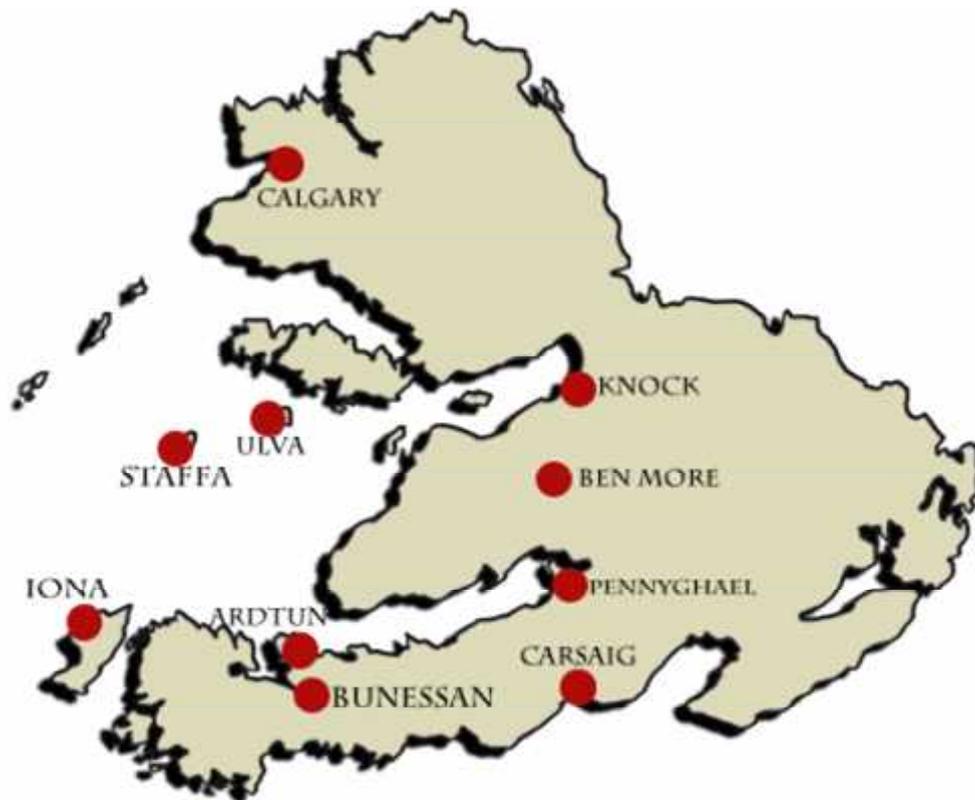


# Isle of Mull – A Landscape shaped by Ice and Fire

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## Introduction:

The Island of Mull, as we see it today has been shaped by two main geological processes: volcanic activity and glaciation. Most of Mull is composed of basaltic igneous rocks which date back to the start of the Palaeogene Period, about 65 million years ago. This was a time when the west coast of Scotland was tectonically very active – Mull is one of several volcanic centres, the others being, Skye, the Small Isles, Arran, Ardnamurchan and St Kilda. The intense igneous activity resulted in large quantities of basalt being poured out as lava. Basaltic lava can take on many forms and these are clearly seen in Mull today.

Relatively more recently, about 12.000 years ago, the whole area was covered in glaciers. As a consequence of the erosive behaviour of glaciation, the landscape has been worn down and what we see today bears evidence of this in the form of gouged out corries, moraine fields, raised beaches and erratic boulders which have been carried by the ice far from their place of origin. The pictures that follow illustrate the type of volcanic and glacial features which are easily identifiable in the field

### **Basaltic Lavas:**

Often the layering in the basalts is very obvious, giving a stepped appearance to the landscape. It is well seen in the Ardmeanach peninsula, seen here from Bunessan:



The basalt is frequently columnar in nature. The following pictures show some good columnar basalt locations:

**Staffa:** This is the most famous. The columns are magnificent:



**Ardtun:** On the beach near Ardtun in SW Mull, there are great columns to be seen:

The hammer is 12" long.



**Ulva:** Second only to Staffa, the basalt columns are well developed here:



In many places, volcanic dykes are common. These are like walls of rock which cut across the landscape. In some places they look almost man-made.

There is a good one at **Calgary**.



The dyke is the result of a split in the Earth's crust being filled with molten material which then solidifies. Being harder than the surrounding rock, it weathers out as a prominent feature.

Here is another dyke at **Carsaig** shore in the south of the Island:



Several dykes stretch for a long way onto the mainland, one in particular running all the way to Cleveland in NE England!

These pictures show some of the “Fire” aspects to Mull’s formation. The effects of “Ice” are also easily seen:

**Erratics:** Glaciers can transport huge amount of material around. This picture shows an “erratic boulder”. This is composed of Granite from the Ross of Mull and has been lifted and deposited on Iona by the glaciers:



Several of these can be found in Iona.

Glaciers can cut channels in the underlying rocks. These are called P-forms, and the best examples in Britain are found near **Knock** in Mull:



At this very location, there are some excellent dykes cutting the rocks, so the “fire” and “ice” are in very close proximity.

The mountains of Mull were shaped by the glaciers, gouging out steep side corries and connecting ridges. This picture shows Ben More, in the very heart of Mull. The contours of Mull’s highest peak have been sculpted by ice:



Finally, on the coast, raised beaches are common. These occur when the ice melts, and the land rises up - a raised platform can result. This is well seen at Calgary Bay in NW Mull:



The volcanoes may have become extinct almost 60 million years ago. The glaciers may well have retreated for the time being, but today we can enjoy the landscape and marvel at the natural forces of "fire and ice" which have created it.