The Wonders and Exhilaration of Caving

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Croesus Cave, Mole Creek, Tasmania. Photo by Garry K. Smith

You may ask what is so special about speleology, commonly referred to as caving? To answer this question we must look at the physical, social and scientific aspects of this underground pursuit. However as a starter, if you are physically fit, not afraid of heights, dark places, tight squeezes, deep water or the unknown and have a sense of adventure, then the 'caving experience' is for you.

The physical aspect of caving embraces the thrill and exhilaration of exploring large caverns, tight passages, deep shafts, swimming underground rivers and requires a combination of many skills such as abseiling, rock-climbing, prusiking, ladder-climbing, observation, map reading and agility.

The sport can present challenges of seemingly impossible feats requiring contortionist manoeuvres through a range of physical obstacles and constrictions, otherwise known as squeezes. Bear in mind that the object is to get through a tight cave passage in such a way as to remain physically intact and using the least energy possible.

Any fool attached to a safety belay can climb a flexible ladder with plenty of brawn, however this is not the fundamental objective. It is to master the technique of climbing a ladder with finesse, using the minimum of energy as well as achieving the maximum degree of safety. When it comes to Single Rope Techniques (SRT), abseiling and prusiking, we can strap the most fancy and up-to-date gear on a beginner but it means nothing unless that person has learnt how to use the gear safely and efficiently under the guidance of an experienced person. When prusiking, having the gear adjusted to the individual's size, flexibility and comfort, and using the correct technique can make the difference between an enjoyable or an exhausting and unpleasant experience.

Important social aspects of caving include the mateship, comradeship, trust and team spirit which rapidly develops among fellow cavers set on a common goal. A days caving often ends with sitting around a camp fire, sipping a cup of tea or other beverage and sharing personal experiences of the day and past trips.

Caves are one of the few frontiers that humans have not fully explored. There is still the possibility of finding new chambers and passages where no other human has been before. New discoveries in this subterranean world excite even experienced cavers. Some caves have deep shafts and vertical rifts, which test the caver's ladder and rope skills. Other caves have developed with complicated three dimensional mazes which test even seasoned cavers navigation skills and there is a likelihood of

becoming ‘lost’ or a better expression is ‘geographically embarrassed’, since you must be somewhere in the cave.

There is much to marvel at in the underground world. Some cave chambers are full of sparkling calcite crystals and exquisite calcite formations. Other caves are almost devoid of decorations, but the sculptured patterns and forms in the bare rock walls and ceiling have a wondrous splendour of their own.

Garry in Honeycomb Cave, Tasmania.
Photo by Garry K. Smith

Cathi Humphrey-Hood in RockMe Cave Timor NSW.
Photo by Garry K. Smith

When new caves are found, every effort should be made to minimise human impact by undertaking track marking to avoid delicate areas. There have been many articles written on this subject so I will not elaborate further.

Calcite decorations (speleothems), form over hundreds, thousands or even hundreds of thousands of years into an infinite variety of shapes, sizes and colours. So every cave is different and no two chambers or passages are the same.

Caves are a precious non-renewable resource which must be protected for future generations. Unfortunately caves are partly destroyed every time humans enter them, whether intentional or not. Therefore all cavers should consider themselves as honoured guests and never intentionally damage a cave.

Only experienced leaders should undertake the training of beginners, so that the fundamentals of safety and cave preservation are fully taught and explained. In this way beginners may have a full appreciation of their impact on this fragile underground world. For conservation of this limited resource, the training of beginners should be restricted to areas or caves (‘sacrificial caves’ for want of a better term) which have been well trodden over the years and present little chance of further damage. In this way caving skills can be honed without risking damage to more sensitive caves and leaders may assess the individual’s attitude and ability before moving on to more delicate caves.

Caving adventures subject people to a variety of circumstances from adrenalin pumping situations through to peaceful times resting in an awe inspiring chamber. Caving is both a sport and a science. The sporting aspect must be developed before the science can be truly pursued. To fully appreciate the

'caving experience', individuals should be exposed to all of the physical and mental aspects as well as have some interest in the cave sciences. Experienced cavers within ASF clubs do a great job teaching beginners the practical means of traversing a cave system, safety practices and conservation aspects of caving. However experienced cavers who are training novice cavers are presented with the perfect opportunity to 'plant the seed', which may spark an individual's interest in one of the many sciences. These include the study of cave ecology, palaeontology (study of bones and fossils), geology, chemistry, hydrology and surveying. Speleology is the general term that covers all of the above as well as encompassing the exploration of caves as a sport or profession.

Andrew Baker under waterfall in Lynds Cave, Tasmania.
Photo by Garry K. Smith

For instance, if we look briefly at ecology and ask someone what creatures inhabit this underground world, the usual answer is bats. Did you know that despite the popular saying 'as blind as a bat' the insect eating microbats have good eyesight and can see very well in low light conditions, however they have the added ability to be able to navigate using sonar in total darkness. With their echolocation system they can fly at great speed through tight twisted passages with astonishing accuracy. They can fly through and around trees and thick vegetation, detecting flying insects in total darkness and catch them while in flight. During the day some species congregate in small groups while others roost in large colonies deep in the cave. They usually prefer chambers or passages with a domed or elevated roof where warm air is trapped. At dusk a mass exodus occurs as they leave the safety of the cave to feed on airborne insects during the night. The microbats are harmless creatures that are an important part of the ecology of our land as they eat up to half or more of their body weight in insects each night. This helps to keep insect populations in check and reduces the need for farmers to use insecticides. The small cave dwelling microbats should not be confused with their larger cousins,

Greg Thomas in Shothole Canyon Cave, Exmouth WA.
Photo by Garry K. Smith

the fruit eating megabats, otherwise known as flying foxes.

Besides bats there are many other varieties of unique fauna that live their whole life in the cave environment in total darkness. Examples include; cave crickets, spiders, millipedes, beetles, fish and crustaceans. Even the undisturbed cave floor is teaming with microscopic life, so cavers should stick to a single path to avoid compacting all of the floor area and destroying the ecology of the cave. A study of this fascinating microscopic world will shed a whole new light on your understanding of preserving the total cave ecology. Next time you're underground have a close look at a small heap of bat guano with a large magnifying glass. A thimble full sample observed under a microscope will reveal more varieties of creatures then you ever imagined.

The caving fraternity is judged by the critical eye of the public, so each action of an individual could mean the difference between speleologists in general having a good or bad reputation. Strict adherence to the Australian Speleological Federation's (ASF) "Minimal Impact Caving Code" will help preserve caves and maintain the good name of speleologists. This code of practice is widely accepted throughout the caving fraternity and includes such things as; avoid touching decorations (speleothems), leave nothing and take nothing but photos and memories. Without this philosophy we run the very real danger of ruining our caves forever. We are but specks on this earth but our actions have far reaching consequences.

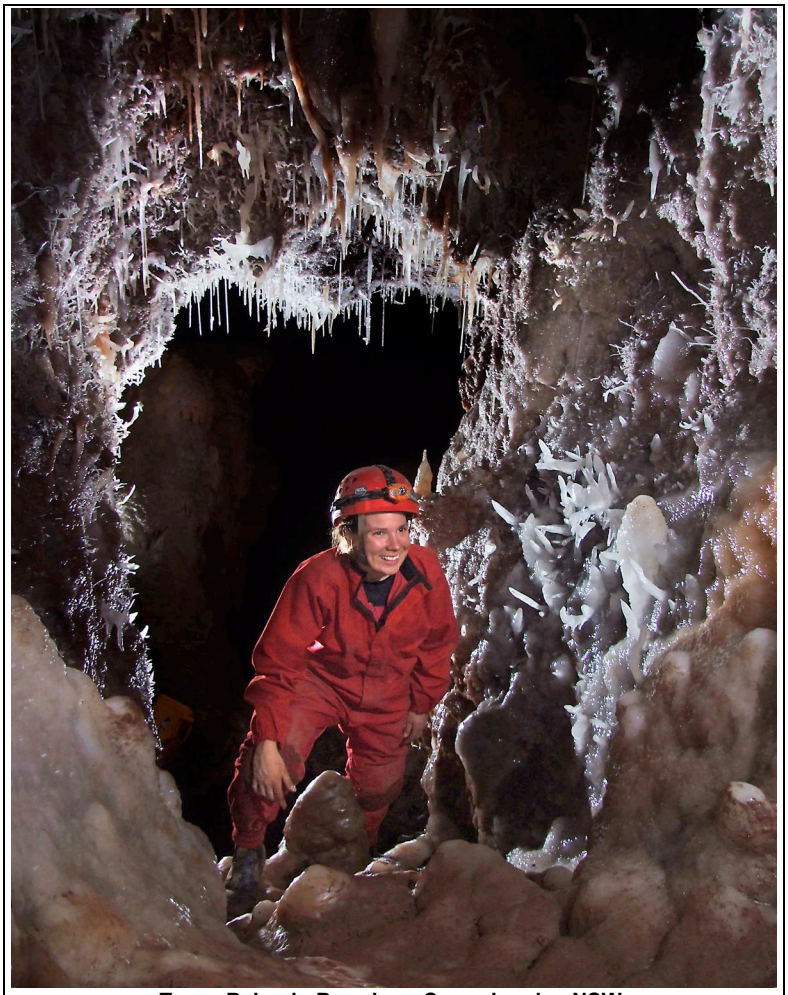
Melissa Hadley in Lynds Cave, Tasmania.
Photo by Garry K. Smith

Some people may rightly argue that every time a person enters a cave, some damage is done whether intentionally or not. However while responsible people are interested in caves, attention will be drawn to the need to protect this fragile wilderness against unscrupulous profiteers, intent on mining easily accessible limestone outcrops containing caves. Mining will remain a threat while ever our community continues to use large quantities of cement products, lime for agriculture and as a coal mine fire suppressant or neutralising colliery washery water. The efforts of speleologists and interested groups to save caves in the future will no doubt depend on tomorrows adults who have often gained their first caving experience as youth members in a caving club, the Scout Association or another youth groups. Having said that one must consider the need to mine limestone is driven by the demand of consumers (ourselves and society at large). By far most caves occur in limestone but we should bear in mind that caves can also occur in other rock types. The incorporation of caves into National Parks to manage and protect them is a step in the right direction, however there is no absolute guarantee that this will protect them forever.

The Australian Speleological Federation codes and standards can be found at https://www.caves.org.au/administration/codes-and-standards.

Caving Safety and Minimal Impact

Here is a shortened summary of the caving safety and minimal impact guidelines:-



Tessa Baker in Barralong Cave, Jenolan NSW.
Photo by Garry K. Smith

- Make sure that other people know of your plans before going underground. In this way if the worst scenario was to eventuate, there will be someone to raise the alarm.
- Make sure that your group has the appropriate permit or permission of the landowner.
- Make sure that each person in the group has the appropriate equipment and skills required for the cave to be entered.
- Ideally caving parties should consist of a minimum of 4 and maximum of 7 persons.
- Always cave as a group, don't split up unless there is a safe number and an experienced leader in each group.
- Each person should carry at least three sources of light, a personal first aid kit and wear a good fitting helmet with four attachment point chin strap.
- Strictly adhere to the "ASF Minimal Impact Caving Code". As an example one part of this code includes not touching decorations (speleothems). This is because the perspiration from your skin will discolour the formations and prevent them from growing. Dirt or mud inadvertently left behind from contact with the decoration will also inhibit the future growth of the speleothems. There is also the chance that fragile speleothems will be broken, destroying hundreds of years of growth in less than a second.
- Be aware of the dangers of 'foul air', elevated carbon dioxide (CO_2) and reduced oxygen (O_2) in the cave atmosphere.
- Be aware of the signs of hypothermia and claustrophobia.
- Any squeeze you can get through, you can get out of, if you don't panic.
- Suggest that everyone should go to the toilet before going underground.
- Don't leave rubbish in a cave and remove any you find.
- Do not disturb any bats you come across.
- Strict adherence to safety standards will minimise the possibility of accidents. There can be no compromise on safety.

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