

## PRESERVATION TREATMENT GUIDE FOR AMK RANCH (UW-NPS RESEARCH CENTER)



MARY M. HUMSTONE, AMERICAN STUDIES PROGRAM  
UNIVERSITY OF WYOMING ♦ LARAMIE



Figure 1. Students, instructors and National Park Service staff at a site visit to the Lucas-Fabian cabin in Grand Teton National Park (Mary Humstone, 2011)

### ♦ CLASS OVERVIEW

During summer 2011, the University of Wyoming American Studies Program offered “Field Studies in Historic Preservation: Preparing a Preservation Treatment Guide for the Historic AMK Ranch.” This 3-credit, upper-level undergraduate course introduced students to the process of documenting and assessing the condition of historic buildings and developing treatment protocols. The majority of the course was devoted to inspecting buildings, interviewing property managers, researching solutions to common problems and writing a “Preservation Treatment Guide” for use by National Park Service and University of Wyoming

personnel. Students also studied log building maintenance and repair at other historic sites within Grand Teton National Park and conducted experiments and demonstrations at the AMK Ranch. Through this field course, students were given the opportunity to assist in fulfilling a contract with the National Park Service and to learn about how the park manages its historic and cultural resources. The course was taught by University of Wyoming Research Scientist Mary Humstone, with assistance from building conservation specialist Harrison Goodall of Langley, Washington, and Grand Teton National Park Cultural Resource Specialist Katherine Longfield.

## ◆ COURSE BACKGROUND

The four students enrolled in the course conducted several days of research on historic preservation and building conservation methods before traveling to Grand Teton National Park. Students stayed at the UW-NPS Research Center (AMK Ranch) for nine days, most of which were spent on site. Under the guidance of Harrison Goodall, students completed *Building Condition Assessment Forms* for each of the 16 historic buildings on the property, noting the overall condition of each building as well as the condition of the roof, exterior walls and finish, foundation, windows and doors, porches and steps, site drainage and grade and surrounding vegetation. They also took documentary photographs of each building.

Following the initial assessment, students met with Research Center director Hank Harlow and caretaker Rich Viola to learn about maintenance procedures and building conservation challenges. Because the AMK Ranch is a federal property that is listed on the National Register of Historic Places, work on the buildings must comply with the *Secretary of the Interior's Standards and Guidelines for Treatment of Historic Properties*, and must be approved by the Wyoming State Historic Preservation Office (WYSHPO). Property managers at this and other historic properties in the park need clarification on how to apply the standards to specific building conservation treatments.

The students identified several problems that were common to many of the buildings on the AMK Ranch, including improper roof flashing, site drainage, vegetation adjacent to buildings, varmints (bats and ants) and areas of wood rot. With Goodall's help they developed treatment procedures to address the major problems.

One area of particular concern to Harlow and Viola was the black fungus that was growing on the building logs. The team determined that, due to the application of linseed oil every few years, the log buildings at the AMK Ranch were generally in good condition, especially compared with other log buildings in the park. However, while the linseed oil protects the logs, it acts as a food source for fungal growth which in turn causes the logs to darken. Additionally, linseed oil breaks down in ultraviolet (UV) light and flakes off, leaving logs unprotected. The layers of linseed oil must be removed for additional treatments of UV blocker or borate (a natural log preservative, fungicide, and insecticide) to be effective.

The students conducted several experiments in cleaning the logs, using different products and different methods of abrasion. They also demonstrated proper log daubing techniques for the staff at AMK.

In addition to the work directly related to the preservation guide, students had an opportunity to meet with National Park Service cultural resources staff to learn how the park evaluates, manages and interprets its cultural resources. Students visited the Western Center for Historic Preservation at the White Grass Ranch, as well as several other historic properties in the park, to compare treatments of log buildings.

The product of this field course is a *Preservation Treatment Guide for AMK Ranch* that includes photographs and building condition assessments for 16 buildings, procedures for remedying the major conservation problems, and a maintenance checklist. The guide will be used by NPS personnel, not only at AMK Ranch but at other locations in the park.

Through this field course students learned how to conduct assessments of historic buildings and prepare a professional report. They also learned about park policies and procedures regarding historic preservation.



Figure 2. Students meet with Rich Viola, caretaker at AMK Ranch, to discuss maintenance and conservation issues. (Mary Humstone, 2011)



Figure 3. Students prepare a log wall for testing to compare the effects of different log cleaning techniques. (Mary Humstone, 2011)



Figure 5. Harrison Goodall shows student Cassie Loveland how to apply daubing to the logs of the boathouse at AMK Ranch. (Mary Humstone, 2011)



Figure 4. UW student Andrea Lewis cleans logs with abrasive brush after applying a cleaning solution. (Mary Humstone, 2011)



Figure 6. Student Cassie Loveland emerges after conducting moisture-level tests underneath the Berol Lodge at AMK Ranch. (Mary Humstone, 2011)