
Excursion 5: Locherim Burn and Coire nan Larach

((Figure 9), localities 1a to 12a)

The main objects of this excursion are: (1) to continue the study of the Carboniferous rocks of the Corrie district: (2) to examine the junction of the Lower Old Red Sandstone and the granite in the Locherim Burn and the contact of the latter with the Dalradian schists in the Allt a'Chapuill: (3) to see the lateral moraines and other glacial phenomena in Coire nan Larach.

The Locherim Burn rises in Coire nan Larach and enters the sea at the old quarry to the south of Corrie village. About 350m up from its mouth the stream forks to form the North and South Locherim Burns, the former being the main branch. The Allt a'Chapuill rises on the western slopes of Cioch na h-Oighe and joins the Glen Sannox Water near the old barytes mines.

It may be pointed out that the route to be followed on this excursion traverses the 300m (1,000 foot) Platform and the opportunity should be taken to note how this feature slopes gradually upwards from its outer margin at about the 245 m level to where the steep ground begins at about 360 m.

1a. [NS 0243 4280] Examine the section of Coal Measures exposed in the lower part of the Locherim Burn about 180m up from its mouth. The section is a short one as the strata belonging to the Coal Measures are faulted in the east against the Corrie Sandstone and on the west against rocks which fall into the Upper Limestone Group. The section shows in descending sequence, sandy marls, fine red shales, thin-bedded shaly sandstone and a fireclay with rootlets. The red shales have yielded plant-remains (leaflets and pinnules of *Mariopteris* and *Neuropteris* and some non-marine lamellibranchs (mussels). Leitch (1942, p. 144) refers the mussels to *Carbonicola os-lancis* and *Anthracomaya modiolaris* and correlates this section with the top part of the Corrie shore section (see Excursion 4, locality 11). He regards the mussel band here as the equivalent of the lowest of the three mussel-bands of the Corrie shore.

2a. [NS 0216 4285] Examine at this locality the section in strata belonging to the Upper Limestone Group exposed on the south side of the burn, almost opposite the point where it forks. The strata seen here are, in downward succession, thin-bedded siltstones alternating with bands of shale, shales containing plant remains, fossiliferous calcareous shales and a thin limestone. The plant-bed has yielded a number of species among which *Lepidodendron veltheimianum* is the most abundant, while the fauna of the underlying calcareous beds includes brachiopods, lamellibranchs and gastropods. Here again the section is a short one, the strata being separated by faulting from the Coal Measures of locality 1a to the east and from beds associated with the Corrie Limestone to the west.

3a–4a. [NS 0205 4284], [NS 0194 4278] At these localities some of the beds associated with the Corrie Limestone can be examined. The position of the Corrie Limestone itself can only be inferred, although there are indications that quarrying operations have at one time been carried on. Note especially the occurrence of white, fine-grained very pure sandstone exposed in the south branch of the Locherim Burn a short distance above the assumed outcrop of limestone. A very similar sandstone occurs close by, above the Corrie Limestone at Corrie itself (Excursion 4, locality 9).

5a. [NS 0200 4290] Return to the main branch of the Locherim Burn and at this locality examine carefully the rocks exposed in the gorge cut in the Calciferous Sandstone Volcanic Group. The Group here consists of lavas, together with a number of bands of agglomerate and tuff; a few thin bands of sedimentary material are also present. If this section is compared with the section of the same Group on the Corrie shore it may be noted that it contains a considerably greater proportion of rocks of fragmental origin, agglomerate and tuff, than the latter.

6a. [NS 0200 4290] The upstream or western margin of the lavas is defined by a fault seen to cross the burn at this locality in a southerly direction. Along part of the fault-line a thin dyke has been intruded, forming a waterfall. The fault brings the volcanic rocks against conglomerates belonging to the Upper Old Red Sandstone. Upstream from the fault good sections in red, often gritty, sandstones of the same formation are exposed, dipping to the east-southeast at about 25°.

The Upper Old Red Sandstone is shown (Figure 9) as separated by a fault from the Lower Old Red Sandstone, but it should be pointed out that between Corrie and Brodick the nature of the boundary between the two formations is very uncertain. There is certainly no good evidence for an unconformity here.

7a. [NS 0130 4311] Examine sections in purplish-red sandstones assigned to the Lower Old Red Sandstone. Note the steep dips and how the sandstones lose their red colour and become progressively harder as the granite margin is approached.

8a. [NS 0113 4309] Examine the exposures on both sides of the Lower Old Red Sandstone-granite boundary. The sandstones of the former have been baked and indurated and altered to a hard, shiny quartzite-like rock, tinted a faint green colour through the development of epidote. The granite near the junction is moderately coarse-grained.

It is well worth extending the excursion route from this point southwards, for about 1.2 km, in order to examine another junction of the granite and the Lower Old Red Sandstone exposed in the Corrie Burn (White Water). Here the faulted junction is clearly seen and the Old Red Sandstone beds have been indurated, altered and epidotised for a distance of roughly 37 m. Movement along the actual junction has given rise to a narrow zone of mylonite (see Bailey 1926a, p. 481).

9a. [NS 0009 4272] Coire nan Larach. Note the splendid example of a lateral moraine on the north side of the Am Binn cin ridge. The surface of the moraine is strewn with large granite blocks. Note also the general covering of morainic drift on the corrie floor. The high rugged ground at the head of the corrie (810m) forms part of the granite ridge joining Cioch na h'Oighe to Goatfell.

10a. [NS 0107 4344] Examine small exposures of Lower Old Red Sandstone beds near the granite margin. These consist of shaly beds showing alteration to hardened, greenish-grey rocks in which traces of the original bedding are left. Just north of this locality there is a narrow strip of Dalradian grits bordering the granite for a distance of about 800m. The actual contact of the two rocks is seen in Allt a'Chapuill at locality 11a.

11a. [NS 0047 4416] This locality merits careful study. The actual junction of the granite and grits is sharp but the line of contact is somewhat sinuous. The grits are much indurated and have lost their schistose appearance, as recrystallisation, accompanied by the development of new minerals such as biotite has taken place. The granite close to the junction is fine-grained with phenocrysts of feldspar.

12a. [NS 0074 4448] Examine the stream section at this locality in chocolate-red and purplish sandy mudstones referred to the Lower Old Red Sandstone. These strata are separated from the altered Dalradian rocks of locality 11a by an important fault, not seen however, in the stream. Note the east-southeast dip of the beds at angles of almost 45°.

Below this section and about the 140m level there is an alluvial flat beyond which the stream turns sharply at right angles to its old course to flow northwestwards and join the Sannox Water.

The opportunity should be taken to examine the exposures of the broad west-southwest trending dyke which crosses the Allt a'Chapuill a short distance below the alluvial flat. This dyke can be traced for a distance of about 1.2 km; part of its outcrop is shown on (Figure 9), part on (Figure 12). The rock is a coarse-grained quartz-dolerite described by Kynaston (in Gunn 1903, p. 173) as showing under the microscope "more or less lath-shaped turbid plagioclases, grains of pale augite of earlier consolidation than the feldspar, patches of pale greenish (sometimes yellowish in the more weathered part of the rock) secondary fibrous amphibole, with some chlorite and occasionally a little brown hornblende associated with the augite. There is also some interstitial alkali-feldspar and quartz". The intrusion is probably one of the late Carboniferous suite of quartz-dolerites.

References

