**Practical Caving Gloves**

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For most travel in wild caves, gloved hands are viewed as more conservation-aware than bare hands. Every touch of bare skin leaves body oils, skin fragments, microorganisms, and debris on cave surfaces.

**Glove Choices**

Leather gloves are durable and create less lint than cotton and other natural fabrics. Leather gloves are appropriate for general caving in many environments, for vertical rope skills, and for tasks that require lifting and heavy labor. However, gloves made of durable synthetic materials wear well and produce minimal lint. In wet environments, greater protection may be necessary. Glove choice is based on the nature of travel and activity in specific cave systems.

Muddy hands and gloves leave ugly scars along travel routes in caves. Instead of grabbing a speleothem or a piece of wall with a big muddy palm, use the cleaner back of a knuckle or a fingertip as a small point of contact for balance. (See photos, page 421 and page 434.) Where something must be grasped as a secure hold, look for and use the most impacted spot instead of creating new muddy blobs. (Observe common sense safety measures—if a caver loses balance, it may be necessary to use the first-available durable protrusion as a quick handhold.)

To avoid making muddy scars in pristine passages, cavers carry lightweight synthetic gloves. Because oils and organics on our hands create damaging impacts, conscientious cavers pack extra gloves for quick access. In some caves, laminated signs that read *Gloves Off* mark locations where cavers are expected to remove their travel gloves and don their flowstone gloves (surgical, exam, vinyl, nitrile, disposable, or some other kind of clean handwear) (Figure 4). Synthetic gloves are good tools for cave protection and conservation.

**Surgical Gloves**

Nonlatex, powder-free surgical or exam gloves are recommended for most cave restoration tasks and for travel through pristine cave passages.

Surgical and exam gloves made of other materials—vinyl, nitrile, and other nonlatex products—are available through medical and lab suppliers, beauty and barber suppliers, food service outlets, and hardware stores.

Lightweight, plastic food service gloves are adequate for quick restoration jobs like small trash or mold removal—or for sponging up an occasional footprint on flowstone.

Holes and tears in lightweight surgical gloves can be a nuisance. Some cavers rarely rip their gloves while others go through several pairs a day. Heavier gloves made of nitrile or vinyl still allow dexterity, but are more durable and can be washed between trips. Only powder-free gloves should be used in caves and it is best to avoid latex products.
Cave Conservation and Restoration

Avoid Latex Products

In caves, it is best to avoid contact with latex products. The term latex usually refers to natural rubber latex, the product manufactured from a milky fluid derived from rubber trees. Proteins flake off from natural rubber latex gloves. Protein particles remain in cave passages and provide a nutrient source for nonnative species introduced from surface systems. Latex proteins become fastened to the glove’s lubricant powder and particles become airborne when the gloves are removed. Aerosolized particles then spread through the cave and to human mucus membranes.

The most common reaction to latex is irritant contact dermatitis—the development of dry, itchy, irritated areas on the skin, usually the hands. This reaction is caused by irritation from wearing gloves and by exposure to the lubricant powders added to them.

Allergic contact dermatitis results from the chemicals added to latex during harvesting, processing, or manufacturing. These chemicals can cause a skin rash similar to that of poison ivy.

Neither irritant contact dermatitis nor chemical sensitivity dermatitis will cause an immediate, life-threatening allergic reaction. (There are several types of synthetic rubber that are sometimes also referred to as “latex.” The synthetic products do not release proteins that cause allergic reactions.)

Glove choice is based on the nature of travel and activity in specific cave systems.
However, people with suspected latex sensitivity (allergy) should avoid latex products because latex exposures at even very low levels can trigger severe, life-threatening allergic reactions in some sensitized individuals.

- Reactions usually begin within minutes of exposure, but can occur hours later and can produce various symptoms.
- More severe reactions may involve respiratory symptoms such as runny nose, sneezing, itchy eyes, scratchy throat, and asthma (difficult breathing, coughing spells, and wheezing).
- Rarely, anaphylactic shock may occur—an acute and critical condition that involves the respiratory system and requires immediate medical assistance.

For additional information about latex allergy, visit the National Institute for Occupational Safety and Health (NIOSH) and other safety sites at the following Web addresses.

- National Institute for Occupational Safety and Health
  Occupational Latex Allergies
  <http://www.cdc.gov/niosh/topics/latex/>

- Anesth.com
  Search for latex allergy
  <http://www.anesth.com/lair.htm>

- Family Village Home
  Latex Allergy
  <http://www.familyvillage.wisc.edu/lib_latx.htm>

- University of Rochester
  Guidelines for Reducing Employee Exposure to Latex
  <http://www.safety.rochester.edu/lh/latex.html>

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