

INDIANA HISTORICAL SOCIETY  
**COLLECTIONS ADVISOR**  
A RESOURCE FROM IHS LOCAL HISTORY SERVICES

Issue 154 | August 2024

## Synthetic Fibers in Textiles

*By Tamara Hemmerlein, Director, Local History Services*

It's that time of the year when many of us grab our casual and comfortable clothes to head out to county and state fairs, parks, and beaches for a little summer fun. A lot of us wear hiking and workout gear, bathing suits, and other types of clothing that are meant to be washable, cooling, breathable, and moisture wicking. For the textiles to have all of these characteristics, they are often made of synthetic fibers like nylon, polyester, acrylic, and polyurethane.



[\*Girl Scouts Swimming at Camp Dellwood\*](#) (Indiana Historical Society, P0569)

Synthetic fibers in collections are difficult to care for and the best thing to do for our collections is to develop a plan for preventive preservation. That means creating environmental and storage conditions that will keep the textiles in the best shape possible for the longest amount of time. Once synthetic fibers begin to degrade, there is very little that can be done to conserve them.

The first step is knowing what kinds of synthetic fibers are in your textile collections. Check manufacturers' labels and washing instructions for information. If the clothing is handmade, ask the donor for any information they may have about when the clothing was made and what it was made for. This might give you some idea of where to start researching. It is also a good idea to check with a conservator who may use a variety of tests – feel tests, microscopic analysis, even burn tests - to ascertain the composition of the textile.

After doing your best to determine the composition of your textiles, you can research preventive conservation measures and develop a plan for their care. Synthetic fibers, like other textiles, are sensitive to light, temperature, and humidity. It is important to monitor your collections environment (50-55% RH and temperatures between 68° and 72°F) and schedule regular condition checks and recording.

Like many other types of collections objects, degrading synthetic fibers will have an odor. If you smell anything when you are checking the textile, move it away from other objects in your collection. Place it in a separate storage box until you determine what should be done. As materials degrade, they may stain or even jump start the process with other objects. Plasticizers may attach and stick to other materials causing damage.

It may become necessary to dispose of the object if the degradation has become advanced. In that case, document the object. Take good quality photos and be sure to have as complete a description as possible. Record the history of the object so that if you lose the object, you don't lose the story it represents.

## Resources

- [AASLH Technical Leaflet #301 Interpreting Sports at Museums and Historic Sites](#) (American Association for State and Local History)
- [An Illustrated Guide to the Care of Costume and Textile Collections](#) (Collections Trust)
- [The Care and Display of Historic Clothing](#) (Rowman & Littlefield)
- [Synthetic Fibers in Costume Collections](#) (National Park Service Conserve O Gram)

## Further Resources

- [AASLH Technical Leaflets](#) (American Association for State and Local History)
  - [Collections Advisors](#) (Indiana Historical Society)
  - [Timely Tips](#) (Indiana Historical Society)
-

## Collection Trainings

[C2C Care Course: Developing a Collections Management Policy](#)  
**September 17-26** (Connecting to Collections Care)

## Webinars

[Succession Planning for Cultural Institutions, Part 3: Case Studies](#)  
**August 7** (Conservation Center for Art and Historical Artifacts)

[Collections Insurance 101](#)  
**August 14** (Texas Historical Commission)

[DHPSNY: Digital Preservation Planning](#)  
**August 20** (Conservation Center for Art and Historical Artifacts)

[Safeguarding Collections](#)  
**August 20** (Connecting to Collections Care)

[Recorded Webinars](#) (Indiana Historical Society)

---

This is a free publication. Anyone may subscribe.  
Read past issues of Collections Advisor [here](#).

[Local History Services](#)  
(317) 232-1882 | [localhistoryservices@indianahistory.org](mailto:localhistoryservices@indianahistory.org)

