## 5 King's Cave and Drumadoon

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This walk takes you through the spectacular and varied geology of the Kings Cave coastline. See igneous intrusions, evidence for sea-level change, and find the footprints of the mysterious `hand beast.

**Start** [NR 89786 31485]

**1 An Cumhann dyke** [NR 88483 31683] — The rock you're now standing on is one of 'Judd's dykes' — a series of magmatic intrusions described by J. W. Judd in 1893. It is an igneous rock known as a 'porphyry', meaning it contains large crystals in a fine-grained matrix. This intrusion is connected to the main Drumadoon sill.

This porphyry contains crystals of quartz and feldspar. Quartz is grey and transparent. The larger white crystals are feldspar.

- **2 King's Cave** [NR 88438 30911] King's Cave is one of several large caves eroded into the New Red Sandstone along this coast. They were worn away by the sea at a time when ice covered much of Scotland. After the glaciers melted and the weight of the ice was lifted, Arran began to rise relative to the sea, leaving a feature known as a 'raised shoreline'. There are carvings on the walls of the cave that date to the Iron Age and early Christian times. Look for crosses, deer, and a group of snakes.
- 3 *Chirotherium* footprint [NR 88686 30150] At the end of this path you will find a small vertical rock face with several footprints. These belong to a large reptile that lived at the time of the earliest dinosaurs. The name *Chirotherium* means 'hand beast', because the prints look like giant hands although the digit that points to the side is not its thumb but its outside toe.
- **4 Drumadoon Sill** [NR 88658 29491] The spectacular cliffs of the Doon are made up of igneous rock like you saw at An Cumhann. The magma was intruded as a sill, meaning that it squeezed its way horizontally between layers of sedimentary rocks. As you walk along the shore below the sill, you get a closer view of the large blocks that have fallen from the cliffs. You should be able to identify quartz and feldspar again. Look for blobs of orange material in the rock, this is a different magma that mixed with the porphyry while both were still molten.

## **Figures**

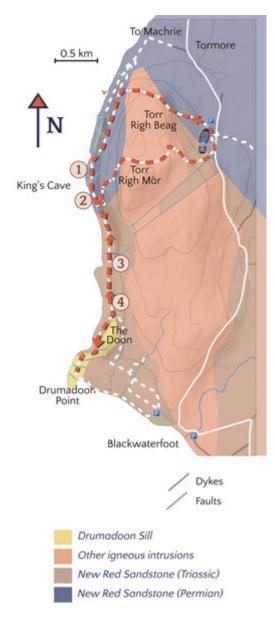
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Route map.

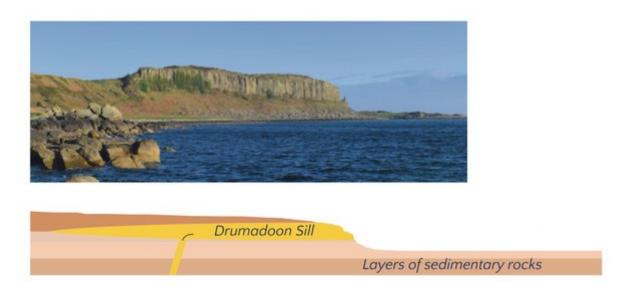
This porphyry contains crystals of quarz and feldspar. Quartz is grey and transparent. The larger white crystals are feldspar.

Handprint of Chirotherium

Drumadoon Sill.



Location map. 4 Glen Rosa.



Drumadoon Sill.