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Glen Rosa is one of Arran's most spectacular glaciated valleys. At its maximum, around 18,000 years ago, the ice would have been hundreds of metres thick here.

Glaciers are an incredibly powerful agent of erosion. Rocks from the mountains are ripped away from the landscape and become embedded in the base of the glacier. As they move downhill — like slow rivers of ice — they act like sandpaper scouring out these deep glens.

Start [NS 00106 37550]

1 The lower glen — This area is typical of a glaciated valley: the sides of the glen are steep, and the floor is flat, with a stream that is too small to have eroded this valley on its own. This 'U-shape' is characteristic of glens that have been carved by ice.

2 Evidence of glaciers [NR 98583 38281] — As you walk further into the glen, you will see large mounds either side of the Rosa Burn. These are called moraines, and are piles of sediment dumped by the glacier that carved out Glen Rosa.

Glaciers are full of eroded rock particles, from microscopic fragments to huge boulders. When the ice melts, these sediments are left on the landscape and provides geologists with evidence of past processes.

3 Cir Mhor [NR 97250 43072] — Just before you reach the Garbh Allt bridge, you will have a fantastic view of Cir Mhor. It is perhaps Arran's most impressive mountain, and is an example of a 'pyramidal peak' — a mountain formed as several glaciers eroded backwards towards each other. Cir Mhor, and the other mountains surrounding Glen Rosa, are made of granite, a hard igneous rock that formed from the cooling and solidifying of magma sixty million years ago.

Look for white granite stones on the path, can you see the individual crystals that make up the rock? These are quartz (grey), feldspar (white), and mica (black).

Most of Glen Rosa is owned and protected by the National Trust for Scotland. Trees were once abundant in the area, but overgrazing has meant that they have mostly disappeared. A major project is underway to revive native woodland in the glen. This will improve the biodiversity of the area — which is great news for insects and for birds.

Figures

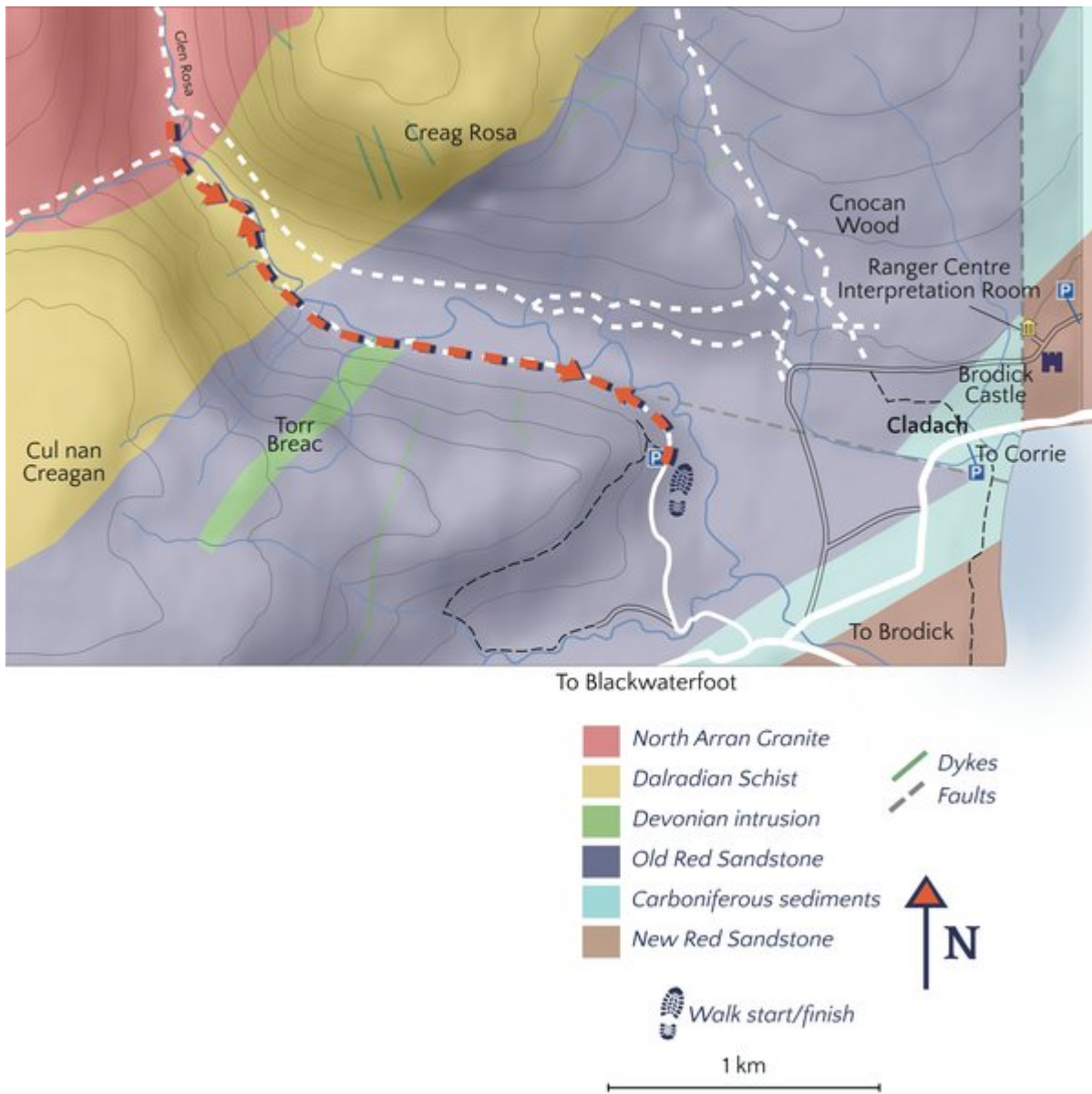
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Route map.

This is what Glen Rosa would have looked like during the last Ice Age!

Cir Mhor from Glen Rosa

These lumps either side of the river are thick layers of sand and gravel deposited by a glacier.



Location map. 4 Glen Rosa.