Section D—Restoring Speleothems

Cave-Friendly Footwear
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In caves, use footwear with nonmarring/nonmarking soles. Employ common sense and select comfortable, durable, safe footwear for various caving activities. From light-soled athletic shoes to durable rubber boots—the variety of specialized footwear available today makes it easy to choose appropriate shoes for most any cave environment.

Boot Soles
Don’t wear heavy waffle stompers in caves. Weight and bulk cause unnecessary travel damage and excessive trail compaction.

Avoid traditional black Vibram® soles—they definitely leave marks on cave surfaces. Advanced technology has afforded Vibram the ability to offer a variety of new soles—some are described as nonmarking. Check the soles before walking across sensitive cave surfaces. For the best test, strike the soles across a block of limestone before wearing them in a cave. (See scuff marks, page 405; also see soft scrubbers, page 406.)

Whether light or dark colored, many boot soles will leave scuff marks on calcite and other cave surfaces. Test all caving soles on untreated limestone or concrete.

Be careful with blond rubber soles—chunks from soft soles tend to break off and leave debris in cave passages.

Include an extra plastic bag to contain dirty boots through pristine areas where flowstone shoes are required.

Flowstone Shoes
Carry clean, lint-free flowstone shoes with lightweight, nonmarking soles for entering pristine areas. Use water sports booties, smooth-soled athletic shoes, aqua socks, or nylon slippers. Carry a small sponge to spot-clean flowstone shoes while caving.

Choose flowstone shoes according to the nature of travel surfaces. Rough or rocky surfaces require durable flowstone soles for comfort and safety while flexible soles often give adequate protection and grip on slick, smooth surfaces.

Do not travel across cave surfaces with only bare feet or socks—lint, skin flakes, blood, body oils, and microbial residents living under toenails and in skinfolds should not be left on cave surfaces.

Between cave trips, flowstone shoes should be laundered in a washing machine with just a touch of mild detergent.

Include a plastic bag that is suitable for containing flowstone shoes that get soaked with water or soiled with cave muck.

Shoe Covers
When traveling through areas that have intermittent muddy floors, cover flowstone shoes with hazmat booties. Designed to slip over shoes, the hazmat boot covers can be donned over (or removed from) flowstone shoes...
Figure 1. In transition zones, step out of boots and into flowstone shoes. Non-marking aqua socks with light soles make good footwear for many pristine cave surfaces. (See page 15 in color section.)

Figure 2. Use nonmarring boots for caving. Some boot soles leave tenacious scuff marks on flowstone. Test soles by striking across untreated limestone or concrete.

Figure 3. Plastic shopping bags often make adequate boot covers for short distances if cavers walk gently. David Joaquim is checking a science and monitoring station on a muddy trail in La Cueva de las Barrancas. Just outside of the trail, test tubes remain in situ to allow cultures to grow in the stable cave environment. (See page 15 in color section.)

Figure 4. In pristine areas with intermittent mud, Harley Shaw slips hazmat boot covers over his flowstone shoes to avoid spreading mud onto clean flowstone surfaces. (See page 15 in color section.)

When traveling through areas with intermittent muddy floors, cover flowstone shoes with hazmat booties. While standing. Though durable enough to withstand mud-covered, rocky surfaces when worn over aqua socks, the hazmat covers tend to rip and tear when worn over normal caving boots.

Simple plastic bag boot cover may be adequate for brief zones of travel. Two-gallon Ziploc® freezer bags fit easily over many boot sizes and provide surprisingly durable protection and safety on most surfaces. (Hefty® bags with built-in zipping mechanisms speed up the transition process, making it easy to slip a foot in and secure the bag. However, with repeated use, the zippers stop working and it is wise to carry a pair of large elastics or Velcro® bands to secure the bags loosely around the ankles.)

In a pinch, or for very short distances, lightweight plastic shopping bags tied over boots provide temporary protection if the caver steps very gently.

Happy Feet Make Happy Cavers
From rock to mud to water, boots are made for caving. Choose wisely and keep your feet healthy and happy. Be kind to your soles for they bear you.