Cuillin Hills 10:

Sgùrr Dearg and the Inaccessible Pinnacle



The Inaccessible Pinnacle, the justifiably (im)famous summit of Sgùrr Dearg in the south-central portion of the arc of the Cuillin Hills, is a blade-like fragment of one of the intrusive basalt sheets that forms the so-called Main Ridge Complex. Dykes of the NW-SE-trending dyke swarm and a cone-sheet also contribute to the overall shape of the pinnacle. The 8m advantage the Pinnacle has over Sgùrr Dearg's more obvious rounded adjacent summit results in it being a mecca for climber's intent on reaching its top, to claim what may be the most difficult of the currently-defined 282 peaks recognised by Sir Hugh Munro as being 3,000 feet (914.4m), or more, in height. It is #163, with a height of 985.8m OD.

Aspects covered: various units of the Paleocene Cuillin Intrusive Centre: the Outer Gabbros; the Outer Bytownite Troctolites; intrusive tholeiite dolerite sheets; dolerite dykes; cone-sheets; xenolithic and non-xenolithic peridotite dykes; Quaternary glacial landforms and deposits of the SW part of the Cuillin Hills (corries, arêtes, horns, trimlines, moraines).

Route: Glenbrittle House / Glen Brittle Campsite - Sgùrr Dearg (Inaccessible Pinnacle) (- return Glenbrittle House / Glenbrittle Campsite).

Distance: 8 kilometres.

Time: Up to 8 hours.

General comments: An arduous excursion on high ground, to be undertaken only on long, good-weather days, most likely in the late Spring and early Summer. Stunning views throughout.

This excursion to Sgùrr Dearg and its Munro Summit, the Inaccessible Pinnacle (although the former is not a Munro Top, see below) has a limited set of objectives, although on good weather days for those who have the necessary skill and energy, a superb reward awaits.

The level of exposure is stunningly good, although access in places is limited unless scrambling skills are employed. It should not be undertaken unless you are fit, have good orientation skills, and have a good head for heights. Accessing the top of the Inaccessible Pinnacle should not be attempted. This summit is one for properly equipped and experienced climbers to undertake in good weather conditions. Geologists can gain their enjoyment by understanding the makeup of the Pinnacle and delighting in the view of it and that of the surrounding spectacular scenery of this part of the Main Ridge.

The western end of the <u>Sgùrr Dearg</u> ridge can be accessed by paths either starting from near <u>Glenbrittle House</u>, where the road crosses the <u>Allt Coire na Banachdich</u>, or from the <u>end of the public road at the Glenbrittle</u> Campsite.

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. From here, the path crosses the Allt Coire na Banachdich, past the south side of Eas Mòr, and SE towards Loch an Fhir-bhallaich. Before reaching the loch, when approximately in line with the E-W -trending ridge of Sgùrr Dearg, leave the path at [NG 42216 21307] and head east towards the line of the ridge to pick up the zig-zag path that provides access to the summit and, beyond, the Inaccessible Pinnacle.

The rocks exposed in the <u>Allt Coire na Banachdich</u> are dealt with in excursion **Cuillin 9**.

The alternative route to the western end of ridge is from the road end at the <u>Glen Brittle Campsite</u>, where there is better (i.e. more) space to park vehicles. From here, follow the path at the <u>rear of campsite buildings</u> (close to the shore), east towards <u>Coire Làgan</u>. Where the path is due south of <u>Loch an Fhir-bhallaich</u>, at <u>[NG 43045 20531]</u> head NNE past the east side of the loch to the low ground at the western end of the E-W -trending <u>Sgùrr Dearg</u> ridge.

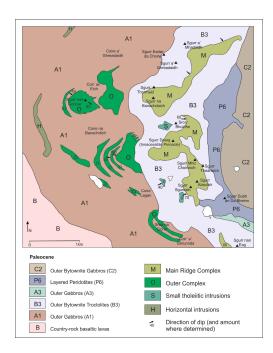


Figure Cuillin 10.1: Summary map and key of the Sgùrr Dearg – Coire Làgan section of the Cuillin Hills.

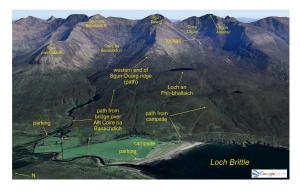


Figure Cuillin 10.2: Annotated oblique Google Earth® image of the south-central Cuillin Hills area indicating access to the western end of the Sgùrr Dearg ridge.



Figure Cuillin 10.3: Annotated oblique Google Earth® image of the south-central Cuillin Hills area.



Figure Cuillin 10.4: Hydrothermally-altered basaltic lavas exposed in the Allt Coire na Banachdich.



Figure Cuillin 10.5: 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.





Figure Cuillin 10.6: Map and Google Earth® image of access paths towards Sgùrr Dearg and Coire Làgan.

The path to the summit of <u>Sgùrr Dearg</u> has several zigzags in an attempt to lessen the gradient. Much of the

path is initially on scree but ultimately gives way to bedrock, comprising sheets of dolerite intruded into gabbro and troctolite.

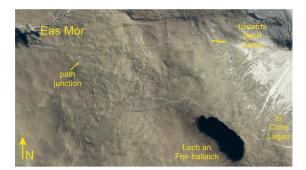




Figure Cuillin 10.7: Path to Sgùrr Dearg, where it departs from the path to Coire Làgan.



Figure Cuillin 10.8: Path to the summit Sgùrr Dearg along the axis of the E-W -trending ridge. The red scar is a peridotite sheet, emplaced in gabbro. The small 'bump' on the horizon is the Inaccessible Pinnacle.



Figure Cuillin 10.9: Reverse view down the Sgùrr Dearg ridge, with Loch Brittle (top left) and where the public road crosses the tree lined Allt Coire na Banachdich (right middle). Note the dominance of scree in the vicinity of the path. People for scale.

Eventually, the rounded summit of <u>Sgùrr Dearg</u> comes into view.

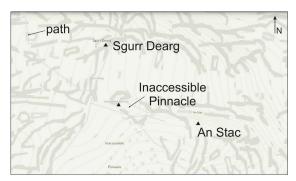




Figure Cuillin 10.10: Map and Google Earth® image of key points in the Sgùrr Dearg summit area.

In the upper part of <u>Sgùrr Dearg</u> two distinctive lithologies, other than dolerite sheets intruded into troctolite, are of note.

1: Red-weathering peridotite sheets, with abundant xenoliths (so-called cognate xenoliths or autoliths), up to 60cm across, of material like that of the host intrusion. These sheets are olivine-dominated, with minor amounts of plagioclase and clinopyroxene, whereas the xenoliths show a greater degree of heterogeneity, with many being relatively rich in plagioclase. Xenolith shape is highly variable and contacts between xenoliths and the host

sheet are sharp. Emplacement was likely as a magmatic suspension consisting of olivine crystals and xenoliths.



Figure Cuillin 10.11: Xenolithic peridotite sheets emplaced into troctolite on the Sgùrr Dearg ridge, west of the summit. The distant prominence is the Inaccessible Pinnacle, the true recognised summit of Sgùrr Dearg.

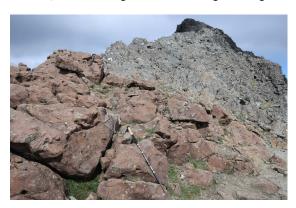


Figure Cuillin 10.12: Xenolithic peridotite sheet emplaced into troctolite on the Sgùrr Dearg ridge, west of the summit. Pole *c*. 1m long.

2: Breccia forming substantial, albeit localised areas east of the <u>Inaccessible Pinnacle</u>. The breccia is heterogeneous and comprises angular blocks of gabbro, troctolite and dolerite in a fine-grained matrix, comprising comminuted basaltic material, and carbonate.

The formation of these breccias, common throughout the Cuillin Intrusive Centre, involves a number of steps. First, magma (dyke?) injection causes brecciation of the coarse-grained (igneous) country-rocks, whilst under compression. Increased vapour pressure due to rapid cooling of this magma causes fluidisation of the blocks that have formed, transporting them upwards in a coherent fashion. During this process, abrasion of blocks, mixing, and further brecciation takes place, resulting in the development of the fine-grained matrix material. Material of this type penetrates upwards to the highest structural levels. Finally, the fluidised masses collapse, due to the lack of a sufficient pressure gradient to drive the system, resulting in the preserved textural characteristics.



Figure Cuillin 10.13: Xenolithic peridotite sheet emplaced into breccia on the Sgùrr Dearg ridge, west of the Inaccessible Pinnacle. Iain Allison for scale.



Figure Cuillin 10.14: Breccia on the Sgùrr Dearg ridge, west of the Inaccessible Pinnacle. Pole *c.* 1m long.



Figure Cuillin 10.15: Detail of breccia, comprising angular blocks of gabbro, troctolite and dolerite in a matrix of comminuted basaltic material and carbonate. Coin *c.* 24mm across.



Figure Cuillin 10.16: Detail of breccia, comprising angular blocks of gabbro, troctolite and dolerite in a matrix of comminuted basaltic material and carbonate. Coin *c.* 24mm across.



Figure Cuillin 10.17: Detail of breccia, comprising subangular to sub-rounded blocks of gabbro, troctolite and dolerite in a matrix of comminuted basaltic material and carbonate. Coin *c.* 24mm across.

En route to the Inaccessible Pinnacle there are spectacular 360° views.

To the SE, at the head of <u>Coire Làgan</u>, are the summits (left to right) <u>Sgùrr Mhic Choinnich</u>, <u>Sgùrr Thearlaich</u>,

Sgùrr Alasdair and Sgùrr Sgumain. All are dominated by thick (tholeite) dolerite sheets intruded into troctolite (a variant of gabbro). In the distance is Sgùrr Dubh Mòr, composed of peridotite. The Great Stone Chute is the result of the fragmentation (by freeze-thaw) of a nearvertical fine-grained silicic intrusion ('felsite'). The Coireachan Ruadha Crags illustrate the vast number of relatively late-stage dolerite cone-sheets that cut the thick dolerite sheets and gabbros.

Due south of <u>Sgurr Dearg</u> are the three buttresses of <u>Sròn</u> <u>na Cìche</u>, dominated by troctolite and basaltic minor intrusions.





Figure Cuillin 10.18: View of the summits at the head of Coire Lagan.





Figure Cuillin 10.19: The three buttresses of Sròn na Cìche, dominated by troctolite and basaltic minor intrusions. The Cioch, a protuberance from the near-vertical cliffs, is indicated. View is towards the south from Sgùrr Dearg.





Figure Cuillin 10.20: The ridge of Sgùrr nan Gobhar, dominated by dolerite sheets above weathered Outer Gabbro. View is towards the NW. In the far distance are the flat-topped summits of Macleod's Tables.

Upon reaching the summit of <u>Sgùrr Dearg</u>, the <u>Inaccessible Pinnacle</u> comes into view, its blade-like form trending approximately NW-SE, parallel to the Paleocene NW-SE -trending dyke swarm.

The Inaccessible Pinnacle [NG 4442 2155]:

The following figures depict the key geological aspects of the <u>Inaccessible Pinnacle</u> and the surrounding area.



Figure Cuillin 10.21: The Inaccessible Pinnacle, forming the (technical) summit of Sgùrr Dearg, a blade-like fragment of one of the intrusive basalt sheets that forms the Main Ridge Complex. Dykes of the NW-SE -trending dyke swarm and a cone-sheet also contribute to the overall shape of the pinnacle. View is towards the north.

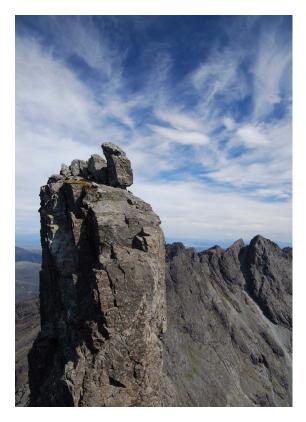


Figure Cuillin 10.22: Summit detail of the Inaccessible Pinnacle. Note highest point, the Bolster Stone(s).



Figure Cuillin 10.23: Alfred Harker's 1904 sketch of the Inaccessible Pinnacle, which partially explains its overall shape in terms of an inclined sheet of spheroidal-weathered dolerite at its base, and the two sides of its blade-like form due to dolerite dykes that have been (partially) removed by erosion.

The Inaccessible Pinnacle:

The <u>Inaccessible Pinnacle</u> is the true Top of <u>Sgùrr Dearg</u>, at an elevation of 985.8m OD, c. 8m above the nearby rounded mountain summit, or parent peak. It was first described in print by Charles Richard Wedd in 1859/60 (Two Months in the Highlands, Orcadia and Skye), noting that it had been surveyed by a Captain Wood for the UK Government, who logged it on an Admiralty chart at a height of 3212 feet (979m OD), remarkably just less than 7m different from today's determined height. Captain Wood described the Top as being 'inaccessible',

informally logged as the *Inaccessible P(ea)k*. The adjacent summit of *Sgùrr (Sgor) Dearg* was logged at 3,059 feet (932m), a much greater elevation difference (47m) than the *c*. 8m difference recognised today.

Somewhat confusing is the use of the name *An Stac*, used by the famed Skyeman and climber, John MacKenzie, for the Pinnacle. On present-day Ordnance Survey maps, the name *An Stac* persists (at [NG 44478 21492]), but is attributed to a smaller lower pinnacle to the east. The tasteless name *In Pin* should be avoided at all costs.

The first recorded ascent was in 1880, attributed to the Pilkington Brothers, Charles and Lawrence, although details are somewhat sketchy. Their guide was John MacKenzie. Confusingly, the Pilkington Brothers referred to the Pinnacle as *The Old Man of Skye*, not to be confused with the *Old Man of Storr* on Trotternish, north Skye. They described the significant amount of shattered rock atop the *Pinnacle*, now defined by them as being 'accessible' (hence their attempt to rename it). This loose material was, soon enough, removed from the *Pinnacle* by the myriad of climbers who followed the Pilkington Brothers. Another source of erosion of the *Pinnacle* is its natural ability to act as a lightening conductor, dramatic events that are capable of significant damage.

The drop on one side of the Pinnacle has been described as being 'infinite' and on the other side 'even steeper and longer.'



Figure Cuillin 10.24: View of the Inaccessible Pinnacle towards the east. D: dolerite dykes; P: peridotite sheets. Note highest point, the Bolster Stone(s).

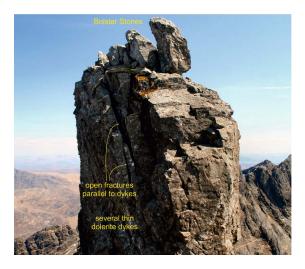


Figure Cuillin 10.25: Annotated view of upper part the Inaccessible Pinnacle towards the north.



Figure Cuillin 10.26: Annotated view of lower part the Inaccessible Pinnacle towards the north.



Figure Cuillin 10.27: Spheroidal ('onion skin') -weathered inclined sheet of dolerite at the base of the Inaccessible Pinnacle. Pole $\it c.$ 1m long.



Figure Cuillin 10.28: Detail of spheroidal ('onion skin') - weathered inclined sheet of dolerite at the base of the Inaccessible Pinnacle. Coin *c.* 24mm across.



Figure Cuillin 10.29: Jointed dykes and fractures trending parallel to the eastern face of the Inaccessible Pinnacle.



Figure Cuillin 10.30: Detail of jointed dykes and fractures trending parallel to the eastern face of the Inaccessible Pinnacle.



Figure Cuillin 10.31: Pale weathered basalt sheets within the largest of the Bolster Stones, atop the Inaccessible Pinnacle.



Figure Cuillin 10.32: Detail of pale weathered basalt sheets within the largest of the Bolster Stones, atop the Inaccessible Pinnacle.

Return to the road using the reverse route.

End of excursion.