



FROM THE INSIDE OUT

Navigating the Chasms of the Southwest

By Kevin Jackson

The canyons that are ideal for canyoneering are often sculpted right out of the bedrock stone – forming narrow gorges with numerous drops, beautifully shaped walls, and sometimes spectacular waterfalls. Recently, I had the opportunity to explore an amazing canyon just outside Sedona, Arizona, for three days and two nights of some of the most exhilarating adventure I've ever been a part of; rappelling through amphitheatres so expansive and vast, photos can only scratch the surface.

Canyoneering is the art of exploring some of the most magnificent terrain on earth by rappelling, climbing, hiking, and possibly swimming your way through a maze of rock walls. This thrill-seeker's adventure offers a unique experience that anyone with a passion for exploration should try. It encompasses navigation, technical skill, and the opportunity to utilize your equipment to its full potential in tricky situations. One of the most intriguing aspects of canyoneering involves hiking between two sandstone-sculptured walls, discovering your route along the way.

These breathtaking canyons are drawing adventurers from all walks to the southwestern region of the country, and with its increased popularity it is critical to understand the importance of proper safety, gear, and training prior to testing your skills in the backcountry. Considering the lack of satellite phone reception, the unpredictability of weather conditions, the difficulty of a speedy rescue, and the simple fact that several canyons have yet to be explored at all, your preparation becomes all the more important.

Safety >>

Flash floods are one of the greatest potential dangers in a canyon environment. Canyons are waterways, after all – water carved the canyons and water will continue to carve them. **Given the right conditions, a dry canyon can become a raging river**

within minutes. Flash floods typically occur when a violent thunderstorm breaks over the mountains and deserts of the Southwest, where runoff from the heavy rains cascades into the steep canyons in a matter of minutes. **Walls of water sometimes 10 to 30 feet high swirl through the canyons and arroyos, picking up mud, boulders, trees and other debris.** Plants, animals and sometimes people are caught, swept along and battered in the onrushing torrent of the flash flood. Flash floods can result from thunderstorms centered over mountains many miles away. They can occur at any time of the year, but the predominant seasons are summer and early fall. Here are five tips to avoid getting swept away while canyoneering:

- Avoid canyon travel during the rainy season. Flash floods occur most often on the Colorado Plateau from mid July through early September.
- Check the weather forecast. If rain is in the works, stay out of the canyons. If a canyon trip is planned to last several days, be sure to check the extended forecast.
- Check on recent rain conditions. If recent rains have already saturated the ground, additional water will not be absorbed, increasing runoff and flood potential.
- Know basic cloud formations and what they signify.
- Occasionally make for higher ground to visually check developing weather conditions.

Be sure to check all related weather reports in the area you will be exploring, and constantly be on the lookout for flash floods whenever you are in a canyon.



out your boots.

Clothing: Light, loose, and long clothing works best during the desert's warm season. This type of clothing protects from the sun's rays and provides an efficient evaporating/cooling system. Lightweight nylon trekking shirts hold up very well to sandstone abrasion and seem to be ideal for canyoneering environments. A fleece jacket is perfect to fight off the desert's evening chills during all canyoneering seasons.

Bladders/Bottles: It is essential to carry enough water while canyoneering. Developments in water bladder designs have replaced the need to carry bulky, awkward canteens; durable and flexible bladders can be stuffed into all corners of a backpack and easily collapsed to save space when empty. Drinking tubes are now standard to any hydration system and can provide constant water access, reducing the need for drinking breaks. Those solid, one-liter containers that are virtually indestructible are also very popular for carrying water.

Helmet: Falling rock and debris are always potential hazards while canyoneering – especially when rappelling.

Technical Training >>

Canyoneering without expert guidance is not recommended and you should undertake at least a rappelling course prior to any canyoneering adventure. Exploring these unpredictable rock canyons requires competence in a number of skills, a fairly high degree of fitness and endurance, and a frame of mind that can deal with changing conditions and circumstances. Familiarizing yourself with the systems involved and developing your arm strength and coordination will greatly enhance your overall experience while in the canyon.

Canyoneering is always a true adventure, and with adequate preparation and training can be the experience of a life time. Be safe, be smart, and enjoy the ride! ✦

Kevin Jackson is the owner of TST Adventures, an elite adventure training and guiding organization in San Diego, California. To learn more about their global adventures or corporate development programs in San Diego, call 858-309-2311 or e-mail info@tstadventures.com.

Temperature-related illnesses are also a severe canyoneering hazard. In arid desert canyons, heat exhaustion can occur if proper hydration levels are not maintained and adequate steps are not taken to avoid the intense heat. Hypothermia can be also be a serious danger in any canyon that contains water, any time of the year. Wetsuits and dry suits will reduce the likelihood of hypothermia to a large degree, but when people miscalculate the amount of water protection they'll need, dangerous situations can occur. Before you leave home be sure to inform someone of your destination and when you expect to return. Take survival supplies for several days, including food, water, first aid equipment and any necessary medication. In desert areas during hot weather, allow 3 to 4 gallons of water per day, per person.

Gear >>

Canyoneering gear includes climbing hardware, static ropes, helmets, wetsuits, and specially designed shoes, packs, and rope bags. If there are sections of flooded narrows in the canyon, it may be necessary to carry wetsuits and small inner tubes to be used as a flotation device for your pack. Your basic kit should include the following items:

Backpacks: Your pack will fall victim to the abrasive, destructive powers of sandstone faster than any other equipment. It is not unheard of to extensively repair or even replace a pack after just one sustained slot canyon trip. As a rule it is best to avoid packs with many auxiliary straps and pockets, because protruding parts wear the fastest. Packs that are more self-contained tend to wear slower and are better suited for the abuses of canyon travel. Always carry duct tape, an industrial needle, and strong nylon thread for emergency repairs. A dry bag or a partially inflated sleeping pad will aid greatly when floating packs through potholes. Adding a grommet or two to the bottom of a pack will help drain water.

Boots: Footwear is one area where you don't want to cut costs. A tough, well-constructed upper will support, protect, and last longer than any cheaper boot. Ankle support and a stiff sole are essential in preventing injuries. The ideal boot has a stiff sole for solid wedging, enough ankle support to carry a heavy load, a slow-to-wear sole that grips both dry and wet surfaces, one-way water-expelling ports, and finally, a durable, quick-drying sand-proof upper. Wearing ankle gaiters prevents sand, rocks, and debris from entering your boots; which in turn prevents stopping to clean

