## Excursion 3: Corrygills and the Clauchland Hills

((Figure 7), localities 1 to 12)

The purpose of this excursion is to continue the examination of the Tertiary dykes and sills of the Corrygills district and in particular to study in more detail the textural variations and mode of intrusion of the massive sheet of olivine-dolerite forming the Clauchland Hills. The coastal sections, between Brodick Pier and Clauchland Point, have already been described in Excursion 2.

1. [NS 0223 3529] The red false-bedded pebbly sandstone exposed in the lower part of the Lag a' Bheith (sometimes referred to as the Strathwhillan Burn) have an inclination slightly west of south of between 15° and 20°. Dark-red sandstones, seen almost opposite the point where the Strathwhillan road leaves the main road, contain layers with ashy material and may be referred to the central part of the Brodick Beds (see Excursion 2, locality 3a).

Almost due west of the junction of the Lamlash and Corrygills roads an olivine-dolerite dyke, 15 m or so thick, crosses the burn in a northwesterly direction and can be traced at intervals until it cuts the Brodick foreshore at Invercloy (fig. 6). The baked and indurated sandstone at the southwest contact stands up to form a small waterfall which tends to be obscured by a heavy growth of *Rhododendron.*

Follow the Corrygills road for a distance of about 1 km and note that the drift is generally thin there being outcrops of red sandstone and siltstone in the ditch on the south side of the road. Two dolerite dykes also outcrop in the ditch as they cross the line of the road.

2. [NS 0223 3529] Here the road forks, one branch leading to North Corrygills and the shore at Dunan, the other to South Corrygills. Pitchstone associated with felsite outcrops it the northern branch of the Corrygills Burn; however, a better section of this intrusion occurs in the southern branch of the burn at locality 3.

3. [NS 0346 3467] About 90m downstream from the road a felsite-pitchstone sill forms a series of small waterfalls in the burn. Careful examination of the outcrops reveals massive, spherulitic felsite underlying indurated sandstone and underlain by 60cm of dark-green pitchstone. This locality should be compared with the section of the same sill encountered on the Corrygills shore (Excursion 2, locality 11a). Just north of the pitchstone a basalt dyke crosses the burn.

4. [NS 0405 3436] Here, thin-bedded red sandstones are exposed and traces of a spherulitic felsite are seen by the roadside: locally associated with pitchstone, it appears to follow a parallel course to that of locality 3. It is a very striking rock both in hand specimen and under the microscope.

5. [NS 0408 3403] The prominent hill known as Dun Dubh, about 215m in height, is formed of a massive intrusion of quartz-porphyry some 137m across at the widest part. Note the columnar structure of its northern face. Eastwards it thins out to a narrow tongue. The rock itself carries crystals of quartz and feldspar set in a yellowish or yellowish-grey, minutely crystalline groundmass showing flow-structure. Its field relationships suggest that it is a more or less vertical, plug-like intrusion. The dyke of quartz-porphyry cutting the cliffs and the foreshore to the east (Excursion 2, locality 13a) may be connected with the Dun Dubh intrusion.

6. [NS 0467 3376] The hill-top known as Dun Fionn lies a little east of where the track from South Corrygills crosses the Clauchland Hills. Rising abruptly from the shore to a height of about 163 m it is a magnificent viewpoint commanding a wide panorama. Hardly a trace of the fort that at one time existed is now left. James Bryce, writing in 1872 says (p. 79) "A low mound, enclosing an elliptic space 40 yards by 16, is seen round the summit, but nothing whatever is known of the history of the fort". Today it is difficult to detect even so much.

On the southern slopes of Dun Fionn a spherulitic pitchstone sill cuts the dolerite of the Clauchland Hills, possibly a continuation of the lower one described below (Gunn 1903, p. 93).

The path which follows the crest of the Clauchland Hills westwards should be followed for about 300m. A short deviation northwards from this point should be made to look for and examine the lower contact rocks of the Clauchland intrusion and, farther downhill, two intrusions of pitchstone (of Corrygills type). Both are sill-like and form isolated ledges a little below the scarp features of the great Clauchland Hills dolerite. The lower one is some 4.5m in thickness, the upper one about 3.5 m, but neither can be traced far laterally. Both are dark-green rocks showing under the microscope a pale yellowish-brown glassy base crowded with numerous greenish needles and feathery growths. The greenish needles or microlites are probably hornblende (Tyrrell 1928, p. 230).

7. [NS 0339 3374] Continue along the crest of the hills as far as the summit cairn noting the coarse dolerite exposed in the rocky crags. The contact rocks can be looked for, but may be difficult to find, in the low feature often developed a short distance north of the line of crags.

8. [NS 0346 3335] Cross the outcrop of the intrusion to this locality *via* a path on the west side of the dense plantation. The rock here is a coarse-grained analcime-olivine-dolerite with irregular pockets and veins of very coarse-grained crystalline material. Farther south, and close to the upper margin, which side-steps abruptly along the line of a stream, alternations of fine and coarse-grained dolerite occur, intersected in places by narrow tachylitic veins. To the east of the stream an ENE–WSW striking rock face, with adherent patches of basalt, appears to plunge at 40° or so to the south-southeast.

9. [NS 0286 3300] Here, a short distance southeast of the Dunan Mor cairn, dolerite associated with dense basalt plunges steeply to the south-southeast. In the adjacent streams the intrusive rock abuts on sandstones. Farther to the northeast a leaf of the intrusion overlies the sediments. An attempt should be made to examine fully the rocks in and surrounding the large embayment of sediments. "Contact rocks" dipping south-southeastwards through highly baked sandstone (locally with paramorphs after tridymite) occur along the northern margin of the embayment.

Those interested in archaeological remains may wish to examine the two chambered burial cairns (or rather the remains of them) of Dunan Mtn and Dunan Beag. Both were excavated in 1909 and the following particulars are taken from the detailed account of the sepulchral remains given by Bryce (1910, pp. 75–82):

**Dunan Beag** [NS 0269 3299] (fig. 8). This cairn, standing about 400 feet (c. 120m) above sea level, measures 121 feet (37m) in length from north to south and is 65 feet (20m) in breadth. At its northern end there was a chamber, much dilapidated, with three compartments 3.5 to 4 feet (over a metre) deep; these were found when opened out to be filled with stones and earth. They had certainly been rifled at one time and the only trace of interment was a small piece of burnt bone. Relics recovered comprised a fragment of unornamented pottery composed of dark ware, a flint flake showing some signs of working, and some flakes of Corrygills pitchstone.

At the south end of the cairn was a second chamber of two compartments, possibly all that was left of a larger structure. The first compartment measured 5 feet (1.5 m) in length by 3 ft. 3 in. (1m) in breadth; the second measured 3 feet (0.9m) by 2 ft. 10in. (0.86m). Each was filled with soil and stones and the floors were covered by a layer of black earth, containing many fragments of charcoal. The first compartment contained the unburnt remains of two adult persons, lying in a doubled-up position. The second compartment yielded another unburnt interment. A number of animal bones, chiefly of the ox, were also found, while the relics recovered comprised a flint flake, some fragments of Corrygills pitchstone, a small piece of dark-coloured pottery, portions of an ornamented urn of red ware, and parts of a jet necklace. The urn fragments represent a small vessel of the beaker type (see p. 71).

**Dunan Mòr.** [NS 02807 33153] The cairn, which lies about 100 feet (30m) higher up the slope, is a circular structure with a diameter of 78 feet (24m). When excavated in 1909 the remains of three chambers arranged radially round the margins were disclosed but all in a very ruined condition. Practically nothing remained of the chamber on the northeast margin. That on the west side was 22 feet (6.7m) long, with three compartments each 3 ft. 2 in. (about 1 m) deep. No trace of interments was found and no relics, suggesting that it must have been completely rifled at one time. The chamber at the south end was the best preserved of the three and showed two compartments, here again probably portions of a larger structure. The floor of each compartment was covered with a layer of black earth containing some pieces of charcoal and fragments of burnt bone. The relics recovered comprised a large, coarsely made vessel of red pottery, a flint knife or

scraper, three flint flakes, and some fragments of Corrygills pitchstone. The flint knife measured 8 inches (20 cm) in length by 3.2 inches (8 cm) in breadth.

10 [NS 0185 3321] Fine-grained dolerite is exposed on the east side of tile Brodick—Lamlash road at this locality. It is perhaps best seen a little south of the circle of standing stones. The dolerite here represents the thinned out western extension of the Clauchland Hills sheet.

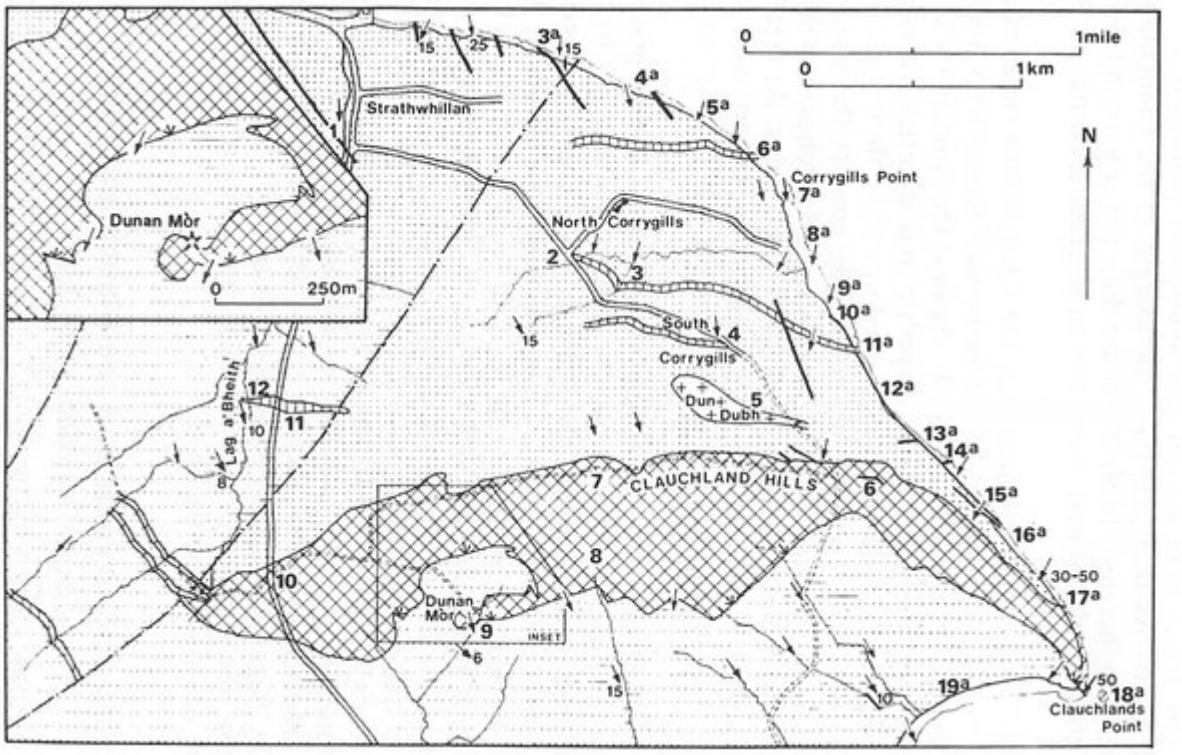
The standing stones referred to stand on a slight elevation on the east side of the road and consist of four massive granite blocks delimiting a circular arc with a diameter of 5.2m. The blocks are round-topped and vary in height from 0.56 to 1.17m. In 1961, James Bryce (1872, p. 216) "found within the circuit of the four blocks, and at a small depth, a cist 26 inches (0.66m) long, 11 inches (0.28m) wide and 10.5 inches (0.27m) deep, cut out of the solid sandstone rock, and covered by a lid. In it there were bone fragments and black earth, in the soil over it some rude flint arrow-heads". Later, however, Bryce (1910, p. 122) described the remains found in the rock above the cist as "a few flint flakes and a flint implement".

A magnificent view of the north Arran hills can be obtained from this point (Plate 1).

11. [NS 0190 3408] At this locality a small quarry has been opened in a generally fine-grained, pale-coloured, slightly yellowish felsite about 7.6m thick. Note the platy jointing of the rock. Spherulitic structure is not obvious in hand-specimen except along a narrow marginal zone. The intrusion shows on both edges a thin band of pitchstone. This felsite has been described by Allport (1872a, p. 542) and more recently by Tomkeieff (1946 and 1961).

12. [NS 0173 3408] A dark-green pitchstone is exposed here in the old Brodick–Lamlash road and in the Lag a'Bheith burn close at hand. It is probably a continuation of the quarried rock described above.

## References




*(Figure 7) Geological sketch-map of the Brodick–Lamlash area to illustrate Excursions 2 and 3. For key see Figure 5.*

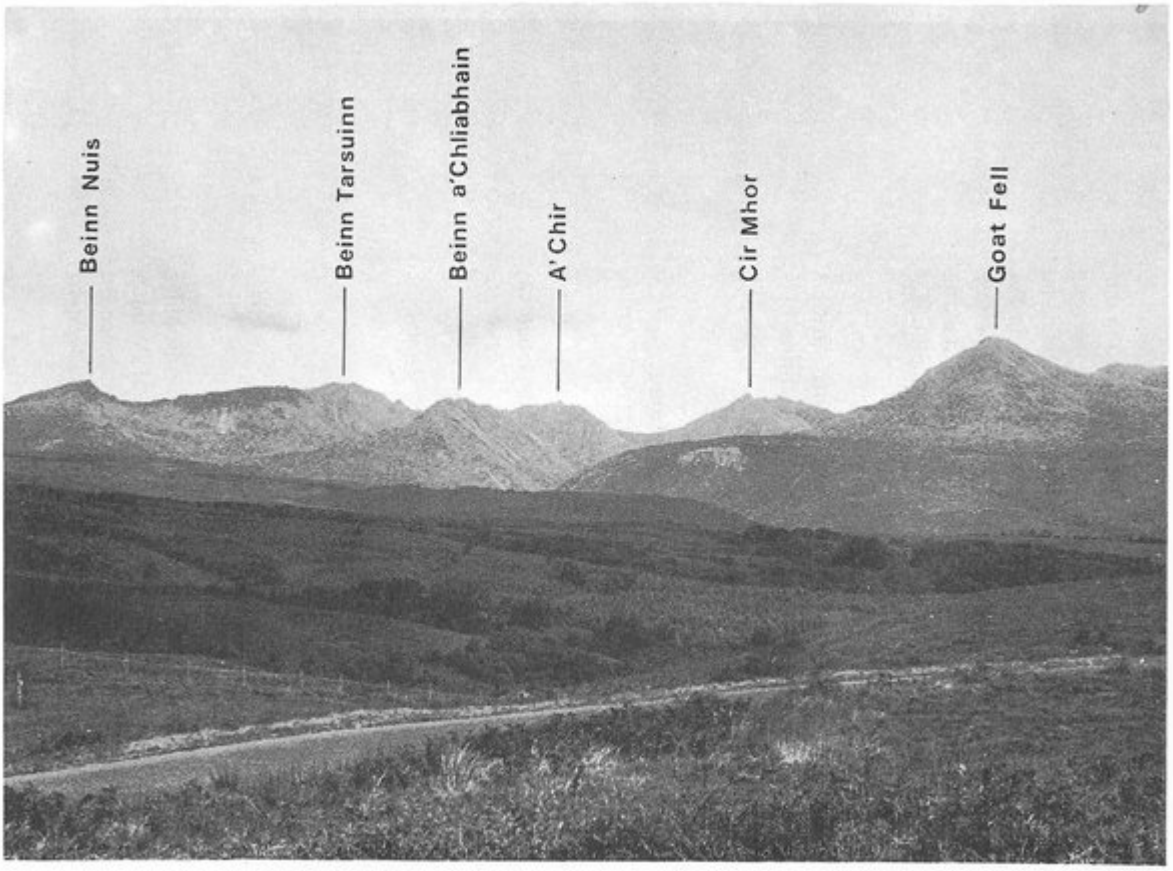



PLATE I. The Northern Granite Mountains. (*For explanation, see page 8*)

*(Plate 1) The Northern Granite Mountains. (For explanation, see page 8)*