar, see "Atlantic White Cedar (*Chamaecyparis thyoides*) in the Southern States" by Daniel B. Ward and Andre F. Clewell (1989, *Florida Scientist* 52(1):8-47).

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Photo by the authors

Grass-of-Parnassus (*Parnassia grandifolia*) grows along the banks of Mormon Branch.

cause its fleshy cones are eaten by birds.

Among the more interesting plants at Mormon Branch are climbing pieris (*Pieris phillyreifolia*) and Grass-of-Parnassus (*Parnassia grandiflora*). The pieris grows as a low shrub, or, in association with white cedar, as a vine that may burrow under the

New Books You Must Get

(quick picks from the editor)

ONE PERK OF THIS JOB IS THAT BOOKS – MY absolute favorite possession – come free in the mail! Unfortunately we don't have the editorial space to expound on all these awesome pubs but here are a few that you should rush out and buy if you haven't already ...

Dr. Richard Wunderlin's new *A Guide to the Vascular Plants of Florida*, FNPS' de facto standard for determining nativity and other information on Florida plants, is now available for \$35.00 (a great deal) from book dealers such as our own Subtropical Trader (see Where to Find FNPS page 30). You can't be without it!

The University of Florida Institute of

Food and Agricultural Sciences (IFAS), in cooperation with the Department of Environmental Protection, has published a new *Florida Wetland Plants* identification manual with more than 800 color photographs and 1000 entries, available for \$35 from US/IFAS Publications (800-226-1764).

Other new books I've read and would like to review for you but as you can see we are OUT of space: *Swamp Screamer* by Charles Fergus, a good read on Florida panthers, and *Stalking the Wild Amaranth*, *Gardening in the Age of Extinction*, by Janet Marinelli, a great book to give any serious gardener (more about that next issue...).