

Cuillin Hills 9:

Coire Làgan



Coire Lagan is a superb example of a glacially sculpted corrie, composed of gabbro and troctolite intruded by dykes and inclined sheets. It has excellent bedrock glacial landforms such as the tarn which has resulted in the unnamed lochan, and roche moutonnées with glacial striae. Classic examples of stone chutes form a backdrop to the corrie, including the iconic Great Stone Chute which aids a rapid descent from Sgùrr Alasdair on the Main Ridge for experienced scree runners.

Aspects covered: hydrothermally altered Paleocene plateau lavas; conglomerates interbedded with the lavas; various units of the Paleocene Cuillin Intrusive Centre: the Outer Gabbros; the Outer Bytownite Troctolites; intrusive tholeiite dolerite sheets; dolerite dykes; cone-sheets; non-xenolithic peridotite dykes; Quaternary glacial landforms (corries, arêtes, horns, roche moutonnées with glacial striae) and glacial deposits of the SW part of the Cuillin Hills.

Route: [Glenbrittle House](#) - [Eas Mòr](#) - [Loch an Fhir-bhallach](#) - [Allt Coire Làgan](#) - [Coire Làgan](#) (- return [Glenbrittle House](#)).

Distance: 16 kilometres.

Time: Up to 6-7 hours.

General comments: A relatively easily accessed corrie with superb glacial landforms and deposits. A fair-weather day excursion.

[Gleann Bhreatail \(Glen Brittle\)](#) lies on the west side of the main Cuillin ridge at the head of [Loch Brittle](#). Follow the Broadford- Portree (A87) road to [Sligachan](#) (26km (16 miles) from [Broadford](#) and 14km (9 miles) from [Portree](#)). Take the Dunvegan (A863) road along [Glen Drynoch](#) to the [Carbost \(B8009\) road](#) (8km; 5 miles). From here, follow the Carbost road, along the south side of [Loch Harport](#), as far as [Merkadale](#) (2.5km (1.5 miles)) and thence take the minor road signposting [Glen Brittle](#). Descend into [Gleann Bhreatail \(Glen Brittle\)](#) as far as the [bridge over the Allt Coire na Banachdich](#) (a distance of

11km (7 miles)). Limited parking is available on both sides of the road c. 100m north of the bridge over the river.

An alternative route to the base of [Coire Làgan](#), which omits localities 1 and 2, starts at the end of the Glen Brittle Road, just before the [entrance to the campsite](#), where there is better (i.e. more) space to park vehicles.

From here, follow the path at the rear of [campsite buildings](#) (close to the shore), east towards the corrie, with [Loch an Fhir-bhallach](#) on the north side of the path.

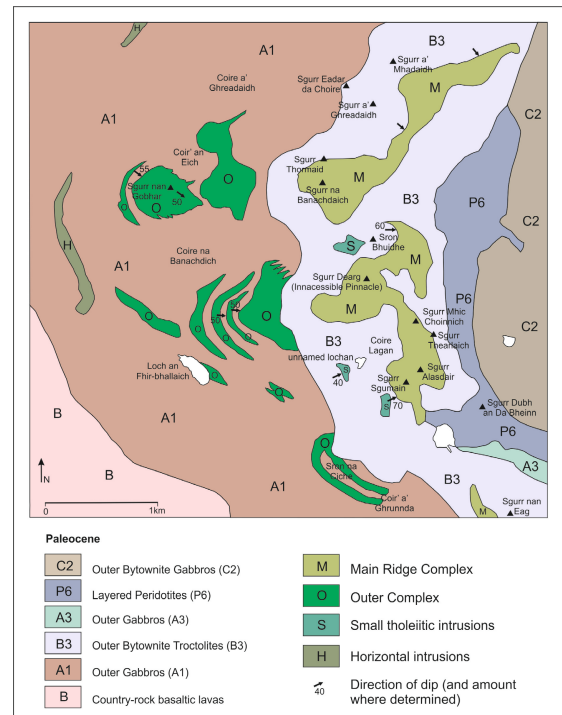


Figure Cuillin 9.1: Summary map and key of the Coire Làgan - Sgùrr Dearg section of the Cuillin Hills.

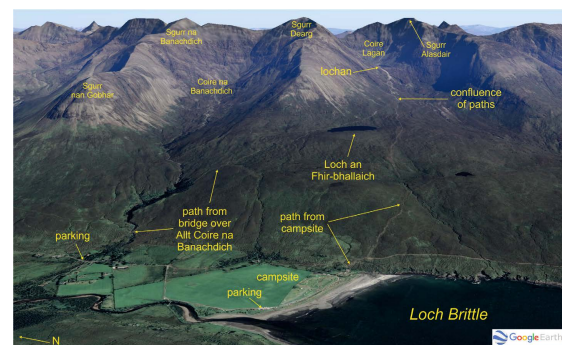


Figure Cuillin 9.2: Annotated oblique Google Earth® image of the south-central Cuillin Hills area indicating the two routes to Coire Lagan.

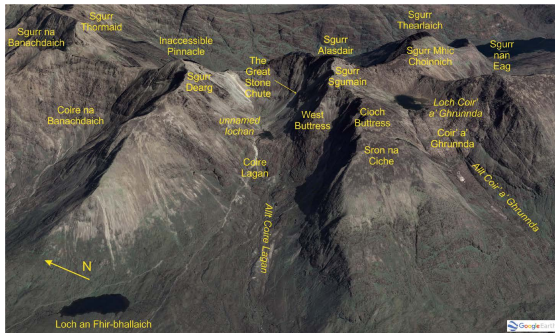


Figure Cuillin 9.3: Annotated oblique Google Earth® image of the south-central Cuillin Hills area.

Locality 1 [NG 4121 2154]:

From the path on the north side of the [Allt Coire na Banachdich](#) (starting at the [sheep/cattle pens](#)) the general geology of the SW Cuillin Hills may be noted. To the west, Paleocene plateau lavas crop out on [Creag na Laire](#), [Beinn Staic](#) and [Beinn a' Bhràghad](#). To the east, the ground as far as the lower to middle parts of [Coire Làgan](#), [Coire na Banachdich](#) and [Coire a' Ghreadaidh](#) is composed of the Outer Gabbros of the Paleocene Cuillin Igneous Centre, intruded by numerous tholeiite dolerite sheets. The Outer Gabbros give way, abruptly, in the upper crags, to fluxioned and xenolithic tholeiitic dolerite, marginal to the Outer Bytownite Troctolites. These marginal rocks can be traced from [Sròn na Cìche](#), across [Coire Làgan](#) and around the west side of the [Sgùrr Dearg](#) ridge into [Coire na Banachdich](#), and thence NE between [Sgùrr nan Gobhar](#) and [Sgùrr na Banachdich](#). The main ridge of the Cuillin Hills, from [Sgùrr Sgumain](#) in the south to [Sgùrr a' Ghreadaidh](#) in the north, is composed of rocks of the Outer Bytownite Troctolites intruded by tholeiitic dolerite sheets. Many of the summit peaks are composed of the latter. Dykes of the Paleocene NW-SE -trending regional swarm and cone-sheets cut all these units.

Follow the path SE towards the [Allt Coire na Banachdich](#). Approximately 200m NE of the [sheep pens](#), near-horizontal Paleocene fluvatile conglomerates and sandstones, interbedded with plateau basaltic lavas, crop out.



Figure Cuillin 9.4: Interbedded fluvatile polymict conglomerates and sandstones north of the Allt Coire na Banachdich. Pole c. 1m long.

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Locality 2 [NG 4127 2155]:

Clast-types in the conglomerates include porphyritic granophyre, amygdaloidal basalt, and Jurassic sandstone, implying these lithologies were exposed and available for erosion during the Paleocene. The best match for the porphyritic granophyre is units within the Rum Central Complex, c. 20km to the south, implying its older age relative to that of the Skye Central Complex, which clearly post-dates the lava sequence in which the conglomerates occur. Return south to the path and follow it to where it crosses the river at a small bridge.



Figure Cuillin 9.5: Hydrothermally-altered basaltic lavas exposed in the Allt Coire na Banachdich.

Locality 3 [NG 4143 2144]:

At the bridge, hydrothermally altered basaltic lavas are exposed in the stream bed and on the banks of the [Allt Coire na Banachdich](#), although not easily accessed. Cross the river at the bridge and follow the path on the south bank of the river, upstream, over deeply weathered Outer Gabbros (A, on map) cut by dolerite and basalt dykes, exposed in the gorge as far east as the waterfall of [Eas Mòr](#). As there are few easy and safe routes into and out of this gorge, these relationships are best appreciated from the vantage point of the south bank of the gorge. Similar but unweathered Outer Gabbros, also intruded by dykes, crop out around the waterfall.



Figure Cuillin 9.6: The gorge of the Allt Coire na Banachdich, west of the Eas Mòr, comprising exposures of weathered Outer Gabbro intruded by dolerite and basalt dykes. View is towards the NW, from the south bank of the river.



Figure Cuillin 9.7: The Eas Mòr ('big waterfall'), where it is eroding Outer Gabbros intruded by dolerite and basalt dykes. View is towards the NE from the south side of the Allt Coire na Banachdich.

Heading SE towards [Loch an Fhir-bhallaich](#), the path forks, with the right-hand fork (the more southerly) heading SE past the NE side of [Loch an Fhir-bhallaich](#) towards [Coire Lagan](#).

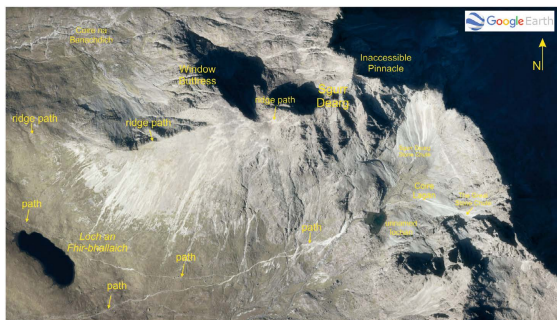


Figure Cuillin 9.8: Map and Google Earth® image of access paths towards Coire Lagan.

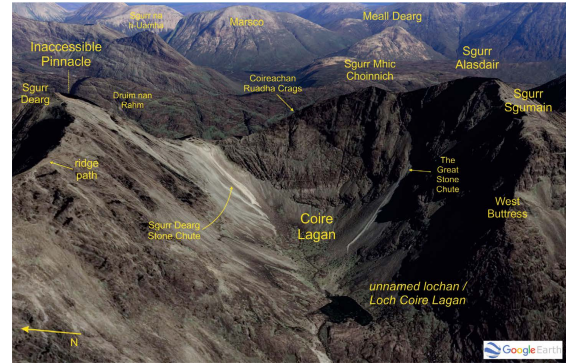


Figure Cuillin 9.9: Annotated oblique Google Earth® image of the Sgurr Dearg – Coire Lagan area. View is towards the east.

From the SE end of [Loch an Fhir-bhallaich](#), follow the path east into [Coire Lagan](#) and traverse ENE into the upper part of the corrie to the [unnamed lochan](#), at an altitude of 565m O.D.

En route, note peridotite minor intrusions from afar, that weather to a prominent brownish orange, on the south side of [Sgùrr nan Gobhar](#) and the SW side of [Sgùrr Dearg](#). (hence the name of the latter: *dearg*, Gaelic for red).

Also, *en route*, note on the [buttress face of Sròn na Ciche](#), to the SE, the often difficult to identify [Cioch](#), a protruding block that is a target for climbers and where the famous sword 'fight' in [Highlander](#) took place.

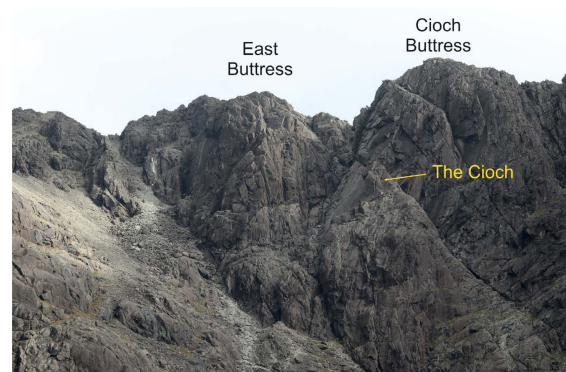


Figure Cuillin 9.10: The buttress face of Sròn na Ciche and The Cioch.

The lip to the upper part of the corrie and the slabs below (to the SW) have been ice-moulded and striated. The area most amenable to investigation is between this lip and the SW shore of the lochan. In case of inclement weather, a large glacial erratic can provide some shelter, depending upon the wind direction.



Figure Cuillin 9.11: The glaciated lip between the lower part of Coire Làgan and the upper part (not visible) that contains the lochan. Note the large block-shaped glacial erratic on the lip. View is towards the east.

Continue via one of the many paths into the upper part of the corrie to the [unnamed lochan](#), commonly and informally referred to as Loch Coire Làgan.



Figure Cuillin 9.12: Block-shaped glacial erratic on the lip between the upper and lower parts of Coire Làgan.

Upon reaching the upper corrie, the [unnamed lochan](#) comes into view. Here, the glacial geology and the bedrock geology are equally worthy of investigation.

The glacial and glacial-related features are dominated by superb examples of roches moutonnées (named after an illusion made by Horace-Benedict de Saussure to wigs fashionable in the 18th Century that were smoothed over with mutton fat - and not 'stone sheep' as is commonly misconstrued!): ice moulded bedrock, with excellent examples of glacial striae (linear scratch marks). The orientation of the roches moutonnées indicates the obvious NE-to-SW direction of ice flow during the Pleistocene, with the gently-dipping (curved) surface on the stoss or 'upstream' side and the near-vertical face (not always present) on the lee or 'downstream' side.

Locality 4 [\[NG 4445 2090\]](#):



Figure Cuillin 9.13: The glacially-excavated tarn, occupied by the lochan at 565m OD. backed, to the east, by Sgùrr Mhic Choinnich (948m OD). The bedrock unit is the Outer Bytownite Troctolites of the Paleocene Cuillin Intrusive Centre, which transition from unlayered material on the west (this) side of the loch into layered material on the east (far) side of the lochan.

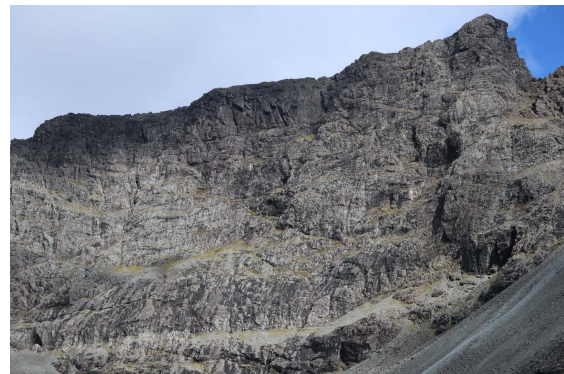


Figure Cuillin 9.14: The west face of Sgùrr Mhic Choinnich (948m OD), composed of Outer Bytownite Troctolites intruded by thin cone-sheets, and with a cap formed of a thick dolerite intrusion of the Main Ridge Complex.



Figure Cuillin 9.15: Stone chute below Coireachan Ruadha Crags, Coire Làgan.

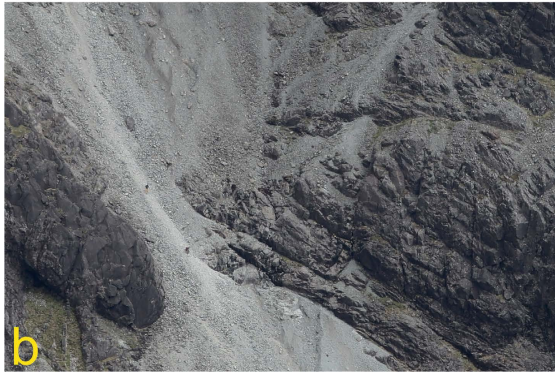


Figure Cuillin 9.16: The Great Stone Chute, a large cone of scree, derived from a fine-grained silicic intrusion, formed by freeze-thaw action: (a) the right-of-centre peak is Sgùrr Alasdair, the highest summit of the Cuillin Hills at 992m OD; (b) person for scale on the Great Stone Chute; and, (c) view of the Great Chute from Coire Làgan. Views are towards the SE.

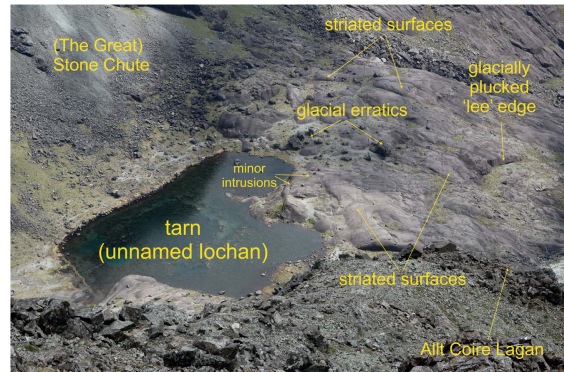


Figure Cuillin 9.17: View of Loch Coire Lagan from Sgùrr Dearg.



Figure Cuillin 9.18: Lochan at 565m OD. On the far side is glacially moulded Outer Bytownite Troctolite and, in the far distance, the Cioch and West buttresses on the north side of Sròn na Cìche.

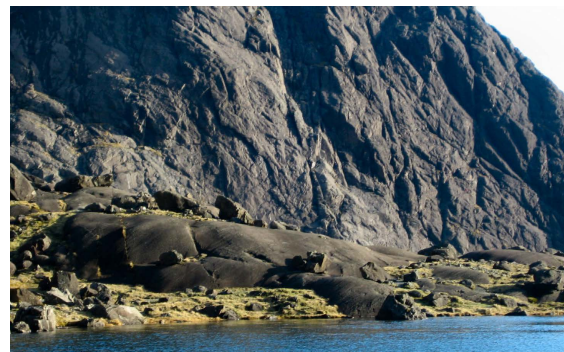


Figure Cuillin 9.19: Glacially-moulded Outer Bytownite Troctolite on the SW side of the lochan.



Figure Cuillin 9.20: Glacially-moulded Outer Bytownite Troctolite on the SW side of the lochan.



Figure Cuillin 9.21: Classic glacial striae on glacially-moulded bedrock adjacent to the lochan.

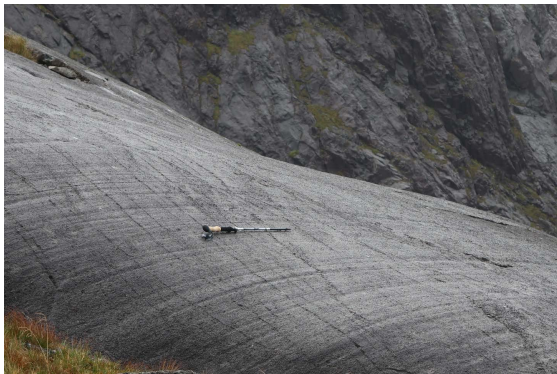


Figure Cuillin 9.22: Classic glacial striae on glacially-moulded bedrock adjacent to the lochan. Pole c. 1m long.



Figure Cuillin 9.23: Coire Làgan from the upper reaches of Sgùrr Mhic Choinnich, fringed by talus cone screes formed by the physical weathering and erosion of the intrusions of the Main Ridge Complex. View is towards the SW, with Rubha an Dùnain (left), Loch Brittle (centre) and An Cròcan (right).

The bedrock geology of the area [around the lochan](#) comprises the Outer Bytownite Troctolites of the Cuillin Intrusive Centre, into which a large number of minor intrusions, dykes and cone-sheets, were emplaced. The exposures in the vicinity of the lochan are strongly striated (see above) and, consequently, primary magmatic features such as layering/stratification in the bytownite troctolite(s) are somewhat obscured. However, detailed observations of the minor intrusions, which are generally not striated, is possible, in particular between the lochan and the large (shelter) glacial erratic.

There is abundant evidence for multiple dilation events that affected single dyke fissures, i.e., single magma-filled voids. Here, narrow dykes cut and chill against each other and against a spatially- and temporally-associated larger dyke and its (bytownite troctolite) country-rock. The narrow dykes can be traced into the larger dyke for only a short distance, where they terminate. In some cases, at these terminations, the central parts of both dykes merge and the chilled margin is absent.

One conclusion is that after the initial dilation of a fracture and the introduction of magma, there are subsequent increments of dilation, sufficiently spaced in time for preceding injected batches of magma to have solidified (crystallised). Distant from the dyke terminations, the dyke fissure was maintained as an open, magma-filled void due to continued flow of magma during further increments of fracture dilation. From these observations, the magma-filled dyke fissures possibly varied in width during their development, controlled by magma input pressure.

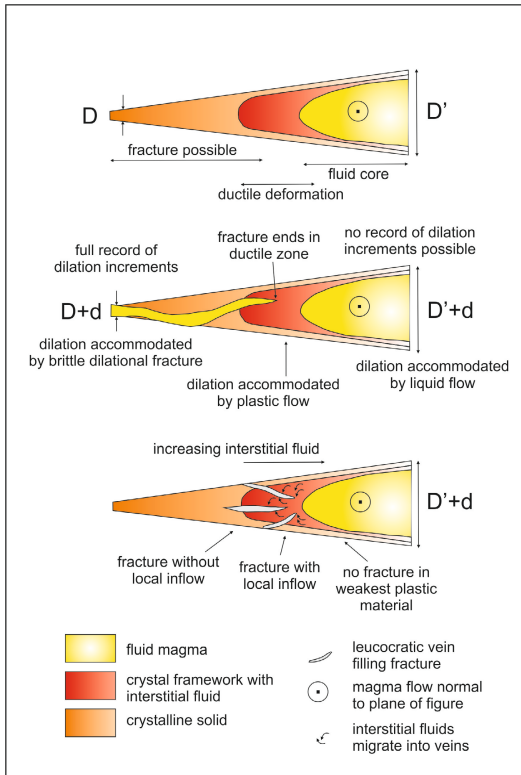


Figure Cuillin 9.24: A The effects of incremental dilation during dyke emplacement.

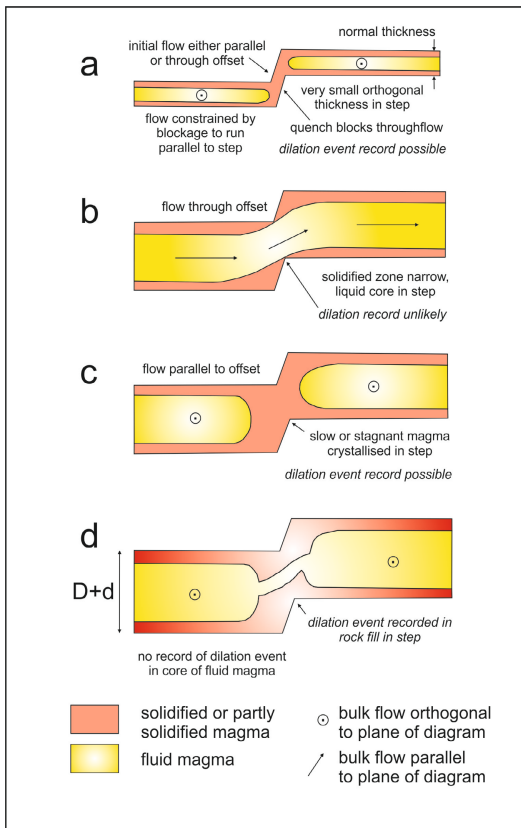


Figure Cuillin 9.25: Dyke emplacement processes.



Figure Cuillin 9.26: Multiple dyke, with initial pulse (now forming material at margins) separated by subsequently intruded material. Pole c. 1m long.

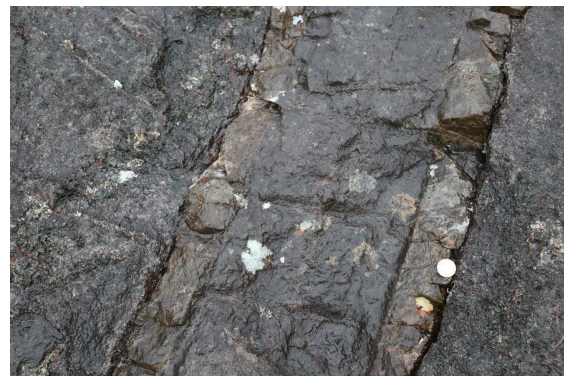


Figure Cuillin 9.27: Detail of multiple dyke, with initial pulse (now forming material at margins) separated by subsequently intruded material. Coin c. 24mm across.



Figure Cuillin 9.28: *En echelon* (apparent) bladed dyke terminations. Pole c. 1m long.



Figure Cuillin 9.29: Complex *en echelon* (apparent) bladed dyke terminations. Pole c. 1m long.



Figure Cuillin 9.30: Intersection of two dykes. The older dyke (left-to-right) has obvious joints orthogonal to its margins and is disrupted/cut by the younger unjointed (top-to-bottom) dyke. The younger dyke has two offsets: one in the vicinity of the intersection and one more distant from the viewer's perspective. Coin c. 24mm across.



Figure Cuillin 9.31: Detail of dyke intersection. The younger dyke (bottom-left to top-right) is displaced laterally (dextral) where it cuts the older jointed dyke. Coin c. 24mm across.



Figure Cuillin 9.32: Detail of lateral dyke displacement. Coin c. 24mm across.

From the vantage point of the [lochan](#), a contact between the Outer Bytownite Troctolites and the younger dolerite sheets of the Main Ridge Complex can be identified from their contrasting responses to erosion: the dolerite sheets being more resistant than the bytownite troctolites.



Figure Cuillin 9.33: Outer Bytownite Troctolites intruded by jointed dolerite sheets of the Main Ridge Complex on the south side of Sgùrr Dearg. Contact arrowed. View is from the lochan ('Loch Coire Làgan').

Return to start point.

End of excursion.