

The Philadelphia Grotto

Since 1917



The National Speleological Society

Trip Leaders' Handbook

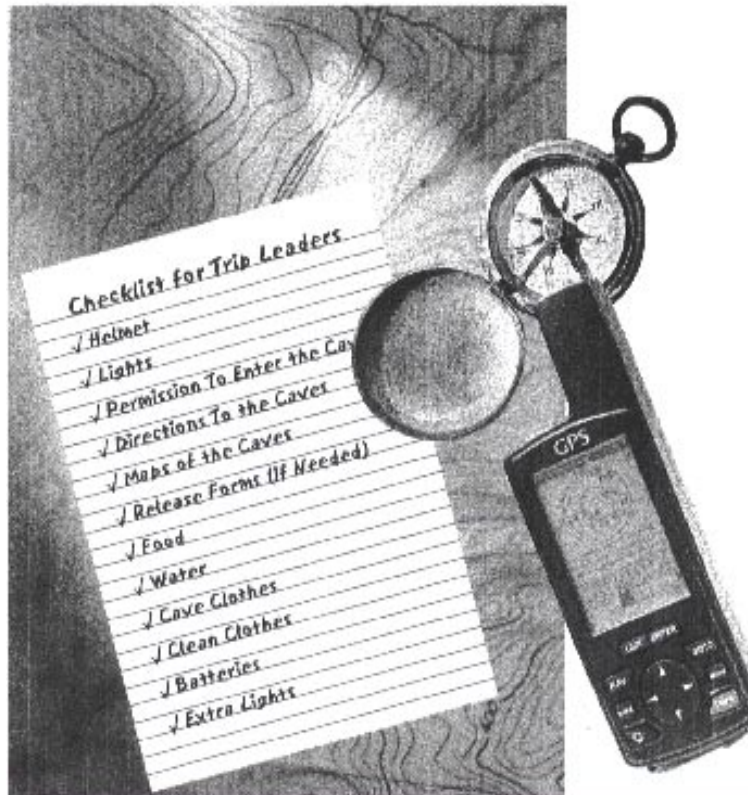


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PHILADELPHIA GROTTO TRIP LEADER'S HANDBOOK

Why do we need a trip leader's handbook?

We go underground because we enjoy and value the incredible and fragile natural diversity and beauty found there. Yet each time we visit a cave we change it slightly or dramatically. As our numbers grow, so must our commitment to conservation and safety¹. Each trip leader sets the example for his or her group and is directly responsible for the group's impact on the cave.

Caves can also be hazardous and unforgiving environments in which the inexperienced or poorly led are extremely vulnerable to accidents and injuries. The trip leader assumes serious responsibilities for the health and well being of both the group and the cave itself.

This booklet will attempt to provide both information and guidance such that each cave trip can be an enjoyable and memorable experience for all concerned while protecting the cave environment.

**GUIDELINES FOR LEADERS
AND LEADER RESPONSIBILITY**

BASICS AND QUALIFICATIONS

1. Make sure your skill and experience level is appropriate for both the difficulty of the trip and the make up of the group you will be leading.
2. It is the trip leader's responsibility to enforce conservation and safety concerns and to set a good example.
3. Make sure that all members of the group are familiar with responsible caving practice before entering the cave. See " THE TALK "
4. Be confident and comfortable making decisions - YOU are the leader.

ORGANIZATION AND PLANNING

1. Check closed cave list updates. Contact the local grotto for any updates on the cave status, if this has not been done in several months. The cave you went into last year may be closed today. It is the PERSONAL responsibility of the trip leader to verify that the cave is open. Do not rely on word of mouth!!
2. Contact the appropriate party (landowner, grotto, conservancy, etc.) for permission. Be responsible for all paperwork, including any forms or waivers.

3. Make sure that all members of the group are aware of the access policy.
4. Ideally the trip leader will have been to the cave before and will be familiar with it. If this is not the case, the trip leader should try to learn as much as possible about the cave. At a minimum that would include a map, if available, the skill level required, potential hazards such as flooding, vertical exposure and water, and the estimated time in cave.
5. Have a contact person who will send out a rescue if you're not back in time - but give plenty of leeway, at least half again the length of the trip.

MULTI - DAY TRIPS

Some points to consider in addition to those for day trips:

1. Clearly state what the accommodations will be including the amenities and facilities and alcohol policy. State the cost and how and by whom this will be paid.
2. State whether meals will be on your own or communal (potluck, shared BBQ, etc) and what facilities or restaurants are available. If the meals will be communal, organize this as well or delegate this responsibility to another member of the group.
3. List what led trips will be going out. (Get commitments ahead of time from the trip leaders)
4. List what other activities will be available, such as hiking, commercial caves, canoeing, geologic points of interest, etc.

SAFETY

1. Four person parties allow one person to stay with an injured caver while two people go for help so that no one has to travel alone. If you have fewer cavers you will have fewer resources in an emergency and you should be more conservative in your decisions. Three is a definite minimum.
2. Know if this cave is prone to flooding, and, if it is, check the weather forecast and abort if at all chancy.
3. Remind all cavers that it's each person's responsibility to keep track of the person behind them. Keep the most experienced cavers at the front and back of the group.
4. While caving, keep track of the general status of each member of the group, especially the weakest caver. Keep the pace at the level of the weakest caver.
5. Keep track of the time.
6. Do not require or encourage anyone to attempt any activity that they are not comfortable with or that is beyond their ability or skill.
7. Discourage anyone from ridiculing or otherwise embarrassing another person who chooses not to attempt anything they believe is unsafe or beyond their abilities.
8. It is the trip leader's decision and responsibility to end the trip when the situation- the cave conditions,

the condition of the weakest caver, etc. - warrants it.
Safety first!

9. The trip leader should insure that the group carries, at a minimum, a watch, a small first aid kit, webbing, compass, a note pad and pen or pencil, possibly extra polypro, and a space blanket, garbage bag, or other warming tool (carbide lamp or heating packets, for example).
10. Have a rough contingency plan for accidents or illnesses. Have the rescue phone number accessible, on you, at the entrance, or in your car.
11. Keep track of water levels. Many avoidable deaths have been the result of ignoring the signs of rising water and entering caves that are known to flood

CONSERVATION

1. Be familiar with the current conservation and minimum impact procedures.
2. The group experience level and their commitment to minimum impact caving should be of prime importance in choosing which cave to visit.
3. Set a good example - if you see trash in the cave carry it out.
4. Make sure everyone in the group carries out all trash.
5. Cave safely - a rescue almost always damages the cave.

6. Try to travel on durable surfaces and avoid areas that may be fragile, perhaps with speleothems, perhaps with animals.
7. Move carefully to avoid delicate formations and creatures. Create a climate where people help each other by pointing out where to be careful and spotting when heads get close to fragile surfaces.
8. In lightly traveled caves stay on established trails, even vague ones, to minimize the impact on the rest of the cave. Choose the best path that creates the least impact and travel single file.
9. Always wear gloves—oils from your skin can affect the growth of cave formations.
10. Practice conservation at the cave entrance as well. Avoid trampling fragile areas. Urinate well away from the entrance. Do not defecate directly uphill from a cave entrance.

LEADERSHIP DEVELOPMENT

1. Allow each member of the group to lead, if possible. This will enhance both the enjoyment of the caving experience and the skills of each participant.
2. Are there future trip leaders for this cave in the group? If so, encourage them to take turns leading. Can they find their way around? Do they understand the risks? Can they find the cave again? Are they aware of the access requirements?

LANDOWNER RELATIONS

1. Be absolutely certain that your group has permission to cross the property and enter the cave, and that all paperwork is properly filled out and submitted.
2. Make sure that all members of the group are aware of the access policy
3. Introduce yourself and your group, if appropriate, and be prepared to spend some time chatting if the owner wishes. Remember, without good landowner relations, there would be no caving.
4. Park and change with consideration for the owner and his or her neighbors. Remember that permission to visit the cave does not necessarily mean permission to drive through the field to it. Always ask permission if the parking area is not specified.
5. Leave gates open or closed, as you find them. Let the owner know if you see a broken fence or gate, cow out, etc.
6. Do not litter. This includes carbide dumps both in and out of the cave.
7. Do not wear out your welcome by visiting the cave too often.
8. Most owners like to talk about their cave. Take the time. If you are surveying, make certain the owner receives a copy of the completed map. If possible, send photos. Many cavers routinely send Christmas cards to the owners of caves that they visit regularly

SPECIAL CONSIDERATIONS

VERTICAL TRIPS

Vertical caving generally requires a much higher degree of skill, fitness, and safety consciousness than the average horizontal cave. You should not consider leading a vertical trip unless you are confident in all aspects of your ability to safely rig a drop. You should have the skills to be able to assist an individual in an on rope emergency situations such as making changeovers, assembling an emergency system from scratch, and rigging simple haul systems. These skills are beyond the scope of this document, but must be learned before safely leading a vertical trip.

Potential vertical trip leaders should be familiar with current publications concerning vertical caving such as "On Rope", "Nylon Highway", "Caving Basics", (all available from the NSS), etc.

A vertical trip leader also needs to understand belaying. This includes being physically competent to give a secure belay, have the equipment to rig a belay, and understanding enough about team dynamics to ensure that anyone who wants a belay gets one, even if they are reluctant to admit they desire or need a belay.

As a prospective leader of a vertical trip, you must ensure that all members of your party are proficient on rope and properly equipped. A vertical cave is NOT a place for beginners, and is NOT the place to learn vertical technique or try out a new system – keep that

above ground. Assuming you have developed the skills to safely lead a vertical trip, the guidelines noted elsewhere in this document will be more applicable than ever and should become second nature. Be prepared for trips of longer duration and bring extra food and clothes (perhaps a vest and wool cap to wear under your helmet while waiting at the bottom of a drop).

WET CAVES

Caves by nature tend to be wet – after all, they are mostly formed by water. It is rare to go caving and not end up with wet feet. Caves with flowing streams, however, deserve special attention from the leader.

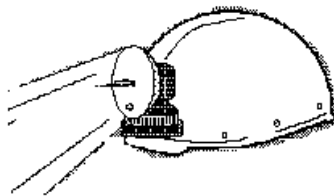
1. Flooding – Know in advance if the cave you are visiting is flood prone, or learn to look for signs that may indicate this. **DO NOT ENTER A FLOOD PRONE CAVE IF HEAVY RAINS ARE FORECAST!!!** Have a contingency plan in case of flood emergency.
2. Temperature – Wet caves tend to be colder, if for no other reason than you are wet yourself. Make sure that members of your group are aware of the water conditions likely to be encountered – will you get wet to the waist intermittently, or will you be chest deep (or deeper!) the entire time?
3. Clothing - As the trip leader, **INSIST** that all members of the group dress appropriately. This means **NO** cotton, perhaps a change of clothing packaged to prevent it from getting wet, maybe even a wetsuit. While advances in clothing technology

have made it possible to stay reasonably comfortable in damp and wet conditions, wetsuits are still preferred for those caves where you will be immersed for prolonged periods of time. Bear in mind, however, that a thick divers wetsuit will often be a hindrance, and can lead to over exertion. Thin, shorty, or surfer wet suits are generally preferred for caving.

4. Deep Water & Diving – Be extra cautious around deep water. Unless wearing a wetsuit, you will be a lot less buoyant. Do not even consider diving without special training.

LONGER THAN AVERAGE TRIPS

1. Check with your group regularly and assess fatigue levels. A tired caver doesn't have the awareness and coordination of a well-rested and more alert caver.
2. To stay alert on a long trip, be proactive about taking breaks, eating snacks and drinking water before you need them.
3. Give yourselves ample time to return to the entrance before you get tired.



APPENDICES

APPENDIX A

CAVE RESCUE PHONE NUMBERS

Make a note of the telephone number for the area you cave in and have it with you at all times when caving. Also, make sure to leave this number with a responsible party that knows when to expect you to return from your caving trip.

Eastern Region NCRC (*PA, NJ, DE, MD, WV, VA, NC*)
(804) 674-2400 - Virginia Department of Emergency Services
USE THIS NUMBER FOR CAVE RESCUE EMERGENCIES ONLY!

Localized areas within the ER-NCRC may also use the following:

New Jersey: New Jersey Initial Response Team - (973) 231-3868
(PAGER)

West Virginia, North-Central including Monongalia, Preston, and Tucker Counties + FayetteCounty in PA: Mountaineer Area Rescue Group (304) 329-1855 (Preston County Dispatch) Ask for group page for rescue

Northeast Region NCRC (*NY, MA, no. NJ, CT, VT, NH, ME, RI*)
(914) 964-2424

South Eastern Region NCRC
(615) 895-4623

Central Region NCRC (*MO, IL, IN, KY, OH, IA, MN, MI, WI*)
(502) 564-7815 - Kentucky Disaster and Emergency Dispatch
USE THIS NUMBER FOR CAVE RESCUE EMERGENCIES ONLY!

Tennessee
Tennessee Emergency Management Agency
In State: (800) 262-3300 / Out of State: (800) 258-3300
Chattanooga / Hamilton County Rescue: 423-622-7777

THIS IS ONLY A PARTIAL LIST - PLEASE CHECK WITH THE NCRC IF YOU WILL BE CAVING IN OTHER AREAS

APPENDIX B

BASIC CAVING GEAR

A good caving or climbing helmet.

A good sturdy light which mounts on your helmet

At least 3 sources of light; usually a headlamp, a backup headlamp in the pack or on the helmet, and a mini mag flashlight or equivalent on a cord around the neck. However, in addition to the headlamp and another reliable, strong, source of light, a cyalume (glo) stick, candle, etc. is acceptable as your 3rd back up source. As you can guess, light is THE most important piece of equipment for safe caving

Batteries or carbide and water for the lamp, sufficient for the twice the estimated time of the trip (for the Petzl zoom, assume 2 hours of light per 3 AA, depending on which lamp and/or bulb is used).

Spare parts for your primary light, such as an extra bulb for an electric light, and a tip cleaner, gasket, felt, etc. for a carbide light, as well as a plastic bag for spent carbide

Spare batteries as well as anything else that should stay dry, such as a snack, should be packaged in ziplock freezer (heavier plastic) bags.

Hiking or work boots, with good cleats on the soles for traction on mud

Gloves - don't spend much, they won't last long! Gardening gloves or

work gloves are good, just stay away from the knit cotton kind, they absorb and hold water too easily

Socks that are NOT cotton

A fanny pack or small back pack to carry things in

Drinking water in a sturdy, shatterproof, non-spill container - no glass!

Kneepads - the soft foam kind, used for biking or basketball, etc.

A large trash bag to put all your muddy stuff in after caving

A sturdy, high energy, easily consumed, non - crumbing, lightweight snack, such as a candy bar, nuts, gorp, or peanut butter and jelly sandwich.

A COMPLETE change of clothes

Optional but good to have:

Coveralls

Polypropylene or light weight thermax underwear

Webbing for unexpected climb downs, a belay, etc.

Small first aid kit

Compass

Pen or pencil and note paper

Spare ziplock bags for trash, etc.

Space blanket, trash bag, or chemical warmers, to ward off hypothermia in an emergency

Pocket knife to make repairs, cut webbing, etc.

Keep your pack small - a large pack is definitely a hindrance! Dress appropriately for the expected cave temperature and conditions. Try to stay away from cotton clothing - it holds moisture and you WILL get cold. Synthetics or at least blends are best for caving. Do not wear cotton thermals!



APPENDIX C

"THE TALK"

This is intended to be a guide for an introductory talk on beginner caving trips. There's always a lot for a leader to do on these trips; reviewing a talk such as this with the group can help make sure you stress the important points of safety and conservation.

Before we go caving there are a few Basics I'd like to go over relating to both Safety and Conservation.

Stay with the group. If you'd like to check out a lead or take a peek at something down a side passage ALWAYS check with the trip leader first, and then stay within voice contact. You would be surprised at how quickly light and sounds will disappear in a cave, and how difficult it could be to find you if you get hurt, or for you to find the group if you get separated.

It is each person's responsibility to keep track of the person behind him or her. Also, don't crowd the person in front of you. Allow him or her plenty of room to try different maneuvers and to retreat and try something else as you come to different challenges.

Immediately tell the trip leader if you become cold, tired, injured, or ill. DO NOT try to hang tough! Let the leader decide whether to keep going, call a break, dig out extra warm, or turn back. A tired, cold caver can easily become an injured caver, and a cave rescue or even self-rescue can take several extra hours to several days, for the whole party! Remember usually you all will be going out the same way you came in, at the slowest person's pace.

Do not feel pressured to attempt anything you are do not feel reasonably safe and confident doing. This is basic and must always be respected by the group.

Everything you bring in with you must come out, including all food, trash, and waste.

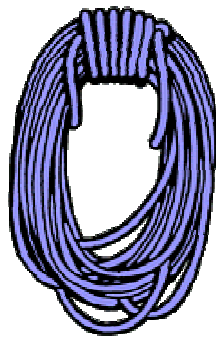
Be extremely careful not to damage any of the fragile formations you see about you. Even seemingly sturdy, large ones can be easily broken by an accidental blow. Remember, what has taken millions of years to form can be destroyed in a careless instant.

Walk single file and try to only touch that which has already been touched so as minimize our impact on the cave. Do not touch any part of the cave without gloves on.

If you see a bat on the roof or walls try to walk quietly by it without shining your light directly on it or warming it too much. Bats are very beneficial creatures and disturbing their hibernation can be devastating.

If a bat is flying about, stay calm. As long as you are moving slowly and predictably the bat's sonar will easily allow them to avoid you, and they will.

Becoming injured in a cave is a very serious matter. Cave rescues can be major undertakings that not only require large investments in time and manpower, but almost always damage the cave as well. Therefore, safety is a primary concern. Horseplay of any kind is strongly discouraged.



APPENDIX D

TRAINING RESOURCES

NATIONAL CAVE RESCUE COMMISSION (NCRC) CLASSES:

Contact John Appleby (Regional Coordinator) (215) 541-4994
applejb@apci.com

GROTTO TRAINING CLASSES:

Contact the Safety Committee Chair

NSS CONVENTION:

Numerous classes and workshops are offered

APPENDIX E

RECOMMENDED READING

CAVING BASICS, Published by the National Speleological Society, G. Thomas Rea, editor, 1992

LEAVE NO TRACE, OUTDOOR SKILLS AND ETHICS, CAVING, developed by the National Outdoor Leadership School, LNT Skills and Ethics Series Vol. 14, written by Liz Tuohy, illustrated by Anne Austin 1998

ON ROPE, by Bruce Smith and Allen Padgett, Published by the National Speleological Society, 1996

CAVING PRACTICE AND EQUIPMENT, Published by the British Cave Research Association, David Judson, editor 1991

NYLON HIGHWAY, newsletter of the Vertical Section of the National Speleological Society

AMC OUTDOOR LEADER HANDBOOK, Appalachian Mountain Club, Boston, MA 02108 1998

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