

## Cave Formation

Limestone caves are the most common type of cave in New Zealand and the world. Limestones are rocks containing high levels of calcium carbonate. The limestone at Clifden formed in the early Miocene time (c. 22-18 million years ago) from the accumulation of shell fragments, sand and pebbles in a shallow sea. This sediment was buried and compressed beneath further layers of sediment and later folded, uplifted and eroded to form the present land surface.

Limestone caves form over a long period of time when acidic groundwater seeps through cracks in the rock and dissolves the calcium carbonate in the surrounding limestone. This creates passageways and unusual formations such as stalactites and stalagmites that gradually become larger and form cave systems.



Calcium formations in the cave. Photo: D Patterson (DOC)

## Stalactites and Stalagmites

Stalactites are the spikes hanging from the roof of a limestone cave, and stalagmites are the spires projecting upwards from the floor of the cave. Both form as a result of the precipitation of calcium carbonate continually dripping water from the cave roof over periods of hundreds and thousands of years.

The Clifden Caves feature some spectacular formations on the ceilings and walls.

**DOC HOTline**  
**0800 362 468**

**Report any safety hazards or conservation emergencies**  
For fire and search and rescue call 111

## Glow Worms/Titiwai

Glow worms/titiwai (*Arachnocampa luminosa*) are a feature of some cave systems. New Zealand glow worms are the larvae of small flies called fungus gnats which undergo a four stage life cycle: egg, larvae, pupae and adult fly. Only the larvae can feed and produce light. This 'glow' is used to attract prey which is caught in sticky silk threads that hang from the glow worm nest. These silk fishing lines are then hauled in and the captured insects devoured. The glow worms grow up to 2.5cm before developing into pupae and adult fly stages.

The Clifden Caves provide a natural habitat for the glow worm, which requires a damp environment with little or no wind.



Glow worm/titiwai threads. Photo: D Patterson (DOC)

## Further Information

For further information contact:

Department of Conservation  
33 Don Street  
PO Box 743  
Invercargill 9840.  
Tel (03) 211 2400, Fax (03) 214 4486  
Email: [Invercargill@doc.govt.nz](mailto:Invercargill@doc.govt.nz)  
[www.doc.govt.nz](http://www.doc.govt.nz)

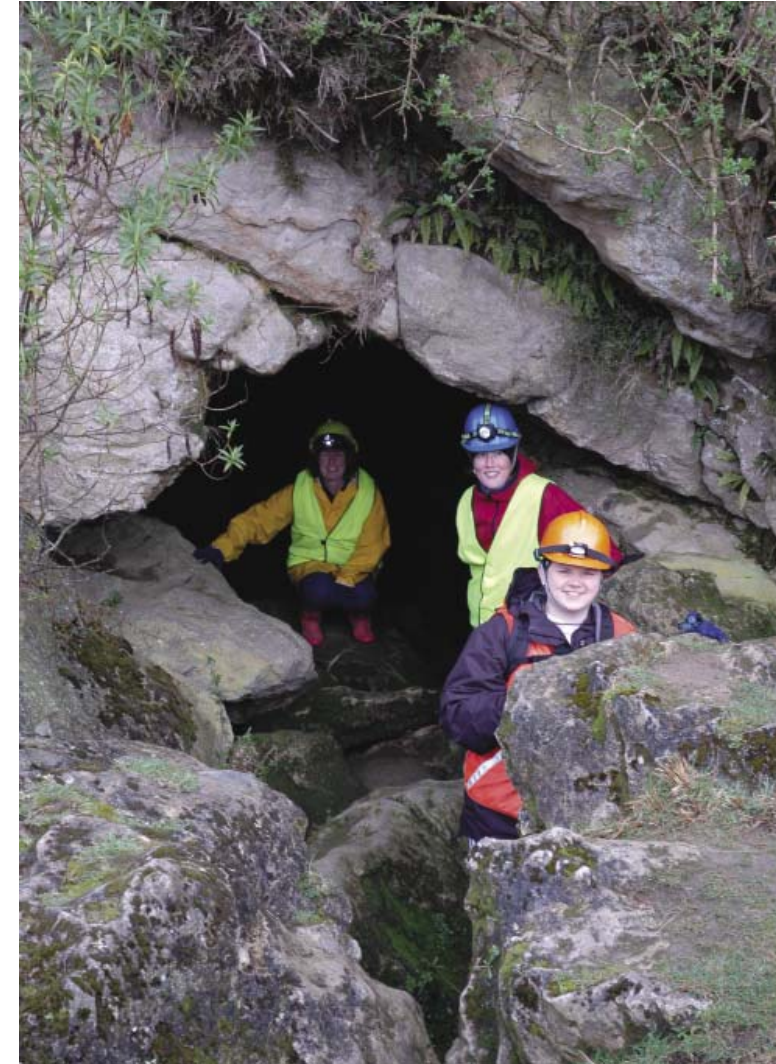
Cover – Entrance to the Clifden Caves. Photo: D Patterson (DOC)

Published by  
Department of Conservation  
Southland Conservancy  
PO Box 743, Invercargill, 9840.  
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November 2006

# Clifden Caves



CLIFDEN, WESTERN SOUTHLAND



Department of Conservation  
*Te Papa Atawhai*

## Introduction

The Clifden Caves are one of only a few cave systems in Southland. The caves are located approximately one kilometre north-east of the Clifden – Blackmount corner (State Highway 96) on Clifden Gorge Road. The cave entrance is signposted from the Clifden Gorge Road. Parking is available adjacent to the caves entrance.

**Access to the caves is though private property, please respect the area.**



Descending a steep section of the caves. Photo: D Patterson (DOC)

## The Cave System

There is a signpost opposite the car park indicating the cave entrance. Access to the caves is over the stile.

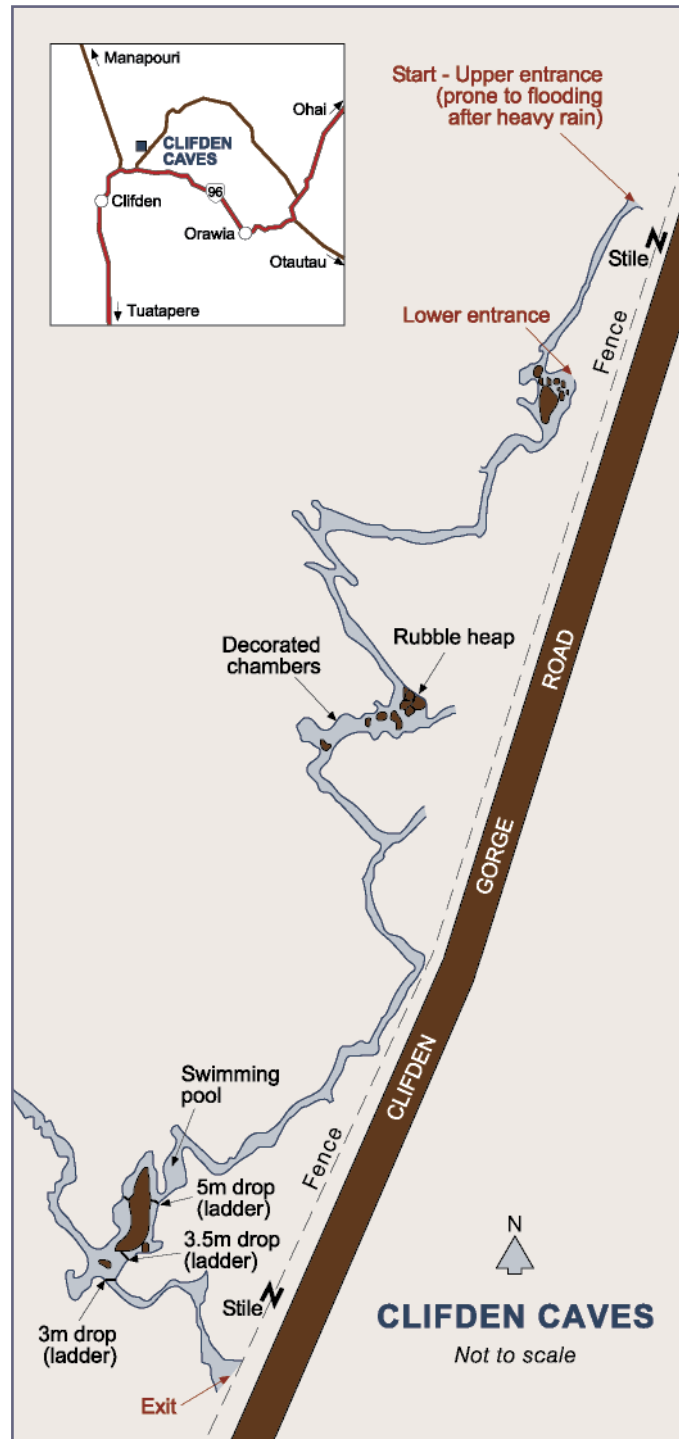
It requires approximately 1½ – 2 hours to travel through the entire cave system and return to the car park along the road. It is advisable to enter this cave system at the upper or lower entrances and travel south to the exit. This will minimise the time spent with wet footwear and clothing after passing through the pool section of the cave.

A high level of fitness and agility is required to navigate the cave system. Some passages are narrow and will require crawling on hands and knees.

Follow the orange triangular markers which indicate the route through the cave system.

About one hour into the caves there is a small pool which requires a short sidle along a narrow ledge situated around the left hand side of the pool. This pool is cold and deep. Passing along the ledge should be undertaken one person at a time. The ledge is likely to be under water – be prepared to get wet feet.

Following along from the pool, there is an intersection – stay left in order to exit the cave system safely (the right hand route should only be undertaken by experienced cavers who have ropes and climbing equipment). After the pool there are several fixed ladders to climb up and down. These are only suitable for one person at a time.



## Safety

**WARNING – This cave system is subject to flash flooding. Do not enter during or immediately after heavy rain.**

- Take two torches per person and spare batteries. Both a head torch and a hand held torch are recommended.
- Always leave your trip intentions (return time, planned route, party numbers etc) with a reliable person. Remember to check in on returning.
- Wear sensible clothing and sturdy footwear as you are likely to get wet and muddy. The caves are often wet and the air temperature will be colder than outside. Wear clothes that are warm, even when wet, e.g. polypropylene or wool. Cotton clothing is **not** suitable.
- Beware of unstable rocks and low ceilings. Wearing a helmet is recommended.
- There are unmarked corridors in the cave system. These are only suitable for experienced and well equipped caving parties. Ropes and climbing equipment are required.
- Take care when travelling through the caves as the flooring of the caves are rough underfoot with loose rocks and stones. Surfaces are often slippery.
- The caves are suitable for fit and agile adults and children aged 12 and older.

## Looking After the Cave Environment

Leave the land undisturbed – toitu to whenua. Please minimise your impact by leaving as little trace of your visit as possible.

- Carry it in, carry it out. Take all your rubbish with you.
- Refrain from touching cave formations as they have taken millions of years to form and are very fragile.
- Keep party sizes small. At least two people is recommended for safety reasons but no more than six for minimum environmental impact.

**Enjoy your underground experience, but cave softly!**