

# Furniture & Wooden Objects

*By Clara Deck, Senior Conservator, The Henry Ford*

Antique furniture and wooden objects can be maintained for years of use and enjoyment provided that some basic care and attention is given to their preservation. The conservation staff at The Henry Ford have compiled the information in this fact sheet to help individuals care for their objects and collections. The first step in the care of collections is to understand and minimize or eliminate conditions that can cause damage. The second step is to follow basic guidelines for care, handling and cleaning.

## **CAUSES OF DAMAGE & GUIDELINES FOR CARE**

For most antique furniture owners, the desire to both utilize their collections and at the same time preserve them presents a formidable challenge. These two objectives are often at odds with each other. Improper handling/usage/display, environment, cleaning and repair are the most common causes of damage to furniture and wooden objects.

### **HANDLING**

The primary cause of damage to furniture is careless handling and use. When moving furniture or large wooden objects care should be taken to remove all belts, buckles and jewelry that could scratch the surface of the object.

Furniture should always be grasped at its most sturdy area. For example, chairs should be grasped by the seat not by the chair back or arms. Furniture should be lifted not dragged. Dragging can place stress on the legs and feet of a chair or table.

Every effort should be made to protect furniture surfaces. Drink coasters or glass table tops can help to prolong the life of finishes on tables that are routinely used. If glass tops are used, place felt or rubber tabs between the glass and table top to prevent the glass from sticking to the furniture finish.

## **ENVIRONMENT**

**LIGHT LEVELS** - Wood finishes, stains and some paints are susceptible to darkening and fading from exposure to high light levels. For this reason, furniture should be exhibited and stored in a dim area where bright light is not allowed to fall on them. Excessive light can also accelerate the aging and degradation of finishes resulting in a cracked, brittle or

"alligatored" appearance. Also, the heat generated from high light levels can cause damage to finishes by softening them.

**TEMPERATURE AND HUMIDITY** - Since wood is a porous material it readily absorbs water when humidity levels are high. This absorption of moisture causes wood to swell. Conversely, wood shrinks in a dry environment. The shrinkage of wood in dry environments leads to the formation of structural cracks, lifting veneer and inlays, gaps in joints and the embrittlement of adhesives. Fluctuations in humidity and temperature levels result in similar damage. While precise control of temperature and humidity is desirable, it is not always practical in homes. Therefore, damage should be minimized by avoiding extremes in temperature and humidity. This can be done by insuring that furniture is kept away from heat sources such as furnace vents, fire places, warm lights and direct sunlight.

The recommended temperature and humidity levels for the storage and display of furniture are as follows:

Winter	Temperature 70 degrees F Relative humidity 35%-45%
Summer	Temperature 70-75 degrees F Relative humidity 55%-65%

Inexpensive humidity sensors can be purchased from conservation suppliers.

## **CLEANING**

Extensive cleaning of severely damaged or darkened finishes should generally be carried out by a professional conservator. Porous or unfinished wood should also be left to a professional.

Owners of antique furniture should consider maintaining the original finishes on their furniture and antiques whenever possible. Original finishes are often viewed as a part of the historical value of an antique and preferred over stripped and refinished, or heavily restored antiques.

The following suggestions are provided to assist in increasing the longevity of your wooden antiques. The procedures are recommended only for objects on which finishes are in good condition (not flaking) and for items that do not have lifting or damaged veneer, inlays or gilding.

1. The first step in cleaning should always be dust removal. Dust should be removed using a soft brush or a vacuum cleaner nozzle with a soft brush attachment. This is recommended particularly on objects that have rough or unfinished surfaces that could be snagged by dusting with a cloth. Unfinished wood should never be wet cleaned.

2. If wet cleaning is necessary and the finish is in good condition, the safest method of cleaning is the use of a dilute detergent. The detergents currently used most often here at The Henry Ford are Orvus, and Triton X-100. Both products are available from Conservation Materials Ltd. (see attached list of suppliers).

The detergents should be diluted to a concentration of approximately 1% in water. Using cotton balls or soft cloth diapers the solution should be gently applied to the surface. Q-tips could be used to get into small ornate carved areas and crevices.

After cleaning residual detergent should be removed by rinsing with Distilled water. The rinse water should also be applied using cotton balls or a cloth diaper. In both instances the cloth or cotton should be damp not wet. Water should not be allowed to sit on the surface as it could damage the finish. An absorbent sponge could be used to blot excess water from the surface.

After the surface is completely dry a high quality wax such as Renaissance Wax could be applied with a rag or brush.

Upon drying (approx. 15 min.) the waxed surface should be lightly buffed with a diaper or a clean, soft shoe polishing brush. Wax should only be applied occasionally (once a year or so to avoid heavy wax buildup). If the finish becomes dull between applications of wax it can be buffed with a rag or shoe brush to restore the luster of the finish .

3. COMMERCIAL PRODUCTS - There are many commercial cleaners and polishes available for the care of furniture and antiques. While some of these products may be genuinely safe to use on antiques, it is difficult to assess the long term effect of these products. Manufacturers generally guard their "ever changing" formulas and thus it is not possible to recommend any specific commercial product.

Many popular formulations contain tung oil or silicone products which have proven to age poorly. Products of this type should be avoided since they can actually darken or become opaque with age, resulting in a dark, dull and often irreparable finish.

## **STRUCTURAL REPAIRS**

Repairs to furniture should be as unobtrusive as possible. Hot or liquid hide glue is preferred in most cases over modern commercial products for adhering loose fragments and veneer. The addition of mechanical metal attachments such as screws and mending plates should be avoided since they can constrict the movement of wood and can lead to cracking.

## **PEST DAMAGE**

Insects that can cause damage to furniture include carpet beetles and powder post beetles.

Carpet beetles generally subsist on protein based materials that are often present as adhesives. Carpet beetles are commonly found at joinery and in drawers. The presence of tiny black beetles (2 mm in size), small worms or furry carcasses are an indication of infestation.

Powder post beetles characteristically bore small holes (approx. 2 mm in diameter) into wooden materials. These holes are usually the first visible evidence of infestation. Furniture should be routinely moved and examined for infestation. The underside of legs and drawers should be inspected since insects hide in inconspicuous places. If evidence of infestation is found, the object should be placed in a plastic bag and isolated until it can be examined by a professional conservator.

A concise reference and accompanying descriptions of wood pests are included in "The Guide to Museum Pest Control" by Zycherman and Schrock.

## **BIBLIOGRAPHY**

Furniture Care and Conservation, 1983

Robert McGiffin

The American Association for State and Local History

Nashville, TN

(This book is also available for purchase in the Henry Ford Museum Gift Shop)

The Preservation and Care of Historic Furniture, 1988

Marc A. Williams

Ohio Antique Review Inc.

12 East Stafford Ave.

Worthington, OH 43085

The Conservation of Works of Art and Antiquities, 1986

Herman Kuhn

Butterworths, London



## Volume I

### The National Trust Manual of Housekeeping, 1984

Sandwith, Stainton  
Penguin Books Ltd.  
536 Kings Rd.  
London SW10 0UH

### The Conservation of Wooden Objects

International Institute for Conservation  
1970 New York Conference on the Conservation of Stone and Wooden Objects  
Second Edition Volume 2  
6 Buckingham Street London England WC2N6BA

### Journal of Wood Conservation

American Institute of Conservation  
Spring 1985 Volume I Number I  
1400 16th street NW, Suite 340  
Washington, DC 20036

### Wooden Artifacts Group Publications, 1985-1994

American Institute of Conservation  
1400 16th St NW, Suite 340  
Washington, Dc 20036

### Gilding and Surface Decoration

Preprints of UKIC Conference in Restoration  
United Kingdom Institute for Conservation of Historic and Artistic Works  
37 Upper Addison Gardens

## **SUPPLIERS**

### **General tools and supplies**

Woodcraft  
210 Wood County Industrial Park  
PO Box 1686  
Parkersburg, WV 26102-1686  
(800) 225-1153

### **Suppliers of humidity indicators**



University Products  
517 Main Street  
PO Box 101  
Holyoke , MA  
800-762-1165  
<http://www.universityproducts.com> ondon, W148AJ

## REFERENCES

For a listing of conservators in your area, please contact:  
The American Institute for Conservation of Historic & Artistic Works  
1717 K Street NW  
Suite 301  
Washington, DC 20006  
(202) 452-9545  
<http://aic.stanford.edu/guide/form.html>

Note: The in-house conservation staff at The Henry Ford has developed these Preservation Fact Sheets to assist in caring for your historical materials. These fact sheets provide basic information on the care, cleaning, and handling of a particular type of artifact, referral information to other conservation organizations, and a bibliography of authoritative works. Individuals may also arrange for a private consultation with a conservator. For more information, please contact the Benson Ford Research Center at [research.center@thehenryford.com](mailto:research.center@thehenryford.com).

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