



Geological landforms: Dorset and The Isle of Skye

Rock types on The Isle of Skye

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If you look at Skye on the 10 mile map, then we can see where the different rock types that make up the island can be found. Covering the largest area, and shown in pink, are basaltic rocks, the plateau lavas that were erupted from volcanoes during the Early Tertiary. Then we have intrusive igneous rocks such as the gabbros of the Cuillins shown here in purple. And in red we can see the granites of the Red Hills. Most of the other rocks on Skye are older metamorphic and sedimentary rocks onto which the lavas were erupted and the intrusions injected. The red lines on the map are major dyke swarms running from the north-west to the south-east. These cut through the older crystal rocks and the lavas. When exposed they sometimes form prominent wall-like features cutting through cliffs or across the landscape.

In Skye, as in most of Britain, the landscape reflects its underlying geology. It's a landscape shaped by the processes of weathering and erosion. An interpretation of this landscape can give us important information about the underlying geology. Weathering and erosion, particularly by snow and ice, results in the breakdown and removal of rocks as is occurring here to produce broken rocks called scree on the steep sided slopes of one of one of the Cuillin mountains. Different rock types respond differently to the processes of weathering and erosion. Some such as gabbros, an intrusive igneous rock, weather to produce the very sharp crags we see along the Cuillin ridge which itself is almost a knife edge in places. Granite on the other hand weathers to produce a more rounded mountain such as those we see in the Red Hills. Under ideal conditions -such as sunset -you can see where the name comes from, although granite can vary in colour from almost white to this very intense pink colour. Different rates of weathering and erosion are responsible for the variation in topography of the island. Igneous rocks such as the gabbros are generally speaking more resistant and tend to form the high ground of the Cuillin mountains which are over 800 metres high in many places. Sedimentary rocks such as limestones and sandstones have higher rates of weathering and erosion and so form much of the lower and flatter area of the Strathaird Peninsula. Near Torrin, Cambrian limestones are exposed along the shore and at sea level you can find the kind of weathering you might expect to find in a soft and soluble rock. In contrast, the dyke which cuts the limestone is much more resistant to weathering and erosion and stands out.