

## Efforts to Protect Biodiversity and Promote Sustainable Forestry in the Appalachian Mountains

Source: Mountain Research and Development, 20(3): 232-235

Published By: International Mountain Society

URL: https://doi.org/10.1659/0276-

4741(2000)020[0232:ETPBAP]2.0.CO;2

BioOne Complete (complete.BioOne.org) is a full-text database of 200 subscribed and open-access titles in the biological, ecological, and environmental sciences published by nonprofit societies, associations, museums, institutions, and presses.

Your use of this PDF, the BioOne Complete website, and all posted and associated content indicates your acceptance of BioOne's Terms of Use, available at <a href="https://www.bioone.org/terms-of-use">www.bioone.org/terms-of-use</a>.

Usage of BioOne Complete content is strictly limited to personal, educational, and non - commercial use. Commercial inquiries or rights and permissions requests should be directed to the individual publisher as copyright holder.

BioOne sees sustainable scholarly publishing as an inherently collaborative enterprise connecting authors, nonprofit publishers, academic institutions, research libraries, and research funders in the common goal of maximizing access to critical research.



FIGURE 1 John Dalen, 48, is a seventh-generation farmer. logger, and cattleman who manages his family's 2200 acres in Pendleton and Pocahontas counties. West Virginia. Here he is cutting timber on Phares Knob. (Photo by Alton Byers)

I've been selectively cutting trees that won't develop any further and cutting out a lot of the low-grade timber that is either damaged or overgrown and won't produce much or produce at all. I do this to improve the quality and diversity of the trees and to favor the more valuable timber hard maple, cherry, and ash.

Alton Byers (MRD): Could you tell us about the Dalen family history in West Vir-

John Dalen: My family were early settlers, coming here in the 1740s. They moved into what eventually became the state of West Virginia in 1863. My great, great uncle John McClure, who was in the Confederate Army during the Civil War, bought up a lot of land in this area, specifically in the high Allegheny out here from Dry Fork into what's called the upper Sinks. After the Civil War, he managed to accumulate a little cash, mainly through a dowry that was given to his wife when they were married. He bought the property in 1867; over the years, he accumulated about 15,000 acres for about \$20.00 an acre. He bought it as grazing land, and around 1905, cleared off the balsam fir ('Blister Pine') forest that was in Blister Swamp for grazing. It's been open rangeland since then.

When did you first become interested in protecting the swamp?

My mother always had an interest in science, particularly biology, as she was a high school biology teacher. She came across the writings of Dr Roy Clarkson of West Virginia University, who had done research on the flora and rare plants within Blister Swamp. We were already interested in what the swamp was like before it had been cleared, and in time, we decided to do something about it. With the help of The Mountain Institute and The Nature Conservancy, we did a restoration project, primarily to fence off the main swamp area, about 40 acres, to let it return to its natural state. We intended to reintroduce the balsam fir to the swamp grown from local seed.

But why exclude such a valuable grazing resource from cattle?

Actually, half will be permanently enclosed to exclude cattle and hopefully the deer

that are probably one of the primary threats to the balsam fir. The other half will be opened up to late season grazing, after the yearly lifecycle of most of the plants has taken place. I didn't want to exclude the whole thing because it's still a valuable grazing resource. I don't think that grazing is unnatural because the buffalo and elk that once roamed these mountains had to eat somewhere, and they traveled and waded through the cricks and stomped down the sod and made natural openings. Also, we know that this was a sacred hunting ground for Native American populations more than a thousand years ago-you can find flint points at virtually any location out there. I imagine they cleared a fair amount of land or burned it so the grass that grew there would encourage the large game animals that were their primary food source.

But my main goal is to be able to step out on the front porch of the house in the early morning and watch the fog lift from Blister Swamp and see the balsam fir like they used to be. I hope I live long enough to see this, which I think I will. It seemed right to protect the swamp, not only because of the balsam fir but also because of the other species that grow there. This is also the southernmost habitat for some of these plants, and some of them are very rare.

Do you think that projects like this one, involving a variety of partners from nonprofits to federal agencies, could somehow influence other landowners in the region to protect similar habitats?

I think so. At first I think that the adjoining landowners are going to be suspicious of what's going on, perhaps because they don't know exactly how the land's to be protected and who's to assume responsibility for it. Hopefully it will become an example to other places and other people, possibly adjoining our property, but also in totally different locations. If landowners are assured that they both own and control the property, I think a lot of them might be more inclined to agree to a project of this nature. It's very important to people around here to preserve their

rights as landowners to protect their land. I think that if they can see a nonthreatening way to address these issues, they will be more inclined to go along with it.

What are the main types of land use and land cover within your 2200 acres?

Well, the smallest amount of acreage is devoted to crop raising, primarily hay. Next is cattle grazing, approximately 500 acres. The largest portion is timber; historically the land's been used for timber. It was first timbered around the turn of the century in the big logging era. At that time, they clearcut most of this country, and then it was selectively cut in the late 1960s and early 1970s. In the late 1980s, I started cutting timber on my own property. Since then, it's been mainly selective harvesting and thinning projects to improve the land overall, to increase the diversity of species and the size of the timber and generally upgrade the land.

What's the most common logging practice in WV today among private landowners?

The way it's most often done is that the landowner will either sell the timber on competitive bids or find a timber cutter that he feels comfortable with to cut the timber for him. They'll usually do it on a contract basis, generally a 50/50 split where the timber cutter gets 50 percent of the proceeds for his time and effort and the landowner usually around 50 percent. Selective cutting is the most common thing. I think most landowners are uncomfortable with the notion of clearcutting. Some do it, and some of the selective cuts almost border on clearcuts as far as the amount of timber they take out is concerned. There are several threats to forest ecology around here now. Timber is so valuable that there's a big incentive to cut and sometimes overcut. But just as harmful, if not more harmful, I feel is the overpopulation of whitetail deer in the area. In time, as the deer continue to browse out all the young growth and



the old trees start to die, I think you're going to see a change in the overall forest ecology of the area. You'll be left with trees that are resistant to deer and yet don't really provide good game habitat.

What role does logging play in your livelihood?

Well, logging is my primary income. I got into it kind of late in life but realized that it was a valuable resource and that it would be foolish not to utilize it. But considering some of the historic forestry practices in this part of the country and the economic aspects, if I were to get someone else to cut it, I'd be making roughly half of what the ultimate value is. Over the last 15 years, I've been selectively cutting trees that won't develop any further and cutting out a lot of the low-grade timber that is either damaged or overgrown and won't produce much or produce at all. I do this to improve the quality and diversity of the trees and to favor the more valuable timber-hard maple, cherry, and ash. There's some real monetary incentive to favor the good young timber because, in growing conditions out here, it doesn't take too many years to establish a really nice forest.

FIGURE 2 Blister Swamp in Pocahontas County, WV. Blister Swamp represents one of the last remaining balsam fir and red spruce circumneutral wetlands in unglaciated eastern North America. Thirteen rare plant species have been reported, of which 3 are globally uncommon. Most of the rare plants are northern and boreal species, of which 2 are found here at their southernmost known occurrence. About one third of the total swamp area is located on John Dalen's property, with the remaining two thirds split between the US Forest Service and another private landowner. (Photo by Alton Byers)



FIGURE 3 Installing fenceposts to protect Blister Swamp. (Photo by Alton Byers)

I don't think that grazing is unnatural because the buffalo and elk that once roamed these mountains had to eat somewhere.... Also, we know that this was a sacred hunting ground for Native American populations more than a thousand years ago.... I imagine they cleared a fair amount of land or burned it so the grass that grew there would encourage the large game animals that were their primary food source.

With today's prices, it's the type of economic incentive that you really can't ignore. I figure the more timberland I can turn productive like that the more it will help me and the more it will help my family. When my children and my sister's children inherit this land, they'll have something that's extremely valuable. Hopefully it will be very attractive; I'm seeking a certain aesthetic quality. Like I said, I may never live to see it, but if the people who come after me have the same attitude, they'll definitely get to see it, and they'll get to profit from it, and hopefully they'll enjoy it and appreciate it as much as I do.

Regarding timber extraction, what are your thoughts on 'alternative' or 'green' harvesting techniques, such as horse logging?

Well, horse logging is OK. But today it is hard to log this country and make any money using horses, especially if you are a timber contractor. We've lost that way of doing things in today's society—it's all machineryoriented, and horses take a lot of care and maintenance and feeding and brushing and shoeing and training, and it's a lot harder to do it with a team of horses. A lot of people, especially the landowners who won't log themselves without modern conveniences, I really don't think they would go back to logging with horses. At the end of the day, you can turn off the skidder and park it. But with a team of horses, you've got to brush them down and water them and feed them and take care of them and take their harnesses off and everything and get them ready for the next day.

What role can nontimber forest products play in a landowner's economy, including things such as ginseng, goldenseal, ramps (wild leeks), berries, medicinal herbs, edible plants?

That's kind of an unknown. I guess that's one of the interesting aspects about the whole thing, that there really hasn't been any solid research into what is marketable out here, as far as what you could grow,

what you could raise or cultivate. We know that there's a tremendous market for ginseng and that people are successfully growing it, and you could probably quantify that to some extent, but as far as the evidence is concerned, it's kind of an unknown. It's like anything else you sell—you have to have a market, you have to know what your market is first before you really get into it at too great an expense. And I think that, before you present something as an alternative business, you have to know what's involved to raise it and you have to know what's involved in marketing.

How much is known in WV right now about the economics of different harvesting techniques, like selective cutting versus clear cutting versus horse logging versus nonuse?

Well, as far as the timber is concerned, I know what the markets are and I know what to go after. As far as techniques are concerned, I think a lot of it hinges on the idea of the length of time you're willing to invest in a specific practice in order to see the benefit from it. I know that, if I take care of this timberland, it will benefit me, the present generation, and future generations. Owning the land and having some vision of the future is enough incentive for me to do what I do in selective harvesting. I think that one of the bad things about timber cutting now is that the market is so good that it encourages timber cutters to cut timber that is smaller than what I feel should be cut because they know they can make money on it right now. They're taking a short-term view because they've got debt to service, and they are driven by forces other than the notion of stewardship. As for myself, I can implement stewardship because I'm cutting my own timber. I don't have to worry about a large debt load and I don't have a payroll. I don't employ anyone, and being pretty much self-sufficient, I can manage it around that. But where you've got a timber cutting crew that has maybe a couple hundred thousand dollars worth of machinery and a workman's compensation rate that's almost 50 cents on the dollar for all the wages they pay out and deadlines to meet, it's a lot harder for them to think about stewardship because they're under the gun to make money to keep going. I'm really an anomaly in this area in the way I go about doing what I do because I have a different vision. Second of all, I have the inclination and the ability to do it myself. And I realize that a lot of people don't; they'd have to learn a whole new skill, and it's hard, dangerous work, and a lot of people just flat out wouldn't want to do it.

## How much longer do you plan to log?

Well, I'm kind of uncertain about that. I'm 48 years old and I don't want to pursue it too many more years because, as you get older, you slow down and you don't have the reaction time that you need to stay safe. Basically, a lot of the time out here in the woods you're living by your wits. There's constant danger, and it's the type of thing that, when I'm in my mid-50s, I'd just as soon be doing something different. But I'll always have an attachment to the land and what happens to it. Even if I had someone else cutting the timber, I feel it would be necessary for me to be here at least part of the time making sure it's being done the way I want it done. I'll always have a hand in it even if I'm not directly doing it myself in order to achieve the end result that I want.

## What other future opportunities related to the land have you thought about pursuing?

One notion I have is trying to develop some kind of a recreation business, maybe with rental cabins, for people who want to get away to do anything from sitting out in the woods reading a book to mountain biking or hiking or bird watching or crosscountry skiing, or whatever there might be a market for. That is something I would see as truly sustainable, and if it were good enough, I suppose that a person could just quit cutting timber and do that entirely.

But meanwhile, I have this forest resource that will do better if it's managed, and it's nice to see a big old growth of timber around. But if it's not utilized monetarily, in a way, it's going to waste. I know Mother Nature doesn't waste a thing, but there are resources here and I think it would be foolish not to utilize them to an economic end.

## What do you think these mountains will look like in 80 years?

Well, it's kind of hard to say. It's likely that most of this area will still be forested. I believe the amount of open land is actually diminishing with time. A lot of old farms have grown up and gone to seed, and the forest is slowly reclaiming a lot of the country. A small family farm isn't viable anymore; people can make a better living in more populated areas, and they've deserted a lot of this country. I might be wrong, but I don't believe that the logging that's going on in the state is going to have an overall detrimental effect. There seem to be enough state regulations to control forest degradation by loggers, and I have a firm faith in Mother Nature's ability to regenerate and restore Herself even when there is a lot of damage being done. In some places in the southern part of the state, they're practicing hilltop mining and similar things that might be permanently changed. But there are few such locations; most of the state is growing back. If you look back and consider what happened to this area at the turn of the century, during the big logging era, and then look at the state it's in now, you see that the forest has a tremendous ability to regenerate and restore things to their previous condition. I believe that, if we're willing to work a little harder at improving things, it'll stay a nice place. We can't overdo the logging, but if people can find real alternatives to conventional forest products and if there isn't much risk in trying to develop them, I'm certain they will happily take to things like that.

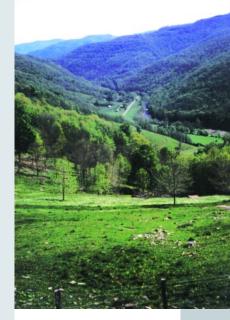


FIGURE 4 View of forests in the Appalachian Mountains, WV. (Photo by Alton Byers)

MRD is grateful to Regional Editor Alton C. Byers for interviewing John Dalen on 11 May 2000 at Phares Knob, WV. Alton Byers is a mountain geographer specializing in applied parks and people models, landscape/landuse change, mountain geoecology, and the development of applied research programs in remote regions. He has worked and published on a variety of research, field managerial, and program development initiatives in the US, China, Nepal, India, Africa, South America, and the Caribbean. He now directs TMI's Appalachian Programs and Spruce Knob Mountain Research Center. Ed.