

# Home Display Environments

By Trail End State Historic Site Superintendent Cynde Georgen; from *Trail End Notes*, November 2002; updated June 2007 & January 2020

We always tell our Trail End visitors to “please try not to touch” as they go through the house, in order to minimize the amount of oil, dirt and salt deposits on the woodwork, textiles and artifacts. We also ask them to refrain from taking flash photographs – the intense light of the flash has a cumulative, irreversible fading effect on the collections.



Sun Damage, Trail End Ballroom, undated (TESHS Collection)

Unfortunately, those are not the only worries we have when it comes to displaying and storing our artifacts. Our main concerns – light levels, relative humidity and temperature control – are factors that you should think about at home in relation to your own collectibles and family heirlooms. When putting together a display of your objects – be they textiles, dolls, photographs, sports memorabilia or beer bottles – here are some things to consider.

## LIGHT LEVELS

While entire college courses have been developed around the subject of light and its impact on historic materials, let us state here the one indisputable fact concerning light: lots of light is not a good thing! In addition to irreversible fading, too much light can cause objects to dry out and become brittle. The type of light can make a real difference, too:

- Natural sunlight is intensely bright, high in ultraviolet (UV) radiation and full of heat-filled infrared radiation (IR).
- Fluorescent lights, although cooler and less intense, are high in UV light and will fade things very, very quickly.
- Incandescent lights are the safest, having very low levels of UV. They can burn a bit hot, however, so low watt bulbs are best.

- LED lights have proven to be excellent in terms of mild UV light and low temperature.

Remember: the adverse effects of light are cumulative and irreversible.

## **RELATIVE HUMIDITY**

Sometimes referred to as “RH,” relative humidity is the amount of moisture in the air. It’s something that many people don’t think about when storing their collections, but it is quite important:

- If the humidity is too low (under 40% – think attic), collections can split or become dust. Low RH is particularly hard on leather, which will begin to crumble.
- If the humidity is too high (over 60% – think basement), objects can swell, warp and come alive – literally – with a variety of molds and mildews. Black mold on paper and white mold (called “bloom”) on leather are two symptoms of high humidity.

Your best bet for humidity is between 45 and 55 percent, but that is only if you have a fairly constant temperature.

## **TEMPERATURE**

Temperature is the last - but certainly not the least - of the environmental bugaboos. While any given temperature in and of itself is not a great problem, abrupt changes in temperature can be:

- Fluctuating temperatures cause expansion and contraction which can increase destructive stresses.
- Temperature impacts relative humidity levels. As temperatures go up, humidity goes down, and vice versa.
- As temperatures rise, chemical reactions accelerate; this is important in relation to photographs and veneered furniture, as adhesives can break down.

The extreme temperatures found in attics and garages make them poor storage locations.

## **CONCLUSION**

In short, the worst environment to which you could subject your family heirloom would be a hot, dry or damp room full of natural sunlight or fluorescent light. Some conservationists might insist that the only safe place for any valuable is a sealed, acid-free box stored in a lightless room. But who saves things just to store them in the dark where no one can enjoy them? That would take all the fun out of putting together a collection!

The best, most realistic alternative would be an area in your home’s regular living space where the temperature and humidity remain fairly constant, and where you can turn the incandescent lights off after you’re through viewing your treasures. Of course, you also want to make sure they are safe from pets, small children, dust and breakage hazards such as swinging doors and reclining chairs.



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