

# ROSCOMMON

**AREA OF COUNTY:** 2,547 square kilometres or 983 square miles

**COUNTY TOWN:** Roscommon

**OTHER TOWNS:** Athlone, Ballaghderreen, Castlerea, Elphin, Strokestown

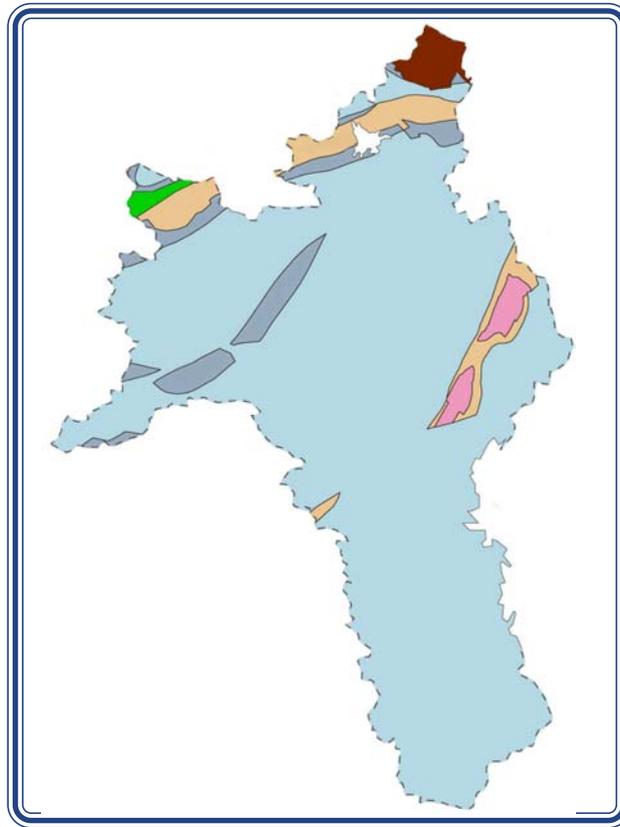
**GEOLOGY HIGHLIGHTS:** Arigna Coal Mining Experience, Limestone fossils.

**AGE OF ROCKS:** Ordovician to Carboniferous



## Boyle Abbey

This Cistercian Abbey was built between 1160 and 1220 of local stone: pale grey limestone and yellow sandstone, both of Carboniferous age



**Geological Map of County Roscommon**

**Pink:** Ordovician; **Green:** Silurian; **Beige:** Devonian sandstones and conglomerates; **Dark blue:** Lower Carboniferous sandstones; **Light blue:** Lower Carboniferous limestone; **Brown:** Upper Carboniferous shaales.

### **Geological history**

The oldest rocks in Roscommon occur in two inliers (older rocks entirely surrounded by younger rocks) north-east of Strokestown and at Slieve Bawn. These rocks are of Ordovician age and are the remnants of a former ocean floor and the roots of a long since vanished mountain chain. They are related to rocks throughout Longford, Down, and into the Southern Uplands of Scotland, but as they are so small in Roscommon, their story is best told in the other county's leaflets.

Surrounding them are some Devonian age rocks, sandstones and gravels laid down by flash floods in a poorly vegetated environment. Both Ordovician rocks and Devonian rocks are partly preserved because they have been lifted up on one side of the Strokestown Fault, which is one of the major geological structures in the county.

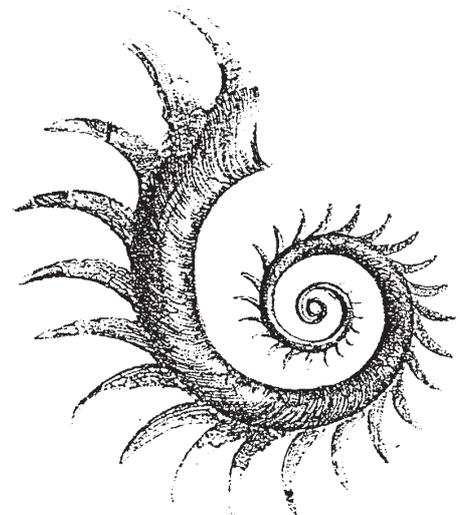
Roscommon's main geological history is in the Carboniferous period. Nearly all the county has limestone near the surface, which was deposited in

a shallow tropical sea covering much of Ireland around 330 million years ago. Thick beds of limestone occur and are continuous over a very wide area. In the uplands around Lough Allen (shared with Leitrim and Cavan, there are younger Carboniferous rocks that were deposited in a delta environment. These include sandstones and shales with occasional beds of coal, and some ironstone nodules.

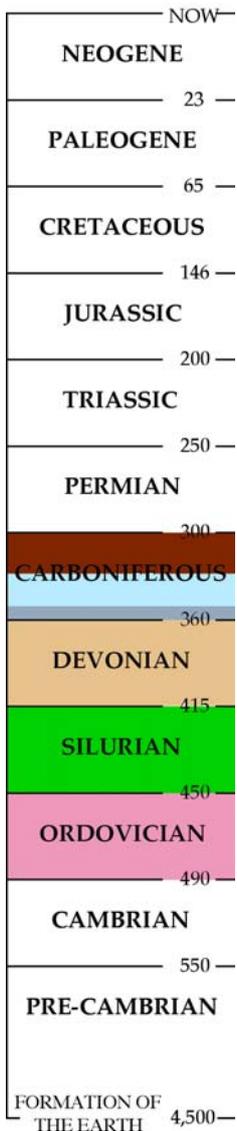
Some glacial deposits obscure the limestone, but it is generally a thin skin. Parts of Roscommon have now been recognised as having karstic features like caves and swallow holes in the limestone, where water mostly drains underground. In the south-east part of the county conspicuous wooded ridges of glacial gravel, called eskers, are found. These were deposited by rivers that flowed beneath the ice sheets, and were left as sinuous ridges once the ice melted. Many small quarries have worked these gravels for aggregate.

**Roscommon fossils**

Roscommon is mostly underlain by the Carboniferous limestone and as this was formed by a shallow tropical sea, potentially fossils may be found anywhere, but because the limestone reflects different local environments on the sea floor they may be in some places but not others. Corals are probably the commonest type, but some rare large gastropods have also been found (pictured right). There is also a thin veneer of glacial deposits in many areas so there may be no rock near the surface to search. Old quarries may be a good place (with land owner's permission of course) or if you are given access to a working quarry that may be the best place. In the sandstones near Arigna, there may be plant fossils or possibly bits of coal, which was originally plant material of course.



**The marine snail  
*Phanerotinus***



**Geological timescale showing age of rocks in Roscommon**

## Roscommon's Mushroom Stones

These weird shaped stones are thought to have been formed by lake water dissolving away the limestone below the level of the lip leaving curious mushroom shapes. The temporary lakes have long since drained away, sometimes replaced by bogs. Roscommon has a few of these features, mostly around Lough Ree, marking a former level of the lake.



**Moyvannan Mushroom Stone,  
Lough Ree**

## Mining & Building Stones

Iron mining took place in Roscommon through many centuries. After early use of bog iron ore (thin layers of limonite deposited in an iron pan beneath many bogs) the ironstone nodules of the uplands around Lough Allen became an important source. A big blast furnace at Creevelea close by in Leitrim was used for smelting the iron, and it used charcoal as fuel, before coal became available from local mines.

There are several large working quarries extracting Carboniferous limestone in the county. Most of the limestone is crushed and used for aggregate for the construction industry, but it is saw-cut for ornamental blocks at a one quarry near Lecarrow. Coal mining was an important industry in Roscommon centred on Arigna at the south end of Lough Allen. Mining only ceased in 1990. The recently opened Arigna Mining Experience tells some of the story, and ex-miners guide you on an underground tour.

Tobacco pipes were formerly manufactured from deposits of 'pipe clay' near Lecarrow, in the south-east corner of the county.

## Suggested reading

- L. Dunne & J. Feehan 2003. *Ireland's Mushroom Stones. Relics of a Vanished Lakeland*. Environmental Resource Management, University College Dublin.

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