

Advice to the Public on the archaeological potential of caves



An Roinn
Ealaíon, Oidhreacht agus Gaeltachta
Department of
Arts, Heritage and the Gaeltacht

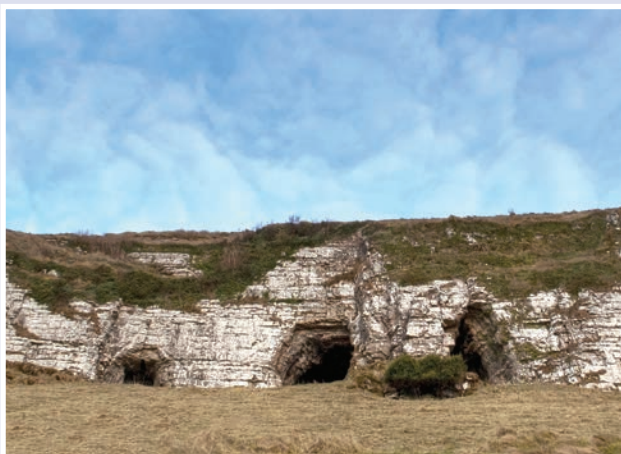
museum

National Museum of Ireland
Ard-Mhúsaem na hÉireann

INTRODUCTION

Natural caves have been used by people ever since the first settlers arrived in Ireland some 10,000 years ago (8,000 BC) and have served a wide variety of purposes: as places of burial, for the performance of ritual, as habitations or shelter for long- and short-term periods, for storage and as hiding places.

The purpose of this leaflet is to inform the public about the archaeological potential of caves. The archaeology of caves increases our understanding of the nature and diversity of past societies on this island. In this way, we gain a deeper understanding of ourselves and the society in which we now live. This leaflet is intended as a practical guide aimed at those who have a specialist interest in caves, as well as for the general public.



The Kesh Caves, Co. Sligo, were used for short-term occupation during the early medieval period. Antiquarian excavations also revealed bones of extinct fauna including arctic lemming, wolf and bear (Ciarán Davis).

1. What is a cave?

A cave is any natural underground cavity in rock that is formed by the solvent and erosive action of water as it slowly travels downwards through joints, bedding planes and fissures. Caves are most commonly found in limestone because it is a soluble rock that is easily dissolved by the slightly acidic carbon dioxide

contained in surface water, particularly rainwater and tannic acid from bogs. Over thousands of years, the continuous flow of erosive water combined with gradual chemical erosion causes underground fissures and joints to slowly enlarge, eventually developing into cave chambers and passages. These are known as 'true caves'.

Caves can also be created by physical erosion, typically along the coast where sea caves develop when fissures in rock are enlarged by constant wave action. Sea caves can form in any type of rock; they often have large entrances but are rarely deep or extensive. A small number of caves are formed by tectonic force and are a consequence of any geological event that causes bodies of rock to move apart (e.g. an earthquake). Caves are described as either 'relict' or 'active'. Relict (or fossil) caves are those that have been abandoned by the river that originally flowed through and formed them; approximately 50% of Irish caves fall into this category. The remaining 50%, known as active caves, currently hold a river or water course. Caves are natural geological features and should not be confused with underground passages such as souterrains or mines which are constructed by humans.



Dunmore Cave, Co. Kilkenny, a national monument open to the public. Large quantities of human bones and Viking period objects have been recovered from the cave since the 18th century (NMS).

2. How many caves are there and where are they found?

At present there are 770 known caves recorded in the State. Almost all are found in carboniferous limestone areas of the country, which accounts for approximately 50% of the underlying geology of the island.

Limestone is dominant in the centre and north of the country but is largely absent from much of the southwest, southeast, northeast and extreme west.

Caves are not equally distributed across limestone regions – in some areas they can be concealed beneath other rock formations, sediments or bogs.

Approximately 80% of caves occur in counties Clare, Leitrim, Galway, Cork and Sligo. The counties with the greatest numbers of caves of known archaeological significance are, in order, Clare, Cork and Waterford.



These human bones from Knocknarea Cave K, Co. Sligo have been dated to 3,600-3,400 BC and represent one child and one or two adults. Corpses appear to have been laid out in the cave and, following decomposition, the larger skeletal elements were removed to another location (Thorsten Kahlert).

3. When is a cave an archaeological monument?

Any cave with evidence that it was used by people in the past can be considered an archaeological monument.

This includes, but is not restricted to, any cave that:

- contains archaeological objects including human bones
- contains animal bones relating to human activities
- has structural modifications (e.g. walls or paving)
- has art (e.g. paintings, sculpture, engravings, carvings)

At least 70 caves, almost 10% of the overall known number, are recorded and classified by the National Monuments Service as archaeological monuments. The number of caves of archaeological interest increases annually as new discoveries are made. With few exceptions, all of these are relict or 'dry' caves. Active caves are rarely of archaeological importance because archaeological deposits would typically be washed away by the underground river. Similarly, potholes (vertical caves) seldom contain archaeological deposits. Little research has been carried out on sea caves but they were used for various purposes through time including short-term occupation, smuggling and pirate activities.

4. Why protect our archaeological heritage?

Archaeological monuments, sites and objects are irreplaceable remnants of past societies. They help us better understand how people in the past lived – the types of houses they constructed, the food they ate, their agricultural techniques, their religious practices, and much more.



A prehistoric polished stone axe from Ballynamindra Cave, Co. Waterford, found during antiquarian excavations in 1879 (NMI).

5. What type of archaeological material occurs in Irish caves?

A broad range of archaeological material and objects has been found in Ireland's caves. The stable underground environment provides excellent conditions for long-term preservation. Flint tools and human bones of Mesolithic date (8,000-4,000 BC) have been recovered from caves. Material of Neolithic date (4,000-2,400 BC) from caves includes human burials, stone axes and pottery vessels. Similar finds of Bronze Age date (2,400-600 BC) have been found, in addition to bronze metalwork. The Iron Age (600 BC-400 AD) is poorly represented in Irish cave assemblages, though human bones and occasional objects are known from a small number of sites. Early medieval (400-1169 AD) finds from caves are relatively numerous and include bone combs and needles, ringed pins (for fastening cloaks), spindle whorls (for spinning wool), iron knives, agricultural equipment and structural features such as hearths, walls and floor paving. Viking period objects such as coins, beads and iron objects are known from a few sites. Archaeological finds dating from the 12th century to the present day are scarce, though pottery sherds and clay pipe fragments occasionally occur. Caves are usually multi-period sites; that is, the same cave was used for different purposes at different times throughout its history.



This Viking period necklace, dated to the 10th century AD, was recovered during archaeological excavations in Glencurran Cave, Co. Clare. It appears to have been concealed in the cave but never retrieved (Thorsten Kahlert).

6. How do I know if a cave is an archaeological monument?

All known archaeological sites and monuments in the State are listed on the National Monuments Service website: <http://www.archaeology.ie/> Click on: Archaeological Survey Database. You can search the database by county, townland, town or class. Under 'Class', select 'Cave' and this will bring up a list of all known caves of archaeological significance. Detailed information accompanies most of the entries. Each cave of known archaeological significance has its own unique Sites and Monuments Record number. For example, Moneen Cave, Co. Clare – where Bronze Age pottery and a medieval human skeleton were discovered by cavers in 2011 – has been assigned the number CL002-080----. As new archaeological discoveries are made, they are added to the database of monuments. In this way, cavers can make a very important contribution to enhancing our knowledge of the archaeological heritage.



Found by cavers in Moneen Cave, Co. Clare in 2011, this antler hammerhead dates to c. 2,000 BC (Thorsten Kahlert).

7. What is the difference between palaeontological and archaeological discoveries in caves?

Palaeontology is the study of natural life before the Holocene (a geological period that began approximately 11,500 years ago), prior to the arrival of humans to this island. Palaeontology differs from

archaeology in that it does not include the study of modern humans, whereas archaeology is specifically the study of people in the past. Ireland's caves are rich sources of palaeontological material and bones of species now extinct such as mammoth, reindeer, Giant Irish Deer, bear, hyena, wolf, wild boar, arctic fox and arctic lemming. When bones are discovered in a cave, it is usually not possible to determine whether they represent palaeontological finds, archaeological material or recent animal fatalities. Only specialist analysis can resolve this. If you think that you have found something that may be of archaeological or palaeontological interest, please contact the National Museum of Ireland for further guidance (contact details below).



In folklore, Diarmuid and Gráinne's Cave, Co. Sligo is said to have sheltered the couple while they were fleeing from Fionn Mac Cumhaill. Excavations in the 19th century led to the recovery of a bronze axe and animal bones in the cave sediments (Ciarán Davis).

8. Who makes archaeological discoveries in caves?

Caves are difficult and challenging environments and many can only be explored by experienced cavers. It comes as no surprise, therefore, that since the 1930s the vast majority of archaeological discoveries in caves have been made by members of the caving community. However, landowners, members of the public and archaeologists occasionally find archaeological material in caves.

9. Can I dig in a cave where there are known archaeological remains?

A routine activity in the exploration of caves by cavers is digging through cave deposits in an attempt to discover new underground passages and chambers (this is called 'pushing' a cave). Typically this takes place in the deepest parts of caves, whereas archaeological material is usually (but not always) found within 100m of cave entrances. As a general guide, no digging or excavation should take place in a cave of archaeological significance within 20m of the known extent of archaeological remains in that cave. The extent of archaeological remains can vary from cave to cave and advice should be sought from the National Monuments Service when operating in a cave of known archaeological significance.



Archaeological excavations in Glencurran Cave, Co. Clare revealed that the site had been a focus for religious activities from approximately 1,400–500 BC (Crossing the Line Films).

10. What should I do if I find archaeological material (e.g. bones, objects or structures) in a cave?

1. Do not remove or disturb the find – this is important to ensure compliance with legal requirements.

2. Take photographs, draw what can be seen, and record as much information as possible. This might include, for example, a description of the type of material, size and shape etc. Good photographs are particularly useful in determining whether features or material are archaeological.
3. Mark the approximate location of the find on a drawing or survey of the cave.
4. Report the find to the National Museum of Ireland *within 96 hours* – this is important to ensure compliance with legal requirements.
5. Inform the National Monuments Service.

On very rare occasions archaeological material in a cave may be under imminent threat of destruction; for example, where the cave is flooded and it is likely an object could be washed away. In this instance, follow steps 1-3 above, then carefully remove the object or bones and place in a secure container. Contact the National Museum of Ireland and the National Monuments Service immediately.



This bowl, dating to c. 3,500 BC, together with the burials of several adult males, was found in the course of limestone quarrying at Annagh Cave, Co. Limerick (NMI).

11. Do I own archaeological material that I discover in a cave?

No. Archaeological objects found in the State which have no known owner at the time when they are found are the property of the State.

12. Can I keep or sell archaeological objects that I discover in a cave?

No (see above). Rewards may be made to finders at the discretion of the Director of the National Museum of Ireland, taking account of the type of object(s) found and the circumstances of discovery, including the co-operation of the finder in reporting and providing details of any objects that are found.



An assemblage of flint microliths and a blade dating from c. 8,000–6,500 BC, from Killuragh Cave, Co. Limerick. The artefacts were associated with human bones and may represent votive offerings placed at the cave entrance by hunter-gatherer groups (NMI).

13. Where should I report the finding of an archaeological object or material?

Under the terms of the National Monuments Acts 1930 to 2004, anyone who finds an archaeological object (in a cave or otherwise) is legally obliged to report it to the National Museum of Ireland or a designated county or city museum within 96 hours.

The National Museum of Ireland
can be contacted as follows:

Tel.: 01-6777444

Email: antiquitiesdo@museum.ie

Website: www.museum.ie



Perforated wolf tooth from Glencurran Cave, probably dating to c. 1,000-600 BC. This pendant may have been worn by someone who was buried in the cave (Thorsten Kahlert).

14. What will happen to a cave if I report an archaeological discovery? Will it be gated?

Reports of archaeological discoveries in caves are treated on a case-by-case basis. The cave in question may be inspected by a qualified archaeologist to make an assessment. In Ireland it is extremely rare to gate a cave for archaeological reasons. At present, only one cave is gated to protect archaeological deposits.

15. What legal requirements do I need to be aware of regarding archaeology and caves?

A cave with known archaeological remains may be protected under the National Monuments Acts 1930 to 2004 in a number of ways. Work at a monument protected under the terms of the Acts may require prior notification or consent. Finders of archaeological objects must report them to the National Museum of Ireland within 96 hours.

It is illegal to be in possession of a metal detection device at archaeological sites and monuments

(including caves) protected under the National Monuments Acts. It is also illegal to use a detection device to search for archaeological objects anywhere in the State or its territorial seas without the prior written consent of the Minister for Arts, Heritage and the Gaeltacht.

It is illegal to excavate for an archaeological purpose without a licence issued by the Minister.

This document is intended only as a general guide to good practice and to draw attention to key provisions of the National Monuments Acts 1930 to 2004. It is not intended as a legal interpretation of those Acts. The full text of the National Monuments Acts 1930 to 2004, and legislation relating to the discovery and reporting of archaeological objects, is available at www.irishstatutebook.ie.

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Robber's Den Cave, Co. Clare: in 1989 cavers discovered the burial of a woman dating to c. 600 BC at this site (Colin Bunce).

CONTACT DETAILS:

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Custom House
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Email: nationalmonuments@ahg.gov.ie

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The Speleological Union of Ireland

www.caving.ie

