

Figure 1. Rustic privy with spruce bark siding and half-log trim, present condition.



Figure 2. Rustic privy on truck bed, arriving at museum in 1961 (image has been rotated 90 degrees for easier comparison).

# Adirondack Rustic Architecture and Regional Watercraft: Case Studies of Artifact Use at the Adirondack Museum

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## ABSTRACT

The Adirondack Museum has a number of examples of rustic architecture. The first part of the paper will focus on two small structures that were moved to the museum from famous camps in the area. These unusual structures, built between 1880 and 1905, must withstand the harsh climate of the region. The rustic materials of bark and twig on an exterior present a conservation challenge. Treatments of rustic furniture are presented for comparison.

The second half of the paper will focus on the use of a historic watercraft in the collection: an Adirondack guideboat, a highly-refined regional boat with very particular handling properties in the water. This artifact is maintained in the traditional manner and is stored in traditional boat storage, rather than in climate-controlled museum storage with the rest of the collection. Development, significance, manufacture, and handling properties of the guideboat are discussed.

## Introduction

The Adirondack Museum is a large outdoor museum in northern New York State interpreting regional cultural history. It is located near the center of the Adirondack Park, a mountainous region of forest interspersed with communities that is equal in size to the state of Vermont. The collection is used to illustrate how people have lived, worked, played, and traveled in the Adirondack region since the early 1800s. The culture is heavily influenced by the physical aspects of the region, which has a severe climate, is rugged and mountainous, thickly forested, and is crossed by thousands of rivers and lakes. Towns and individuals are physically isolated from one another by distance and terrain. Many towns did not have paved roads, electricity, or indoor plumbing until the 1930s or 1940s. Hunting, camping, and boating are quintessential traits of the Adirondack lifestyle.

## Part 1: Rustic Architecture

The dictionary defines rustic as plain and simple; unsophisticated; rough, or sturdy; or constructed of undressed branches or roots of trees. Rustic architecture, although not limited to the Adirondacks, is a large part of the regional aesthetic. The Adirondack Museum has five historic rustic structures exhibited on its campus. The rustic materials of bark, twig, root, and burl add a level of complication to the ongoing preservation issues. We must assess these small structures both as architecture and as decorative, functional wooden artifacts.

### Rustic Privy Description

The rustic outhouse, (fig. 1) or privy, was built in 1905 and was used at an Adirondack camp until the 1950s. It was moved to the museum in 1961. It is a plank structure with a cedar shingle roof measur-

ing roughly 6' to a side and 9'9" in height. The siding is made of large overlapping sheets of bark that are tacked along the perimeter edge.

### Notes on Spruce Bark

The surprisingly durable bark is taken from common native conifers of the *Picea* family, such as the black spruce and the white or Adirondack spruce. When harvested from a mature tree, this bark is about 1/2 inch thick, and is scaly with rough and smooth patches. It has a grain direction, but it is far less distinct than wood grain. I have found no written information regarding the harvesting, handling, treatment, performance, or longevity of bark sheets as a siding material for architecture. My observation is that spruce bark reacts very differently from wood to atmospheric conditions, and in some ways it is more analogous to paper materials. Spruce bark shows significant dimensional change in both directions.

### Treatment History

Much of the bark exterior of the privy had been lost due to weathering and biological degradation. (fig. 2) Bark has a finite lifetime once it is removed from the tree. Photographic evidence suggests that the use expectancy for spruce bark as siding ranges from 5 to 15 years, depending on the quality of bark and the degree of protection. The two main philosophies regarding bark preservation are:

- 1) It is an original artifact to be preserved *in situ*, or
- 2) It is a replaceable material like architectural paint; a protective layer that is cosmetically significant and in need of periodic replacement.

In the past, the museum replaced the bark as needed to present the privy in good cosmetic condition, rather than trying to extend the life of the bark as historic fabric. The privy has undergone three campaigns of bark



Figure 3. Sunset Cottage, showing pole mosaic with spruce bark inset panels, present condition.

replacement since 1961. Preservation options that were considered and ultimately discarded include covering the structure to protect it from the elements. However, removing the outhouse from an outdoor environment would result in a loss of physical context, which the curators feel is essential to the interpretation of its original function and use.

### Current Condition

Only a small percent of the original 1961 bark sheets remain, primarily in areas protected by the eaves. Even these fragments are likely not original to the privy, as sheets were probably replaced periodically for maintenance of the structure. Bark was an abundant native resource and became a common material for siding and roofing structures. It was used on permanent and temporary structures, and appears to have been replaced as necessary. Historical evidence indicates that bark pieces used as roofing material were replaced every 3 to 5 years, due to intense weathering.

Deterioration of the bark siding on the privy has been closely monitored since the 1980s. An architectural preservation consultant performed a



survey in 1993 and again in 2004, documenting progressively accelerated degradation. This observation, combined with the fact that most of the bark is replacement siding, led the consultant to advise us that the bark *in this situation* should be treated as a replaceable material, rather than as sacred historic fabric that needs to be preserved to maintain the historic integrity of the structure.

### Preservation Options

Recent research has revealed one unintentional change that occurred as a result of the restorations: while the original bark sheets appear to have been applied with the grain running in a horizontal direction (like clapboards), the replacement sheets have been applied with a vertical grain (like shingles). To reflect its historical appearance, the appropriate interpretive treatment in the future would be to attach the bark in a pattern based on the photographs taken in 1961, with the grain running horizontally. Unfortunately, it may be difficult to obtain bark sheets of the same large size and quality as the original sheets, because of the lack of locally available old growth trees due to extensive logging of private lands in the early 1900s.

In an effort to increase the longevity of the new bark siding, I hope to exploit some of the similarities between bark and paper. In the future, I plan to experiment with backing materials and adhesives on new spruce bark sheets in an attempt to support the bark and prevent tearing along the grain, while still allowing it to change dimensionally.

### Sunset Cottage

#### Description

A second rustic structure is Sunset Cottage, a 12' x 15' one-room cabin built ca. 1880. (fig. 3) It is named for the pole design in the gable ends, and is called the finest surviving example known of Adirondack mosaic pole work. Exterior decoration consists of hundreds of half-round bark-covered cedar poles, approximately 1.5 to 2.5 inches in diameter, set to form panels in various symmetrical geometric patterns. On three sides, pole patterns

frame inset panels made of flat sheets of spruce bark. The poles are face-nailed with small cut nails to rough board sheathing, which is nailed to a conventional stud wall framing. A tarred felt material was used between the poles and the sheathing.

### Background

Sunset Cottage had two prior sitings before it was moved to the museum. (fig. 4) Two photos from 1930s insurance documents show the cottage in its original location at Camp Cedars, where it had a porch on three sides, and stood on a hillside on posts. The porch had been removed when the cottage was relocated to Deerland Camp, where it stood on footings by the shore of a lake for forty years. During that time, the cedar shingle roof was replaced with asphalt shingle, and the roofline was slightly altered with the removal of the porch. Sunset Cottage was moved to the museum on a flatbed in 1996. Little was known about its original configuration until after it was installed at the museum. Very few physical clues remain as to how the original porch was constructed and connected.

### Condition

Although the roof was resingled with a historically appropriate cedar shingle, the windows reglazed, and some structural work was done shortly after arrival at the museum, all other exterior materials are in worn, "as found" condition. As such, the building presents a number of interpretive and materials conservation issues. Most of the cedar bark, a red-brown, fibrous material, has worn away, and the bare wood has weathered to a silver-gray. There are gaps in the sheathing under the poles where the felt paper is lost and water can get into the structure. Yet the poles and the patterns they form are what make the structure unique. Unlike the bark sheets on the rustic privy, the poles are not viewed as a sacrificial material that should be replaced when the bark wears off in order to restore and maintain the early appearance of the building.

### Preservation Options

As with the rustic privy, we briefly considered



Figure 4. Sunset Cottage at Camp Cedars, original configuration, ca. 1934.

moving Sunset Cottage inside to preserve it, but feel the lack of context would be inappropriate. In contrast to the privy, however, the bark loss is less of an aesthetic issue. The pole design is the essential component that must be preserved for interpretation. The bark loss, for the most part, occurred decades ago, and the weathered silver-gray was the way it appeared while in use at its second home.

Our best solution for long-term preservation of this structure appears to be to restore the porch, in accordance with photographic and physical evidence. This would greatly reduce the problem of water penetration through the sheathing on three sides. It would also protect the poles from further deterioration due to water and UV exposure. Future treatment could also include careful removal of the fragile poles to repair the underlying sheathing and felts.

## Notes on Rustic Furniture

### Introduction

Bark loss is also a common issue in our rustic furniture collection, and has required unique solutions. Since tree bark appears to have more in common with paper than with wood, I have borrowed tech-

niques for loss compensation from paper conservation. The following treatments were done in 1997 and appear to be stable. These treatments have not been attempted on rustic architecture.

### Dresser with Birch Bark Appliqué

A dresser decorated with applied birch bark and spruce twig trim suffered a large loss on the proper left panel of the bottom drawer front. (fig. 5) The loss was filled using mulberry paper toned with acrylics and scored to mimic the appearance and texture of birch bark. (fig. 6) It is adhered at the edges to the reverse of the birch bark with Aytex-P wheat starch paste.

### Rustic Cellarette

A rustic cellarette (fig. 7) made of unpeeled spruce poles had a prior (now inactive) infestation of powder post beetles resulting in large areas of powdery frass and areas of bark that were not attached securely. Numerous bark losses left the light-colored frass or bare wood visible. It required consolidation, followed by visual compensation of bark loss so it could be exhibited.

The frass beneath the bark was consolidated using B-98 in ethanol with repeated application by syringe until the remaining bark was securely at-

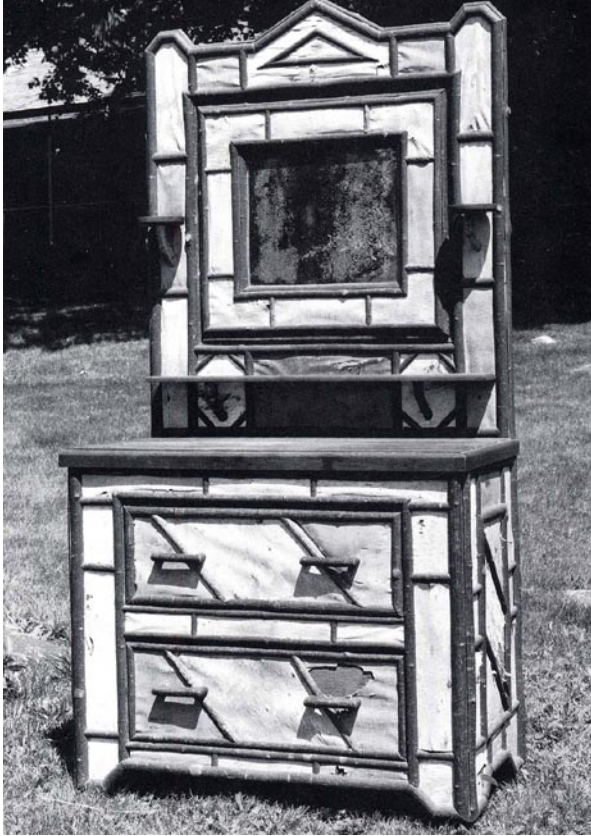


Figure 5. Rustic dresser with applied birch bark and spruce twig trim, before treatment (note loss on bottom drawer front).

tached. (fig. 8) Losses were filled with a homemade material made of shredded rag paper, microballoons, and ground pigment in 35% B-72 in 50/50 acetone/ethanol. When applied with a spatula, the resulting surface satisfactorily matched the texture of the surrounding bark. It was inpainted to blend with the natural color variations in the surrounding bark. This technique can be adapted for different colors and textures of bark, including bark with a fibrous nature such as cedar.

## Part 2: Adirondack Regional Watercraft Introduction

The Adirondack Park contains more than fifteen hundred miles of rivers and three thousand lakes and ponds. The use of water was key to the exploration and settlement of the region. The Adirondack

Figure 7. Rustic cellarette with upper door removed, showing numerous bark losses before treatment.



Figure 6. Rustic dresser on exhibit, after treatment.







Figure 8. Rustic cellarette, after treatment.

Museum's boat collection is the second largest in the country, and has been called the finest collection of inland small pleasure craft. Of the 221 boats in the collection, 70 of them are Adirondack guideboats. The guideboat is so indispensable to the region that the development of the small craft and that of the region are deeply interconnected.

An understanding of the Adirondack guideboat is deemed so essential by the museum that for 25 years the institution has allowed use of one of the guideboats in its collection. The 15-foot long 1910 model is available for staff to use, after a training session with the curator. Staff members are encouraged to experience the elegance of the design first hand. By examining the unique qualities of the Adirondack guideboat, we can be better informed about the controversial decision to use an historic artifact.

## The Adirondack guideboat

The guideboat is a highly refined, smooth-skinned rowboat that is extraordinarily lightweight, capacious, and fast. (fig. 9) It is elegant looking, with a distinctive profile that curves gracefully from a high stem down and out at the center and up again to a high stern. The development of this specialized regional watercraft was influenced by the ruggedness of the terrain, the lack of good roads, and the availability of waterways.

The requirements for the ideal Adirondack boat are contradictory. It must be lightweight and portable, as the region's waterways are often small and obstructed by rapids or broken by mountains, and the boater must carry the craft from waterway to waterway. (When carried, the guideboat fits on a yoke that rests on the shoulders. A guideboat is approximately 1/3 lighter than a wooden canoe of the same length: a 14-foot guideboat usually weighs around 45 pounds.) A guideboat must also move swiftly and easily over long distances; it may be the fastest traditional fixed-seat rowing craft on the continent. And lastly, the guideboat needs to be capacious enough to carry plenty of gear, supplies, or people.

## Building techniques

Lightness and large capacity are often incompatible traits in small boats. Early Adirondack boat builders used the colonial *bateau*, which was both strong and light, as a model for construction techniques. By the 1820s, the flat bottom, sawn frames, and lapstrake construction of the *bateau* were refined into a distinctive regional boat. The builders reduced weight wherever they could. The planking is very thin (often only 3/16 of an inch) and the long edges are beveled to a featheredge. The seam is fastened with a double row of clenched copper tacks, half from the inside and half from the outside, through the matching bevels. Nowhere on the boat is its skin thicker than a single board.

Ribs are sawn from the naturally curving root of a spruce tree. (fig. 10) Root wood is denser and stronger than ordinary lumber and can therefore be



Figure 9. Guideboats on exhibit at the Adirondack Museum: the graceful, lightweight rowing craft can carry large loads swiftly and easily.



Figure 10. Interior of a guideboat, showing the flat bottom, sawn spruce ribs, and complex curves.



cut to finer dimensions, saving weight. The builder tries to match the curve of the grain to the pattern of the rib. The stiffness of the ribs supports the sides of the boat, making cross braces or thwarts unnecessary, and is another key to its lightness.

### **Using a Collections Artifact: Explanation and Discussion**

The guideboat is available for staff members for personal use, and is also occasionally used by school groups under the direction of the curator. It was accessioned in 1979, the 50th guideboat in the collection, but was in very poor condition. The donor wrote in a letter: "I would be happy to see you sell this guideboat and use the money toward something of which the museum is in real need." It was decided the museum would be better served by having a real, historic guideboat that was useable for educational purposes. In 1981, the boat was restored and made available to staff for the following reasons:

- Most staff would not have the opportunity to row a guideboat (guideboats currently cost \$8000 to \$20,000)
- It would provide a first hand knowledge of the craft and appreciation of the skill required to handle it.
- It would enable staff to provide a special experience to visiting friends, family, and VIPs.

### **Storage: Traditional and Museum**

The thinness of the planks makes these boats very sensitive to changes in relative humidity, and they are especially susceptible to damage from low RH. Traditional boat storage for guideboats is the boathouse, an unheated structure built over the water, where boats are stored year-round. The stable and high RH in the boathouse is ideal for the guideboat, especially in winter. Traditional storage in a boathouse may be one of the reasons so many historic guideboats are still water worthy today.

Damage from improper storage can be seen in guideboats that have come from owners who did not have boathouses, and who may have kept their

guideboats in semi-heated spaces. Low relative humidity causes splits within the planks or along the tack lines. The boat storage at the Adirondack Museum is a climate-controlled facility where the RH is generally kept at 50% (for reasons of economy), which is barely adequate for a guideboat. Also, weeks of sub-zero (Fahrenheit) temperatures in the winter can really strain an HVAC system. Catastrophic failure of HVAC systems during a severe cold snap could, theoretically, cause severe damage to the guideboats. Costly measures such as backup systems are not always available to institutions during times of economic "belt-tightening."

The 1910 Blanchard guideboat is the only one of the museum's guideboats still kept in traditional storage. It is carefully maintained as a working boat, and as such, is in better condition (and is therefore a better representation of the type of watercraft) than some other guideboats in the collection that have not been restored. Traditional boathouse storage appears to be the best choice for preserving this boat in useable condition.