Grampian Highlands Field Guide: Day 5 - Loch Laggan, Loch Trieg, and upper Speyside

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Day 5 – Loch Laggan, Loch Trieg, and upper Speyside

Aims: to examine exposures of Grampian Group rocks; to view the lithology and structure of the Leven Schists (Lochaber Subgroup); to view the glacial erosional and depositional features linked to the Loch Lomond re-advance; to examine readily accessible parts of the Geal Charn–Ossian Steep Belt, looking at some of the Appin Group rocks and their relationships to the 'basement' rocks of the Badenoch Group.

Introduction

The day's traverse ranges across the central parts of the Grampian Highlands, but not straying far from the A86, which links Kingussie on Speyside with Spean Bridge in the Great Glen. As the localities lie within or very close to the main component parts of the Lochaber Hydroelectric Scheme, a brief review of its geography, history and construction is appended at the end of the Day 5 description (see below).

Our route crosses much of the basal Dalradian Grampian Group succession, which in this area is dominated by a thick sequence of psammites and semipelites, deposited mainly from turbiditic flows into a rapidly subsiding NE–trending marine basin, termed the Corrieyairack Basin. Lateral and vertical stratigraphical variations are common in the Grampian Group (Figure 5.1). Smith et al. (1999) showed that the basin architecture played an important role in determining the lithological make-up and overall composite thickness of the succession. They recognized a basement ridge on the southeastern side of the basin, which they termed the Glen Banchor High (Figure 5.2). This area corresponds to the NE–trending Geal Charn–Ossian Steep Belt, a regional structure that has been subject to several interpretations. Thomas (1979) envisaged it as a root zone of a 'fountain of nappes' that dominates the overall structure of the Grampian Highlands, whereas Robertson and Smith (1999) saw it as an upstanding basement horst against which the Dalradian sequence onlaps. The basement rocks form part of a larger outcrop of gneissose and migmatitic psammites and semipelites with local amphibolitic mafic bodies that occurs in the central and northern parts of the Grampian Highlands. The nomenclature of these mainly metasedimentary rocks has varied over time: they have been referred to as 'Younger Moines', Central Highland Division, Central Highland Migmatite Complex, Glen Banchor and Dava successions. Currently, they are formalized as subgroups within the Badenoch Group (see Stephenson et al., 2013a). They are intruded by deformed but locally discordant veins and pods of pegmatitic granite that have yielded radiometric ages of c.750 Ma, suggesting that they have a Neoproterozoic deformational and metamorphic history. A ductile shear zone, termed the Grampian Slide, has been recognised at or near the contact between the basement Badenoch Group rocks and the overlying Dalradian Grampian Group. The shear zone is typically gently dipping and varies in thickness from a few metres up to c.200 m. Its tectonic significance has been much debated, but as it is largely confined to the basement rocks, the general consensus is that it has developed close to a modified basement-cover unconformity, as originally suggested by Piasecki and van Breemen (1979).

The overlying Appin Group succession occurs within the highly deformed rocks of the Geal Charn — Ossian Steep Belt, where it is interpreted as unconformably overlying the basement gneisses, but its main outcrops lie farther west where it has been folded into kilometre-scale F2 synforms, namely the Stob Ban Synform, the Blackwater Synform, which themselves refold the earlier F1 Kinlochleven Anticline and Treig Syncline. Note that the fold phase notation here does not correlate directly with that used in the Tay Nappe or even with that in the nearer Ben Alder area. The ages and relationships between even kilometre-scale folds in different part of the Grampian Highlands remain unclear.

This part of the Grampian Highlands is also the site of numerous Caledonian igneous intrusions, which range from Upper Ordovician to Late Silurian in age. The Strathspey Granite underlies much of the country between Loch Ericht and Strath Mashie/Laggan but exposure is patchy. It mainly consists of muscovite-biotite granite, locally garnetiferous, with pegmatitic patches and metasedimentary enclaves common. Its mineralogy and initial $^{87}Sr/^{86}Sr$ ratios (0.71625 to 0.71751) suggest it is a crustal-derived, S-type granite. Noble and Barriero (1997) obtained a U-Pb monazite age of 447 ± 0.9 Ma, interpreted as dating granite emplacement. Miller and Brown (1965) had earlier obtained a K-Ar biotite age of 437 ± 16 Ma, possibly dating uplift. The Loch Laggan Vein Complex lies farther west, manifest as clusters of thick veins of pegmatitic and aplitic leucogranite and subsidiary granite bodies , together forming concentrations up to several kilometres across. One such concentration covers much of Binnein Shuas [NN 46 82]; others lie around Creag Pitridh [NN 48 81] and on the northern side of Loch Laggan, underlying the southern flank of Am Meall [NN 46 85] and on Meall Damh [NN 499 891]. Granitic veins are also common outwith these concentrations and the vein-complex extends west as far as the Strath Ossian Granodiorite and Corrieyairack Granite plutons. Most veins are sub-vertical, commonly with a northeasterly trend. Clayburn (1981) considered that an Rb-Sr feldspar age of 439 ± 7 Ma from a representative vein was the best estimate of emplacement age. Its initial $^{87}Sr/^{86}Sr$ ratio of 0.70964 lay within the general range of 0.705 to 0.718. These $^{87}Sr/^{86}Sr$ values, together with the depleted U and Pb values from 16 pegmatitic veins, suggested that the granitic veins were formed by partial melting in the lower crust and emplacement at moderate crustal levels. The veins appear to postdate the peak of metamorphism. Farther west lies the poorly exposed Strath Ossian Pluton, which consists of three main lithologies. A melanocratic granodiorite to quartz-diorite is intruded by the main component lithology, a medium- to coarse-grained, xenolithic, hornblende-biotite-granodiorite. The youngest component is feldspar-phyric microgranite, developed near Fersit, where it is a marginal to and transitional with the main granodiorite. Emplacement of the pluton into relatively cold country rock caused local deflection and disruption of structures, generation of psammite xenoliths, and some disharmonic folding of adjacent pelitic and semipelitic lithologies (Leven Schists). A U-Pb zircon age of 400 ± 10 Ma was obtained from the granodiorite by Pidgeon and Aftalion (1978) and an Rb-Sr whole-rock isochron age of 405 ± 9 Ma by Clayburn (1981). Initial $^{87}Sr/^{86}Sr$ ratios were 0.7060 and 0.7059 respectively, suggesting mantle derivation. The intrusion shows similarities to the Moor of Rannoch Pluton to the southwest from which it is separated by only a thin strip of Leven schists. Nielson et al (2009) obtained U-Pb zircon ages from several plutons in the Argyll Suite including the Cruachan (Etive), Clach Leathad and Moor of Rannoch plutons. Their ages showed that pluton emplacement had occurred between c.428 Ma and c.408 Ma; the Rannoch Moor Pluton gave an age of 422.5 ± 0.5 Ma. A similar emplacement age seems probable for the Strath Ossian Pluton, and would be compatible with its marked aureole, its relationship to the Loch Laggan Vein Complex, and the fact that the pluton is cross-cut by porphyritic microdiorite dykes belonging to the Etive Dyke Swarm (intruded c.415–408 Ma). P, T conditions of 3.2 kb and up to 650°C have been determined from the Strath Ossian aureole assemblages implying emplacement at c.10–12 km crustal depth (Key et al., 1997).

Localities

Rubha na Magach [NN 4585 8490]

The first stop is by Loch Laggan, where, provided the water level is reasonably low, glaciated slabs expose metasedimentary rocks of the Loch Laggan Formation, here cross-cut by an extensive network of pegmatitic granite and felsic veins. A pegmatitic granite vein complex (c.1 km^2) is mapped just a few hundred metres to the northeast. The Loch Laggan Formation consists of psammite, micaceous psammite, semipelite and minor pelite in both discrete and graded beds. The bedding here is right-way-up and dips some 50° SE; the rocks lie on the southeastern limb of the hinge of the open Loch Laggan Anticline (F2?). However, the tectonic strain is low and sedimentary structures are readily apparent, except in the more pelitic lithologies where a penetrative cleavage or schistosity (termed S2), defined mainly by muscovite, is dominant (Figure 5.3). Calc-silicate lenses, clearly originally of diagenetic origin, are present, but their typical mineralogy (garnet-hornblende-clinozoisite-andesine-quartz) is indicative of the regional amphibolite-facies metamorphism.

Sedimentary structures normally found in Bouma sequences (Ta–Te) (see Figure 5.4b) and indicative of turbiditic deposition, are prominent, particularly in the micaceous psammites. The presence of scours and rip-up clasts implies relatively rapid deposition of the psammitic elements followed by slower accumulation of the silty and muddy ‘tops’ of the individual graded units. Glover et al. (1995) concluded that the lithogies and facies present were indicative of deposition in an inner fan-channel system. Figure 5.4a shows two sedimentary logs recorded at Rubha na Magach that illustrate the lithologies, bed thicknesses, and range of sedimentary features present (Banks, GCR Site 8 in Leslie et al. 2013). Metamorphic recrystallization and cleavage formation have effectively ‘erased’ evidence of any subtle sedimentary features in the semipelitic units.

Moy — Craigbeg Road Cutting [NN 4137 8217 — NN 4122 8212]

This roadside locality exposes psammites and semipelites that are transitional from the Loch Laggan Psammite Formation up into the Ardair Semipelite Formation. The bedding dips c.30° WSW and the rocks effectively lie on the NNW flank of the broad hinge zone of the Loch Laggan Anticline (Figure 5.5). In the Loch Laggan Formation bedding thicknesses decrease upwards (to an average of c.10 cm), and the proportion of semipelite and pelite increases. This change in lithology was recognized by Glover and Winchester (1989) who termed the resultant upper striped unit the Moy Member. The typical pale and dark grey colour-banded lithologies are clearly seen in the road cuttings (Figure 5.6), with calc-silicate lenses and layers common within the sequence. Their mineral assemblage, typically garnet-hornblende-clinozoisite-andesine-quartz, is representative of the regional amphibolites- facies metamorphic grade prevalent in this area. Irregular pegmatitic granite veins intrude the psammite and semipelites at the eastern end of the cuttings.

Valve Tower, Loch Treig [NN 3432 7600]

From the end of the public road by Fersit at [NN 3501 7818] we take the good vehicle track southwards that firstly winds past moundy glaciofluvial deposits. Once past the Treig dam the track climbs gently (c.30 m) above Loch Treig passing several rock cuts and exposures, and then descends to reach the Valve Tower at [NN 3432 7600]; in total some 2.5 kilometres. Note that the loch and glen derive their name from the gaelic *treig*, meaning to *desert*, *forsake* or *abandon*. The east side of the loch once formed part of the main cattle droving route between Skye and the markets at Crieff and later at Falkirk.

The extensive sands and gravel deposits below the dam are remnants of the Trieg ‘Delta’, formed against the ice margin, mainly during the retreat phases of the Loch Lomond Re-advance (Key et al., 1997). A large lake occupied most of Glen Spean for much of this time as a result of ice accumulation

in the Great Glen. Its top-water level was limited by the Pattack-Mashie col (260 m) ENE of Loch Laggan. Recent work documenting the varved deposits show that this lake and the higher 325 m and 350 m lakes that formed in Glen Roy were quite short lived, lasting in total only for some 515 years (Palmer et al., 2010). Provisional correlation with the GRIP ice core records suggested that the maximum extent of ice-sheet development and thus lake formation was reached at about 12 165 years BP, in the later part of the Younger Dryas (Loch Lomond Stadial). Ice-sheet build-up and lake formation was estimated to have taken a minimum of 380 years, whereas retreat, ice-sheet decay, and drainage of the lakes (eventually catastrophically by jökulhlaup at Spean Bridge) occurred in only c.135 years. The dates agree with cosmogenic radionuclide ages dating the formation of the Parallel Roads (eroded lake shorelines) in Glen Roy at 11 900 to 11 500 years BP (Fabel et al., 2010).

The Valve Tower links to two parallel shafts 44.8 m deep with gates at the bottom to control the water flow from Loch Treig to the Alcan/Alcoa Power station and linked Aluminium works at Fort William. It is sited on a large roche moutonnée that forms the promontory of Rubha Ceann Àird Thonnaich [NN 3432 7600]. Glacial grooving is prominent showing clearly that the ice moved down-valley towards the NNE (Figure 5.7). The loch depth (133 m in central part and some 66m here) shows that there was considerable glacial overdeepening; hence the intense glacial scouring. The bedrock consists of schistose thinly bedded semipelites with psammite beds and minor pelitic units assigned to the Leven Schist Formation (Lochaber Subgroup). Calc-silicate lenses and thin more planar ‘beds’, plus quartzofeldspathic segregations and veins, are present. The bedding is generally sub-vertical and strikes NE. Immediately to the north of the promontory the Leven Schist Formation passes down into the Loch Treig Schist and Quartzite Formation. Note that although the beds contain no recognizable sedimentary structures the stratigraphy shows that the overall sequence here youngs to the southeast. The rocks contain an early penetrative cleavage, S1, related to large- and small-scale tight to isoclinal folds, here locally refolded by upright open to tight F2 folds. Good examples of both F1 and F2 folds are readily found on the clean, glacially scoured exposure (see inside cover to field guide-Figure C2). The trace of a major F1 structure, the Treig Syncline, has been mapped in this area based on the lithostratigraphy. It is interpreted as refolded by the F2 Blackwater Synform. These structures are basically upwards and northwest facing, but dependent on the structural position of a particular outcrop relative to the fold traces, the rocks can be locally downward facing. Both F1 and F2 folds have axes that plunge gently southwest, but whereas F1 axial planes lie close to the bedding, F2 axial planes are steeply dipping. Late stage crenulations and open kink-style folding are present locally in some of the more pelitic lithologies. The related crenulation cleavage generally trends roughly E–W and dips steeply northwards. Note that F1, F2, etc fold structures in this area do not correspond directly with F1, F2 elsewhere, e.g. close to the Highland Border.

We will traverse anticlockwise around the rocky peninsula, noting the drape of till on its eastern side. On its northeastern side the beds are more chlorite-rich and pelitic with some actinolite-rich bands. These are the basal units of the Leven Schist Formation. Northwards across the small bay are good exposures of garnetiferous pelitic schists of the Loch Treig Schist and Quartzite Formation.

Kinlochlaggan

We return eastwards along the A 86 past Loch Laggan to park by the village hall at Kinlochlaggan [NN 5464 8976]. A short distance to the east at the roadside (c.60 m, **Take care on main road**) is a glacially scoured outcrop of quartzite and psammite of the Kinlochlaggan Quartzite. This unit is part of a near-vertical Appin Group succession that strikes NNE, forming part of the Geal Charn–Ossian Steep Belt (Figure 5.9). Here, the beds lie on the WNW limb of the Kinlochlaggan Syncline, a tight structure that can be traced for some 20 km to the southwest and 15 km to the northeast. The quartzite is strongly deformed over much of its outcrop, but forms a remarkably coherent marker unit; its hinge zone (low strain) is well-exposed a kilometre southwest of Aonach Beag around [NN

434 735]. It is assigned to the Lochaber Subgroup, and show lithological similarities to the Binnein Quartzite, developed in the Loch Leven area. At several localities along its outcrop length the quartzite contains numerous clasts; Treagus (1969, 1981) termed this lenticular pebbly unit the Kinlochlaggan Boulder Bed and interpreted it as glacial in origin. At Kinloch Laggan he recorded several thousand 'stones' over a 20 m thick interval. However, most lay in the size range 3–30 mm, with only 20 in the range 8–10 cm, with very few larger clasts. Alkali granite is the dominant lithology (c.75%), but many 'clasts' are merely feldspar grains; the remainder include quartzite, pelite and semipelite. The clasts are matrix-supported. Evans and Tanner (1996) proposed that the stratigraphical succession within the Kinlochlaggan 'Syncline' was inverted and thus the 'Boulder Bed' was equivalent to the Port Askaig Tillite Formation (basal Islay Subgroup). Their model and revised stratigraphical correlation have attracted little support. The 'Boulder Bed' lacks features characteristic of typical diamictites, and its quartzite/psammite matrix and restricted occurrence at or near the top of the quartzite unit, all suggest it is better interpreted as a slumped unit containing coarse detritus, perhaps representative of the exposed basement.

The type locality at Kinloch Laggan is now somewhat weathered and obscured by moss and lichen, making it difficult to find the 40 cm x 16 cm granite 'boulder' illustrated by Robertson (Site 9 in Leslie et al., 2013). The Kinlochlaggan Quartzite here is some 150–200 m thick and it overlies the Aonach Beag Semipelite Formation with gradational contact. It is in turn overlain eastwards by metalimestones, calc-silicate rocks and schistose semipelites and pelites. These units, which form part of the Coire Cheap Formation, are exposed in the old quarries by the lime kiln at [NN 5483 8973]. They have been assigned to the Ballachulish and/or Blair Atholl subgroups. Note that the Geal Charn–Ossian Steep Belt is offset in several places in this area by the Markie, Creagan Liatha and Inverpattack faults (Figure 5.9). These NNE–and N–trending faults show evidence of sinistral displacement, locally combined with downthrow to the west.

Coul Farm, Blargie [NN 5874 9437]

From Kinloch Laggan return northeastwards on the A 86 until you reach the village of Laggan where you turn sharply west onto a minor road that leads to the Spey dam and Garva Bridge. After c.2.5 km turn right up a long straight tree-lined drive across the Spey flood plain leading to Coul Farm [NN 5890 9402]. Request permission to park at the farm. A track leads northwest into some poorly drained pasture dotted with numerous glaciated rock outcrops. The outcrops form part of the Laggan Inlier, which here exposes some of the basement Badenoch Group and parts of the Grampian and Appin Group successions (Dalradian) (Figure 5.9). The inlier is effectively a NNE extension of the Geal Charn–Ossian Steep Belt. The hill that overlooks the farm to the northeast is Blargie Craig, where sheared gneissose psammites, semipelites and quartzites of the Glen Banchor Subgroup (Badenoch Group) are cut by veins of pegmatitic granite from which muscovite 'books' have yielded Rb-Sr ages of c.750 Ma (Piasecki and van Breemen, 1983).

The area just north of Coul Farm show a complex pattern of sheared, interfolded and faulted basement and cover rocks. The Creag Liath Psammite Formation and the underlying An Stac Semipelite Formation, the uppermost units of the Glen Banchor Subgroup are in contact with the Aonach Beag Semipelite Formation (Lochaber Subgroup). The overall pattern of lithological units and hence their structural relationships can only be deciphered when a larger area is mapped in detail. Thus the unconformable cover-basement contact exposed here at [NN 5874 9437] is rather cryptic (Figure 5.10). The Blargie Craig GCR site described by Smith and Robertson (Site 5 in Leslie et al., 2013) includes the Coul Farm outcrops as well as more extensive outcrops of the basement gneissose rocks on Blargie Craig and the units of the Appin Group present here. These include metalimestones of the Coire Cheap Formation, which have been quarried formerly on a small scale higher up the hillside (grassy area).

From Coul Farm retrace your route to Laggan and turn right onto the A86. After crossing the bridge

over the Spey, turn left onto the A889 to Dalwhinnie and return to Kindrogan.

Appendix — The Lochaber Hydroelectric Scheme

The Lochaber Water-Power Scheme was the third hydroelectric scheme and related aluminium works built by the British Aluminium Company, following Foyers (completed 1896) and Kinlochleven (completed 1909). The initial idea (1917) was to divert water from Loch Laggan to Loch Treig, and thence by an 11 km long tunnel to feed a second power house and an additional aluminium factory at Kinlochleven. Following strong local opposition to this proposal, a revised scheme was formulated. The site of the new facility was moved to Fort William, with the water being transferred from the northern end of Loch Treig by a 24 km long aqueduct tunnel defining a rough horseshoe trajectory beneath the Grey Corries and Ben Nevis massif. The scheme was approved by Act of Parliament in 1921 and constructed between 1924 and 1934 (Halcrow, 1931). Engineers for the scheme were C S Melk (died 1923) and W T Halcrow, and the contractors were Balfour Beatty & Co. Ltd. The cost of the main Laggan-Treig scheme was some £3 million. The top water level in Loch Laggan (250 m above OD) was not altered, but to augment water storage capacity a concrete gravity-section dam was built some 7 km below its natural outlet at [NN 3725 8089]. This Laggan dam, 213 m long and 52 m high, has a slight curvature and 24 segmental arches that carry a roadway giving it an elegant appearance. Its outlet employs an innovative siphon valve system to automatically control the top water level, but it also has a concrete spillway for times of flood. The reservoir is linked to Loch Treig by a tunnel 4.6 m diameter and 4.4 km long. The Treig dam was one of the earliest examples of the rock and earth-fill construction method, but it has a concrete core and protective slabs on its downstream side, and granite pitching on its upstream slope. The dam and related portals, valve tower, etc were built between 1929 and 1934. The dam is c.122 m long and raised the top water level of Loch Treig by 10.7 m to 249.6 m above OD, just 0.3 m below the level of the Laggan reservoir. It necessitated a diversion of the West Highland railway line for some 2.2 km close to the dam. The main aqueduct tunnel (also 4.6 m diameter) runs from Loch Treig starting at some 44.8 m below the Valve Tower and terminating at the surge chamber on the northwestern flank of Ben Nevis, from where steel pipes feed the generating station below. The aqueduct also taps 11 streams that drain the Grey Corries and Ben Nevis massif by means of intake-dams, diversion channels, conduits and shafts, thereby augmenting the water supply and power capability by 16%. Note that additional works involving the construction of the Spey Dam and the related diversion canal/tunnel were carried out in 1943 to capture the headwaters of the River Spey and thus further increase the capacity of the scheme. The Lochaber Aluminium Smelter, now owned by Rio Tinto Alcan, currently manufactures some 42 000 tons of aluminium ingots annually, making it one of the smallest aluminium smelting facilities in the world. Without its now 80 year-old hydroelectric scheme it would not be economically viable. The main aqueduct tunnel and related works were serviced in 2014.

File:GHFGfig5.1.jpg

Figure 5.1 Stratigraphical correlations in the Northern Grampian Highlands (after Smith et al., 1999). Thicknesses are relative but not to scale. Blank areas in columns indicate stratigraphical breaks.
Abbreviations: AB Aonach Beag Semipelite Fm, ACH

Achneim Striped Psammite Fm, AD Ardair Semipelite Fm, AP Appin Group, undivided, BAS Ben Alder succession, BSZ Blargie Shear-zone, CC Coire Cheap Semipelite Fm, CM Creag Meagaidh Psammite Fm, CNL Coire nan Laogh Semipelite Fm, CS Clachaig Semipelite Fm, DRS Drumochter succession, DS Dava succession, EF Eilde Flag Formation, EL Elrick Formation, ESZ Eilrig Shear-zone, FSSZ Flichity — Slochd Shear-zone, GB Glen Buck Psammite Fm, GBS Glen Banchor succession, GS Glenshirra Subgroup (undivided), IL Inverlair Psammite Fm, K Kincraig Formation, KLQ Kinlochlaggan Quartzite Fm, LL Loch Laggan Psammite Fm, LSZ Lochindorb Shear-zone, LTQ Loch Treig Schist and Quartzite Fm, NB Nethybridge Fm, PT Pitmain Semipelite Fm, PY Pityoulish Semipelite Fm, RS Ruthven Semipelite Fm, STS Strathtummel succession, TB Tarff Banded Semipelite Fm, TP Tormore Psammite Fm (from Leslie et al., 2013).

File:GHFGfig5.2.jpg

Figure 5.2 Sketch map showing the rift basins, bounding lineaments and basement highs interpreted as present during deposition of Grampian group sediments in the northern Grampian Highlands (after Smith et al., 1999). Based on a simplified geological map after restoration and removal of major faults and intrusions. Solid linework in the basins shows the boundaries of the main subgroups. Abbreviations: MPH Meall Ptarmigan High, SOL Strath Ossian Lineament. (from Leslie et

al., 2013).

File:GHFGfig5.3.jpg

Figure 5.3 Psammite and semipelite of the Loch Laggan Psammite Formation showing well-defined bedding, sedimentary structures and calc-silicate lenses of probable diagenetic origin. Note the cleavage and muscovite in the semipelite beds. Cross-cut by discordant pegmatitic granite vein.

File:GHFGfig5.4a.jpg

Figure 5.4a Measured sedimentary logs in the Loch Laggan Psammite Formation from a) Rubha na Magach [NN 4618 8492] and b) lochside exposures at [NN 4653 8516].

Note the crude thinning and fining-upward cycles from thick- bedded psammite + micaceous psammite + semipelite up to more thinly bedded micaceous psammite + semipelite units. Log a) is c. 50m higher in the stratigraphy than Log b). (from Leslie et al., 2013).

File:GHFGfig5.4b.jpg

Figure 5.4b Typical complete Bouma sequence.

File:GHFGfig5.5.jpg

Figure 5.5 Map of the SE part of the Glen Roy district (Sheet 63W) showing the regional structures in Grampian Group rocks in the SW part of the Corrieyairack Basin in relation to the Corrieyairack and Strath Ossian plutons and later faults. The cross-section (A–B) shows the open nature of the Loch Laggan

Antiform and the more complex structural geometry of the Geal Charn-Osssian Steep Belt (SE corner). (from Key et al., 1997).

File:GHFGfig5.6.jpg

Figure 5.6 Psammites and semipelites in the transitional zone between the Loch Laggan Psammite into the Ardair Semipelite formations. Note the greater proportion of pelitic material, regular bedding, and prominent calc-silicate layers. Moy–Craigbeg road cutting around [NN 4128 8219].

File:GHFGfig5.7.jpg

Figure 5.7 Glacial grooving on south end of the large roche moutonee at the Rubha Ceann Aird Thonnaich, Loch Treig around [NN 34336 7596].

File:GHFGfig5.8a.jpg

Figure 5.8a a) Map showing the regional fold and ductile thrust structures in the Glen Roy district (Sheet 63W) west of the Corrieyairack and Strath Ossian granitic plutons.

File:GHFGfig5.8b.jpg

Figure 5.8b b) Cross-section along line 2 showing the main F1 and F2 structures interpreted in the SW part of the Glen Roy district (from Key et al., 1997).

File:GHFGfig5.9.jpg

Figure 5.9 Simplified geological map of the NE part of the Geal Charn–Ossian Steep Belt showing the Kinlochlaggan and Blargie Craig

localities (from Leslie et al., 2013).
File:GHFGfig5.10 P611930.jpg
Figure 5.10 Glacially scoured crag that exposes the contact between the Aonach Beag Semipelite Formation (Appin Group) (left) and the Creag Liath Psammite of the Glen Banchor Subgroup (Badenoch Group) (right). The hammer marks the line of the inferred unconformity. 350 m NNW of Coul Farm, Blargie at [NN 5874 9837] (Photo: BGS, P611930).

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