

St. Croix State Park – The Way It Was

By John W. O'Reilly

Have you ever wondered what the forest in our area was like before the loggers and settlers arrived?

In the 1970s, a graduate student wondered just that about St. Croix State Park and wrote his thesis on what the area that is now the park it was like in the 1850s.

The student, named Allen Fedkenheur, studied notes made by the original surveyors who covered the St. Croix State Park area between 1849 and 1853. The surveyors were required to make notes on four trees closest to the section corners. They recorded the species of each tree and its direction and distance from the corner.

Using the distance data, Fedkenheur estimated the density of the forest at each corner. If the four trees were just a few feet from the corner, he concluded the forest was very dense in that area and, if they were further away, that the forest was less dense.

Fedkenheur used the species data to estimate the nature of the landscape between the section corners. That is, if the trees near two adjacent section corners described by the surveyors were of one species, then Fedkenheur speculated the area between the two corners was also covered by that species. He then adjusted his estimates based on topography. If the two adjacent corners are on high ground but the area between is swampy, then he knew the tree species in the swamp would be different than those recorded near the corners.

What did Fedkenheur find the landscape was like in the 1850s? Was it covered by the huge white pines we all imagine?

Not exactly.

Of the 34,000 acres in St. Croix State Park, about 1,000 acres were covered with the magnificent white pines we imagine. They were growing in two parcels: one, of about 750 acres, was in the far northeast corner of the park and the other, of about 250 acres, was in the southeastern corner.

But the 1,000 acres of white pine accounts for only 3% of the park's land. What was growing on the rest?

There were two big parcels of Norway pine totaling about 3,700 acres. One parcel was on the northwest edge of the park and the other on the north central edge. These trees were undoubtedly nearly as big and impressive as the white pines.

In addition, there were five parcels of mixed pine and hardwoods, covering a total of 7,500 acres. These parcels must have contained some huge pines as well as big oaks, maples and basswoods.

Jack pine, the pine that thrives on the poorest, sandy soil, covered a huge area around what is now the Park Headquarters. Fedkenheur estimated there was a total of 6,500 acres of jack pine. Interestingly, these trees were not all growing in a dense forest. Some of the jack pines were scattered, growing in what Fedkenheur called a woodland, and others were even more scattered and growing in what he called a savannah or barren.

DNR biologist Ruth Thornton thinks the jack pine savannahs were some of the most interesting areas in the park because growing under and between the scattered jack pines were native prairie grasses. She says it is very unusual to find this combination.

The most common tree in the St. Croix State Park of the 1850s was the tamarack. This tree, which is the only conifer that drops its needles each fall, covered over 7,500 acres of the park land in nearly a dozen parcels. Notes made by the surveyors indicate the tamaracks, for unknown reasons, were in decline.

Three other species the surveyors recorded in the 1850s were 2,500 acres of bottomland hardwoods which were growing in wet areas, 600 acres of spruce and just 1,200 acres of aspen-birch.

Fast forward 150 years. How is the park different from what it was in the 1850s?

Today, the 1,000 acres of white pine is gone as is 97% of the red pine and 87% of the mixed pine and hardwood. The original 9,000 acres of tamarack is down to 500. There is some jack pine left, 2,700 acres of the original 6,500, but only 67 of those acres contain the rare jack pine barrens.



St. Croix State Park biologist Ruth Thornton is shown in a jack pine savannah in which trees are widely spaced. In the 1850s, there were about 1,600 acres savannahs like this in the park. A unique feature of these savannahs is the prairie grasses that grow between the trees, like the big bluestem in front of Ms. Thornton.

The table shows the big winners today are aspen, birch and other hardwoods – oak, maple and basswood. These deciduous species are now growing on much of the land that used to contain pines. The 7,000 acres of forested / shrub swamp bears woody plants that, in presettlement days, would have been burned off from fires started either naturally with lightening or by the Native Americans.

Forest Community	Acres		Change
	1853	2001	
Conifers (Pines, etc.)			
White Pine	1,000	0	-100%
Red Pine	3,700	125	-97%
Jack Pine Woodland & Forest	5,000	2,600	-47%
Jack Pine Barrens (Savannahs)	1,600	67	-96%
Pine-Hardwood mixed	7,500	1,000	-87%
Tamarack	9,000	500	-94%
Spruce	600	300	-49%
Deciduous (leaf-dropping)			
Aspen-Birch	1,200	9,500	+675%
Bottomland Hardwoods	2,500	2,300	-6%
Deciduous Forest / Woodland	0	4,500	
Forested / Shrub Swamp	0	7,000	
Emergent Marsh	0	1,500	
Developed Land	0	3,800	

St. Croix State Park managers would like to restore the landscape to what it was in the 1850s. Depending on how aggressive they are, particularly with the use of fire as a management tool, this project could take from a few decades to a hundred years or more. If the project is successful, however, our great grandchildren will be able to enjoy the landscape of St. Croix State Park as it was in the 1850s.