

Caving



0845 300 1818

Introduction

This is the second edition of the Caving factsheet, replacing the version coded PT-68/1988. The paper provides guidance on age, equipment, leadership and a number of topics of particular interest to those leaders wishing to offer an alternative adventurous activity for their members.

Further editions will be published as necessary in the light of experience. The issue of replacement factsheets will be notified in SCOUTING Magazine, Talking Points and the Activities Newsletter.

General

Caving is a curious business. The underground explorer tends to be driven on by an insatiable desire to see what's round the corner, or down the hole; the non-caver is curious in a different way - he is often intrigued to know why people venture underground at all! The nature of the sport ensures that the outsider knows very little about it - all you will see if you visit a caving region is the occasional party of grubby people vanishing down an even grubbier hole. The mystique which is thus created does nobody any harm, but is a great hindrance to communication between different caving units, and makes it more difficult for beginners to know how to go about things than with, for instance, canoeing.

The lack of communication extends to the field of Scout caving. A few Counties, Districts, Groups and Venture Scout Units have efficient training schemes, and well qualified instructors. Unfortunately, there are others where the potential cave enthusiast has no guidance to turn to, and in the past this has led to occasional incidents which have given Scout caving a bad name. Before undertaking caving activities advice should be sought from the County Caving Adviser, the Assistant County Commissioner (Activities) or, in the case of there being no such appointment, the Specialist Adviser for Scout Caving should be sought. All adventurous activities should be fun, and caving is no exception, but they must be carried out properly, both for the sake of safety and the good name of Scouting.

Age

Caving is a potentially dangerous activity which should not be undertaken lightly. Given the proper precautions and experience, however, it has much to offer.

For older Scouts - generally from fourteen upwards - caving can be introduced as a major activity. This needs careful handling, and Scouts of this age should not be expected to form self-conducted parties. Knowledge of all the factors involved in underground exploration only comes from long experience, and it would be wrong to train young people of Scout age to become cave leaders. It is important that the grade of caving system visited is tailored to the experience and fitness of the Scouts or Venture Scouts concerned. At this stage the main aim should be to give experience of caving.

Caving comes into its own for Venture Scouts. It offers the thrill of physical and scientific discovery and exploration, but is only successful when tackled by efficient teamwork. It involves many facets of Scoutcraft: camping, map reading, walking and knotting, to name a few. At this stage, training in caving can be given so that Venture Scout Units specialising in caving may become efficient underground parties in their own right.

For Cub Scouts and younger Scouts the best introduction to caving is a visit to a show cave. A theoretical session beforehand on the formation of caves will be of value to the boys and help to balance the colourful but fictional tales of some cave guides! The Cheddar Caves are, of course, well known. In South Wales the show section of Dan-yr-Ogof and Cathedral Cave, in the Swansea Valley, are well worth a visit, whilst in Derbyshire there are a number of competing attractions in the Castleton district. Of these, Treak Cliff Caverns are endowed with very fine stalactite formations, and Peak Cavern impresses by its sheer size. Yorkshire has fewer show caves and pot-holes, but Ingleborough Cave, approached by a 1.5 mile walk from Clapham is excellent value for money.

Where to cave

Natural caves generally occur in limestone regions. In Britain this means the Mendip Hill of Somerset; the southern flanks of the mountains of Scout Wales; the Peak District of Derbyshire; the Craven area of Yorkshire; and County Fermanagh in Northern Ireland. In addition to these main areas there are lesser caving districts in Devon, the Forest of Dean, North Wales, Cumbria and the Northern Pennines, and Sutherland in North West Scotland.

If exploration of old mines is included, the scope is greatly increased, from the Dene holes of the South Eastern Chalklands, to the mineral mines of the Lake District. It must, however, be stressed that old mines are in general more hazardous than natural caves. They should never be explored without expert advice.

Pot - holing

The basic difference between caves and pot-holes is that caves tend to consist of horizontal passages and pot-holes vertical passages. More advanced visits underground usually involve pot-hole pitches. These require the proper equipment and techniques for safe descent. They are more common in Derbyshire and Yorkshire than in the southern caving regions of Great Britain. Vertical pitches are descended and ascended by use of a ladder and lifeline or the more advanced technique of using a single rope in conjunction with jamming and prusiking equipment. All of this equipment is taken underground by the party and removed on leaving.

Equipment necessary

Light is a basic necessity. For anything more than a walk into a rock shelter, headlamps are strongly recommended. The minor's type of electric lamp with a rechargeable accumulator is best. They are very expensive to buy, but may be hired cheaply from some specialist centres in the caving area. Most dry cell headlamps on the market are too flimsy for serious caving, but Petzl electric headlamps are an exception. Some cavers still use carbide lamps but these are not really suitable for Scout expeditions from a safety point of view. They are also prohibited in many caves in this country. For pot-holing, as opposed to caving, ladders, ropes, and accessory gear will be necessary, but it is beyond the scope of this factsheet to describe it in detail.

Potential hazards

There are a wide range of potential hazards that the Leader must consider before taking a party underground. In addition to the potential difficulties of operating in the dark, rope handling, route planning etc. there are a number of specific hazards that should be considered.

Many cave systems will react to heavy surface rain by rapidly rising water levels. The leader should check the individual cave's reaction to bad weather before entering the system. If the weather forecast is poor and the party inexperienced the leader should consider alternative plans rather than risk a cave with a history of flooding.

If the intention is to explore a derelict mine there are additional hazards to be considered. There may be areas of rotting timber or unprotected shafts in the floor which must be considered in addition to the more usual hazards of a natural cave system. The National Association of Mining History Organisations produces some very useful support material.

Another hazard that should be considered is air pollution. This can range from **methane** in some old mine systems to **radon** in both cave and mine systems. Methane is an inflammable gas which, in some conditions, can form a high explosive mixture. Before undertaking any mine exploration checks should be made to see if there is any history of methane contamination.

Radon is a naturally occurring radioactive gas formed by the breakdown of minerals within the earth's crust. It is present in small quantities in most underground systems. In the United Kingdom it is found in its highest concentrations in parts of Derbyshire and in redundant lead mines. Concentrations vary with the changes in natural ventilation from season to season, their being highest in summer. Excessive exposure to radiation from radon can adversely affect the body's ability to produce a balanced blood content. This can lead to diseases such as leukaemia.

Radon should not be considered a serious problem for the majority of Scout caving even in the most seriously affected caves which are in Derbyshire. If exposure is limited to one or two trips a month the potential danger is negligible. Instructors or Leaders who may consider more regular exposure to the hazards should consider the long term dangers associated with radon gas.

Bear in mind the following points:

- Do not spend excessive periods in caves or mines with a known radon hazard.
- Do not sleep underground in caves or mines with a known radon hazard.
- Do not smoke before, during or immediately after a caving trip.
- Given the seasonal variation of radon concentration use substitute venues regularly in summer.

Cave rescue

A network of rescue teams cover the caving areas. Their work is entirely voluntary and their existence should not be taken to mean that help is automatically available if things go wrong. Rescue from some caves is impossible. If you are unable to estimate this yourself, you are not fit to take a party down.

Remember that all requests for emergency cave rescue assistance should be made via the 999 emergency telephone system (ask for Cave Rescue).

Cave leadership

The Scout Association has introduced a scheme of authorisation for people wishing to lead parties of Scouts on trips down caves or mines. In order that the leader of any party will be suitably experienced The Scout Association demands that the authorised leader must have at least the following experience:

- Be familiar with Cave Practice and Equipment by David Judgson.
- Have a personal commitment to caving, preferably by membership of a caving club.
- Have regular experience relevant to the system and type of party for which authorisation is required.
- Have a knowledge of hypothermia, its causes, prevention, signs and symptoms and immediate treatment.

In addition to this, the leader must hold a Scout Association First Response qualification or any current adult first aid qualification.

There is no age limit for gaining authorisation, however, authorised Scouts or Venture Scouts under 18 years of age may only operate with the permission of their Scout or Venture Scout Leader on each separate occasion.

Authorisation will be issued by the District Commissioner on the advice of the County or Area Caving Activity Adviser or Assessor and will be valid for no more than 5 years.

There is no requirement for the authorised person to hold a local or National Cave Leadership certificate. Authorisation is granted on the basis of the applicant's knowledge and experience. The County/Area Caving Activity Assessor should be qualified to the local Cave Leadership Certificate. (see factsheet FS120410).

Visits to show caves or show mines do not require authorisation.

If a group wishes to make use of professional instruction or leadership the leader concerned must ensure that the instructor(s) concerned hold the appropriate qualifications from the National Caving Association, such as Cave Instructor Certificate or a Local Cave Leadership Certificate.

How to go caving

Caving is very much a group activity, and there may be a Scout or other caving group in your area willing to take beginners out. On the other hand many clubs do not encourage such approaches, so if there are no local arrangements for Scout caving, you are advised to contact the Specialist Adviser for Scout Caving, c/o The Programme and Development Department, Gilwell Park, Chingford, London E4 7QW.

What caving is like

Most of our caving areas are upland regions in the west of the country where there is a high annual rainfall, and the water which formed the caves is still very much present! Outside Devon you are likely to encounter steams underground on every trip. Our caves vary in length from a few metres to 30 kilometres, and can be up to 200 metres deep. The types of passage vary from tube-like tunnels 8 metres in diameter, to stream-trench rifts 30 metres deep, and from slits no more than a foot wide to tubes that only the smallest can squeeze through.

Breakdowns frequently give boulder-chokes. Redeposited limestone gives a whole range of calcite forms from the universally known stalactites and stalagmites to the mysterious and gravity defying helictites.

Caving is one activity where, given fitness, the small person has a real advantage. There are many caves which are only penetrable by skinny people.

Cave conservation and access

Caves are particularly prone to damage - they are often home to colonies of bats and contain a delicately balanced eco system. All caving parties must take very great care to ensure that they leave the cave as they find it. It is also important to check on access arrangements before visiting the cave. A cave conservation code is available from the National Caving Association.

Cave studies

Caving is far more than a physical pursuit. It introduced lots of questions right from the start. Why is it here? Where does it go? How was it formed? And so on. The science of speleology can be studied from an amateur level to university standard. In fact, the work of an amateur is often of benefit to the research worker, in the form of surveys, photographs, and data on water movements.

Surveying

Simple cave surveys can be made with a Silva compass and a tape measure, or even a knotted string! Surveying a cave is one way to really get to know it, and the finished product often indicates the most likely area for future extensions to the cave.

Photography

Nearly all underground photographs are taken with flash equipment. There are special problems to overcome before satisfactory results are obtained. All equipment must be carried in waterproof, shockproof boxes. Obtaining the right lighting for shots requires much trial and experiment. Nevertheless very good photographs of this unique environment can be obtained without expensive equipment.

Archaeology

Cave remains contain a unique record of the lives of our remote ancestors and the animals or pre-history. Many bones of mammoths and other now extinct

creatures such as leopards and rhinos have been found in the silts of Derbyshire caves for example. It cannot be stressed too highly, therefore, that cave deposits should not be disturbed. (A unique display of cave remains exists at Buckfastleigh in Devon, at the Wm Pengelly Cave Studies Centre and Museum).

Publications cross reference

Basic information

Caving Code - National Caving Association.

Cave Conservation Policy Summary - National Caving Association.

Caving Practice and Equipment - D. Judson (David and Charles).

Speleology: The Study of Caves - Moore and Sullivan.

Legal Aspects of Access Underground - P.T. Mellors.

A Dictionary of Karst and Caves - D. Lowe and T. Waltham.

Race Against Time - J. Eyre and J. Frankland.

A Visitors' Guide to Underground Britain - R. Fells.

Northern Caves (3 volumes) - Dalesman.

Mendip Underground - Irwin and Jarret.

Caves of the Peak District - D. Gill and J. Beck (Dalesman).

Scout Association Cross Reference

Policy, Organisation and Rules of The Scout Association (1995 with amendments February 1996 and January 1997).

Authorisation Scheme for Activities in Caves and Mines - FS120403.

Going Down a Mine - FS120407.

First Response - BX140001.