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## BGS Land Survey photographs

Photographs taken during the geological survey of north-west Scotland. "B" photographs = Full Plate; "C" photographs = Half Plate. "D" photographs = Survey photographs taken well after the primary survey, mostly large format film, earlier photos are B&W, later in colour. Descriptions and images © UKRI.

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### **[Sheet 61 Arisaig](#)**

[P217282](#) C03625 Western end of Loch Morar at outlet of river Morar. Looking N. Panorama: moraine extends between loch and river and is correlated with lower raised beach at 55 ft. O.D. to left. [NM 6850 9250]

[P217283](#) C03626 Western end of Loch Morar at outlet of river Morar. Looking N. Panorama: moraine extends between loch and river and is correlated with lower raised beach at 55 ft. O.D. to left. [NM 6850 9250]

[P217284](#) C03627 View of Loch Morar. Looking E. from near Morar. Panorama: moraine, as C3625-C3626. Near hills are schists of Sub-Moine Series of Morar. [NM 6850 9250]

[P217285](#) C03628 View of Loch Morar. Looking E. from near Morar. Panorama: moraine, as C3625-C3626. Near hills are schists of Sub-Moine Series of Morar. [NM 6850 9250]

[P217286](#) C03629 View of Loch Morar. Looking E. from near Morar. Moraine, as C3625-C3626. Near Hills are schists of Sub-Moine Series of Morar. [NM 6850 9250]

[P002513](#) C03630 A view of Mallaig Harbour, looking south-west, Inverness-shire. Rocks in the foreground belong to the metasedimentary Morar Striped and Pelitic Schists of the Moine series. The foreground and the houses on the left are on

the 25 ft. raised beaches. Behind the houses there are higher raised beaches. [NM 6750 9650]

[P002514](#) C03631 Mallaig Harbour and town looking south-west, Inverness-shire. The Island of Eigg in the background is composed of Tertiary plateau basalts on top of Jurassic sedimentary rocks. Rocks in the foreground belong to the metasedimentary Morar Striped and Pelitic Schists of the Moine series. [NM 6750 9750]

[P217287](#) C03632 Coast, NW of Morar. Postglacial 25 ft. beach platform cut in Upper Psammitic Schists of Moine Series of Morar. [NM 6650 9350]

[P217288](#) C03633 Coast, NW of Morar. Postglacial 25 ft. beach platform cut in Upper Psammitic Schists of Moine Series of Morar. [NM 6650 9350]

[P217289](#) C03634 W. side of Carn a' Ghobhair from E. of Mallaig. The rocks are striped and psammitic gneisses of Sub-Moine Series of Morar. [NM 7150 9650]

[P217290](#) C03635 NE point, Mallaig Harbour. Upper Striped Schists with psammitic ribs centred by calc-silicate layers. Moine Series of Morar. [NM 9750 9750]

[P217291](#) C03636 On Hillside, E. of N. end of Loch an Nostarie. Crumpled Striped Schists with folded quartz-like Sub-Moine Series of Morar. [NM 6950 9550]

[P217292](#) C03637 On Hillside, E. of N. end of Loch an Nostarie. Crumpled Striped Schists with folded quartz-like Sub-Moine Series of Morar. [NM 6950 9550]

[P217293](#) C03638 N. shore of Morar Estuary, 0.5 km. WSW of Bourblach. Laminated schists. Upper Striped Group. Moine Series of Morar. [NM 6650 9350]

[P217294](#) C03639 Coast W. of Camusdarach House. Contemporaneous fold with eroded top, overlain by false-bedded schists. Upper Psammitic Group. Moine Series of Morar. [NM 6550 9150]

[P217295](#) C03640 SE angle of Camas an Daraich Bay, 0.5 km. N. of Traigh House. False-bedding in vertical psammitic schists, Upper Psammitic Group, Moine Series of Morar. [NM 6550 9150]

[P217296](#) C03641 Coast, 0.4 km. N. of Traigh House. False-bedding in vertical psammitic schists, Upper Psammitic Group, Moine Series of Morar. [NM 6550 9050]

[P002515](#) C03642 View from left to right, Ardnish, Moidart and Ardnamurchan, looking south-west across the Sound of Arisaig from the slopes of Beasdale, South Morar. The rocks in foreground consist of gneisses of the Lewisian in the core of the large, open Morar antiform. Beyond the foreground are the younger Moine metasedimentary rocks of the Morar Division. The Lewisian is considered to be parautochthonous representing infolds of basement that has probably been transported far on the underlying Moine Thrust. Ardnish and Moidart and the east part of Ardnamurchan are also of Moine age while peninsula Ardnamurchan is a Tertiary central igneous complex. [NM 7350 8450]

[P217297](#) C03643 Shore of Loch nan Uamh, S. of Arisaig House. Pitching fold in Lower Psammitic Group, Moine Series, cut by camptonite dyke to right. [NM 6950 8450]

[P217298](#) C03644 Shore of Loch nan Uamh, S. of Arisaig House. Crumpled siliceous and pelitic gneisses of the Sub-Moine series of Morar. [NM 6950 8450]

[P217299](#) C03645 Shore of Loch nan Uamh, S. of Arisaig House. Drag fold on the reversed limb of the Morar Anticline rocks belong to Lower Psammitic Group, Moine Series. [NM 6950 8450]

[P217300](#) C03646 Shore of Loch nan Uamh, S. of Arisaig House. Drag fold in Lower Psammitic Group of the Moine Series on western limb of Morar Anticline. [NM 6950 8450]

- [P217301](#) C03647 Shore of Loch nan Uamh, S. of Arisaig House. Drag fold in Lower Psammitic Group of the Moine Series on western limb of Morar Anticline. [NM 6950 8450]
- [P217302](#) C03648 Shore of Loch nan Uamh, S. of Arisaig House. Drag fold on the reversed limb of the Morar Anticline. Closer view of folds. [NM 6950 8450]
- [P217303](#) C03649 Shore of Loch nan Uamh, S. of Arisaig House. Drag fold in Lower Psammitic Group of Moine Series on western limb of the Morar Anticline. [NM 6950 8450]
- [P217304](#) C03650 Shore of Loch nan Uamh, S. of Arisaig House. Drag fold in Lower Psammitic Group of Moine Series on western limb of the Morar Anticline. [NM 6950 8450]
- [P217305](#) C03651 Shore of Loch nan Uamh, S. of Arisaig House. Band of microcline porphyroblast schist (new feldspar rock) in Lower Psammitic Group of the Moine Series [NM 6950 8450]
- [P217306](#) C03652 Slopes above Beasdale Station, South Morar. Syncline in crumpled-Striped Group of the Sub-Moine Series. [NM 7050 8550]
- [P217307](#) C03653 Slopes above Beasdale Station, South Morar. Crumpled and striped hornblendic gneisses of the Sub-Moine Series. [NM 7050 8550]
- [P217308](#) C03654 At roadside, head of Loch nan Uamh. Lineated surface in the Outer Psammitic Group of the Sub-Moine Series. Lineation dips south-east at 45 degrees. [NM 7250 8450]
- [P217380](#) C03795 Sgurr Coire nan Gobhor, Loch Nevis. No 3 Working, Upper Bench. Showing highly inclined bands of mica-bearing pegmatite (white) and schist (grey). Opencast mica workings. [NM 7950 9650]
- [P000156](#) C03796 Sgurr Coire nan Gobhar, Loch Nevis, Knoydart. Inverness-shire. Opencast mica workings. No. 3 Working, Upper Bench. Showing highly inclined bands of mica-bearing pegmatite (white) and schist (grey). The deposit was the most extensive and valuable source of mica in the western Highlands. The quartz-rich pegmatite contained books of white mica (muscovite) up to 18 inches to two feet in diameter. Muscovite, the commonest variety of the mica group is a potassium aluminium silicate that at this location forms large crystals that split freely and yield extremely thin, uniform plates and films. [NM 7950 9650]
- [P217381](#) C03797 Sgurr Coire nan Gobhar, Loch Nevis. No 4 Working, Lower Bench. Near view of mica books in situ, 0.15 m. ruler is placed on left-hand side of an aggregate of mica books. Opencast mica workings. [NM 7950 9650]
- [P217382](#) C03798 Sgurr Coire nan Gobhar, Loch Nevis. No 4 Working, Lower Bench. Near view of mica books in situ, 0.15 m. ruler is placed on left-hand side of an aggregate of mica books. Opencast mica workings. [NM 7950 9650]
- [P217383](#) C03799 Sgurr Coire nan Gobhar, Loch Nevis. No 4 Working, Lower Bench. Still nearer view of mica books in situ. Opencast mica workings. [NM 7950 9650]
- [P217384](#) C03800 Sgurr Coire nan Gobhar, Loch Nevis. No 4 Working, Upper Bench. Near view of pegmatite body containing mica books. Opencast mica workings. [NM 7950 9650]
- [P217385](#) C03801 Sgurr Coire nan Gobnar, Loch Nevis. No 4 Working, Upper Bench. General view of pegmatite mass. See C3800 for near view of mica-bearing body below pointer held by workman. Opencast mica workings. [NM 7950 9650]
- [P217386](#) C03802 Sgurr Coire nan Gobhar, Loch Nevis. No 4 Working, Upper Bench. Near view of mica-bearing pegmatite rock. Note books of mica in situ to left of photograph. [NM 7950 9650]
- [P000157](#) C03803 Sgurr Coire nan Gobhar, Loch Nevis, Knoydart. Inverness-shire. Opencast mica workings. Samples of mica books after rough dressing (rough cobbled) as sent for processing at the Pitlochry Depot. (Note 0.15 m. scale at

base.) A photograph clearly illustrating the nature of the muscovite mica. Mica was used in industry in two forms; in a finely divided or pulverized form called 'ground mica' produced from mine waste or shop scrap, or sheet mica as in the photograph. The proportion of usable mica extracted is small, up to two per cent of the total rock excavated. A further 65–90 per cent is lost due to natural imperfections and damage to the 'books' during extraction. [NM 7950 9650]

[P000158](#) C03804 Sgurr Coire nan Gobhar, Loch Nevis, Knoydart. Inverness-shire. Opencast mica workings. Samples of mica books after rough dressing (rough cobbled) as sent for processing at the Pitlochry Depot. (Note 0.15 m. scale at base.) After mining the purpose of the Rough Dressing Station on the lochside at Knoydart was to reduce the mica books in thickness by splitting and then cut out the more obvious defects. The Knoydart production was brought down the hillside by pony, carried by launch to Mallaig and then by rail to Rannoch. At Rannoch it was sent by bus to Pitlochry. Sheet mica for industrial use was processed into one of two types: 'sheets' from one inch square upwards and from a few thousandths of an inch to one-eighth of an inch thick flat and free of flaws, or 'splittings' these were usually less than one inch square and one thousandth of an inch thick. Splittings were cemented together with shellac to form mica boards. [NM 7950 9650]

[P217387](#) C03805 Sgurr Coire nan Gobhar, Loch Nevis. Pegmatite vein in No 1 (East) Quarry No 2 Bench. Bar held by man is at right-angles to vein which is inclined steeply to left. Opencast mica workings. [NM 7950 9650]

[P217388](#) C03806 Sgurr Coire nan Gobhar, Loch Nevis. No 1 Working. General view of Upper Bench (abandoned). Opencast mica workings. [NM 7950 9650]

[P000159](#) C03807 Sgurr Coire nan Gobhar, Loch Nevis, Knoydart. Inverness-shire. Opencast mica workings. No. 1 Working. West end of lower bench showing workmen excavating mica books. The photograph illustrates the small scale of the workings. Due to its high value in proportion to its weight and a value based on quality rather than quantity and its fragility, the mineral is mined with extreme care. The workmen can be seen wielding picks, shovels and crowbars. Deposits tend to be small and irregular and the mica is unevenly distributed throughout the deposit. No estimates of reserves can be made beyond the amounts actually in sight from day to day. [NM 7950 9650]

[P002545](#) C03920 Loch Eilt, a view from the north side of the loch, Inverness-shire. The alluvial fan or delta of the Allt a' Choire Bhuidhe. The mechanical load of the river is carried to the loch where, when the velocity suddenly decreases, the river is unable to continue carrying the load so it is deposited as deltaic sediments usually in a triangular shape with the apex upstream. The lower parts of the delta are built outwards into the loch by successive tipping of the load in that direction. The loch is close to being split into two.

[P219047](#) D01568 SE angle of Camas an Daraich Bay. False-bedding preserved in the Moine Series. False-bedding in vertical psammitic schists, Upper Psammitic Group, Moine Series of Morar. [NM 6590 9110]

[P219056](#) D01584 Road-cutting at W. end of Loch Eilt on A830. Tight isoclinal in the Morar striped and pelitic group. (Also modelled in the rock-face entrance-facade of the 'Story of the Earth' exhibition in the Geological Museum.) [NM 7900 8280]

[P219254](#) D01922 NW end of Loch Eilt. Tight folding in striped psammite and pelite. [NM 7960 8280]

## **Sheet 70 Minginish**

[P214103](#) B00149 Between Loch Coruisk and Glen Sligachan, Cuillin Hills. Strongly banded structure and felspathic veins in gabbro in Tertiary Igneous Series, Druim an Eidhne. [NG 4500 2500]

[P214104](#) B00150 Between Loch Coruisk and Glen Sligachan, Cuillin Hills. Strongly banded structure and felspathic veins in gabbro in Tertiary Igneous Series, Druim an Eidhne. [NG 4500 2500]

[P214105](#) B00151 Druim an Eidhne, between Loch Coruisk and Glen Sligachan, Cuillin Hills. Strongly banded structure and felspathic veins in gabbro in Tertiary Igneous Series (nearer view). [NG 4500 2500]

[P214106](#) B00152 Druim an Eidhne, between Loch Coruisk and Glen Sligachan, Cuillin Hills. Strongly banded structure and felspathic veins in gabbro in Tertiary Igneous Series (nearer view). [NG 4500 2500]

[P214107](#) B00153 Druim an Eidhne, between Loch Coruisk and Glen Sligachan, Cuillin Hills. Strongly banded structure and felspathic veins in gabbro in Tertiary Igneous Series (banding less marked). [NG 4500 2500]

[P214108](#) B00154 Druim an Eidhne, between Loch Coruisk and Glen Sligachan, Cuillin Hills. Strongly banded structure and felspathic veins in gabbro in Tertiary Igneous Series (banding less marked). [NG 4500 2500]

[P214109](#) B00155 Druim an Eidhne, between Loch Coruisk and Glen Sligachan, Cuillin Hills. Strongly banded structure and felspathic veins in gabbro in Tertiary Igneous Series (banding less marked). [NG 4500 2500]

[P214110](#) B00156 Between Loch Coruisk and Sligachan, Cuillin Hills. Banded structure in gabbro, Druim an Eidhne. [NG 4500 2500]

[P214111](#) B00157 Between Loch Coruisk and Glen Sligachan, Cuillin Hills. Banded structure showing curvature in gabbro, Druim an Eidhne. [NG 4500 2500]

[P214112](#) B00158 Between Loch Coruisk and Glen Sligachan, Cuillin Hills. Granulitic and coarsely foliated gabbro traversed by later veins of felspathic gabbro, Druim an Eidhne. [NG 4500 2500]

[P214113](#) B00159 Between Loch Coruisk and Glen Sligachan, Cuillin Hills. Dykes of spherulitic felsite cutting banded gabbro, Druim an Eidhne. [NG 4500 2500]

[P214114](#) B00160 Between Loch Coruisk and Glen Sligachan, Cuillin Hills. Dykes of spherulitic felsite cutting banded gabbro, Druim an Eidhne. [NG 4500 2500]

[P214115](#) B00161 Between Loch Coruisk and Glen Sligachan, Cuillin Hills. Dyke of granophyre (1.83–3.05 m. broad) proceeding from the main mass and intersecting the gabbro, Druim an Eidhne. [NG 4500 2500]

[P214116](#) B00162 Between Loch Coruisk and Glen Sligachan, Cuillin Hills. Weathered surface of acid dyke in the gabbro, showing tortuous flow-structures, Druim an Eidhne. [NG 4500 2500]

[P214117](#) B00163 Between Loch Coruisk and Glen Sligachan, Cuillin Hills. Weathered surface of acid dyke in the gabbro, showing crowded spherulites, Druim an Eidhne. [NG 4500 2500]

[P214118](#) B00164 Druim an Eidhne, between Loch Coruisk and Glen Sligachan, Cuillin Hills. Weathered surface of acid dyke in the gabbro, showing crowded spherulites. [NG 4500 2500]

[P001703](#) B00166 Cuillin Hills, looking up Loch Coruisk, Skye, Inverness-shire. Mountains composed of gabbro, cut by cone-sheets and dykes. Deep glacially-eroded basin. The Cuillin Hills are composed principally of layered gabbro, and minor ultrabasic rocks (mainly on Sgurr Dubh), formed by precipitation of crystals at the base of a magma chamber in the roots of a volcano. Several magma chambers were involved, whose products form intrusions which successively cut each other. The gabbros and ultrabasic rocks were intruded by a series of doleritic cone-sheets dipping towards Loch Coruisk, and by many subvertical dykes, mostly south-east-trending, but some radiating from the Cuillin centre. [NG 4850 2050]

[P001704](#) B00167 Cuillin Hills, Skye, Inverness-shire. Mountains composed of gabbro, looking up Loch Coruisk. Ice-smoothed surfaces. The Cuillin Hills are composed principally of layered gabbro, and minor ultrabasic rocks (mainly on Sgurr Dubh), formed by precipitation of crystals at the base of a magma chamber in the roots of a volcano. During the Pleistocene glaciations, the basin of Loch Coruisk was excavated by glaciers, and extends well below sea level. Ice movement left many striated rock platforms, e.g. that in the foreground. [NG 4850 2050]

[P001705](#) B00168 From Druim Hain, Cuillin Hills, Skye, Inverness-shire. Mountains composed of gabbro, An Caisteal (left), Sgurr na h-Uamha (near centre), Sgurr nan Gilleann (right). The Cuillin Hills are composed principally of layered



gabbro, and minor ultrabasic rocks (mainly on Sgurr Dubh), formed by precipitation of crystals at the base of a magma chamber in the roots of a volcano. During the Loch Lomond Stadial 10,000–11,000 years ago, the Cuillin ridge stood above the glaciers filling the Coruisk basin. During this period, frost-shattering intensified the sharpness of the main ridge, as exemplified by the Pinnacle ridge of Sgurr nan Gillean (right). [NG 4740 2465]

[P214119](#) B00169 NW side of Sgurr nan Gillean, Cuillin Hills. Inclined sheets of dolerite cutting gabbro. [NG 4720 2530]

[P001706](#) B00170 View from Loch nan Eilean near Sligachan, looking south towards Marsco (left), and Sgurr nan Gillean (right), Skye, Inverness-shire. The distant mountains are composed of granite (left) and gabbro (right). Moraine-dammed lochan in foreground. Marsco (left), part of the western Red Hills Centre, consists predominantly of granite, but some gabbroic material is present. The main Cuillin ridge (right) consists of layered gabbros cut by moderately-dipping cone-sheets and vertical dykes of basaltic composition. The Bhasteir Tooth is well seen (centre of ridge), but the Pinnacle ridge of Sgurr nan Gillean is end-on and lost in front of the main peak. In the foreground, hummocky glacial deposits have trapped water in many small lochans. [NG 4900 2525]

[P001707](#) B00171 Glen Varragill (north of Sligachan), Skye, Inverness-shire. Looking south towards Glamaig (centre) and Beinn Dearg Mheadhonach (right). Moraines. Granite hills in the distance. Mounds of poorly-sorted glacial deposits were deposited during the retreat of glaciers during the latest glaciation. Areas between mounds largely filled with peat. In the distance Glamaig and Beinn Dearg Mheadhonach largely formed of granite intruded in the western Red Hills Centre. The granite weathers to small blocks which collect as scree and result in rounded hill shapes, contrasting with the angular gabbro hills of the Cuillins. However, the ridge of Glamaig (peaked hill in centre) consists of a remnant of basalt lava, intruded by the granite. [NG 5180 2875]

[P216259](#) C02253 W. of Sligachan. Morainic mounds and terraces. [NG 4850 2950]

[P216260](#) C02254 W. of Sligachan. Morainic mounds and terraces. [NG 4850 2950]

[P216261](#) C02255 Allt Daraich, Sligachan. Stream cutting gorge in dyke intrusive into plateau basalts. [NG 4950 2950]

[P216262](#) C02256 Allt Daraich, Sligachan. Stream cutting gorge in dyke intrusive into plateau basalts. [NG 4950 2950]

[P216263](#) C02257 Allt Daraich, Sligachan. Stream cutting gorge in dyke intrusive into plateau basalts. [NG 4950 2950]

[P002274](#) C02258 From Raasay, looking south towards the distant mountains of Skye, Inverness-shire. A view across the Tertiary central igneous complex. The gabbros and ultrabasic rocks of the Cuillins on the left and Blaven range on the right were the first plutonic rocks to be emplaced in a broad oval mass 9–13 km. wide. Following this the centre of activity shifted to the north-east which gave rise to the granites of the Western Red Hills of which Glamaig and Beinn Dearg Mhor in the centre of the photograph are formed (though parts of Glamaig including the summit are formed of Tertiary lavas). [NG 5250 3050]

[P002275](#) C02259 From Sligachan, Cuillin Hills, Skye, Inverness-shire. Sgurr nan Gillean, a mountain composed of gabbro. The great mountain group of central Skye is eroded out of Tertiary plutonic masses that form a central igneous complex. The complex consists of an arcuate mass of ultrabasic rocks in the centre that is enveloped and intruded by the gabbro, itself a complex of cone-sheets and dykes. This was followed by the acid intrusions of the Red Hills. Sgurr nan Gillean is part of the gabbro complex. [NG 4850 2950]

[P002276](#) C02260 The Pinnacle ridge of Sgurr nan Gillean, Cuillin Hills, Sligachan, Skye, Inverness-shire. A mountain composed of the gabbro sub-complex of a greater Tertiary plutonic central igneous complex that covers both the Cuillins and the Red Hills. The notches and gullies, with other vertical fissures are due to preferential erosion along the less resistant intrusive dykes compared with the more resistant gabbro into which they are intruded. The outcrops of the inclined sheets of dolerite, the cone-sheets are seen running nearly horizontally along the steep slopes. [NG 4750 2550]

[P002277](#) C02261 Bhasteir Tooth', north-west of Sgurr nan Gillean, Cuillin Hills, Sligachan, Skye, Inverness-shire. Cliffs of gabbros with inclined cone-sheets of dolerite, part of the Tertiary plutonic central igneous complex that covers both the

Cuillins and the Red Hills. [NG 4650 2550]

[P216264](#) C02262 Bhasteir Tooth', NW of Sgurr nan Gillean, Cuillin Mountains. Cliffs of gabbros with inclined sheets of dolerite. [NG 4650 2550]

[P216265](#) C02263 Coire na Creiche, Cuillin Mountains, 6.4 km. SSW of Sligachan. Mountains of gabbros with inclined sheets of dolerite. [NG 4450 2550]

[P216266](#) C02264 Coire na Creiche, Cuillin Mountains, 6.4 km. SSW of Sligachan. Mountains of gabbros with inclined sheets of dolerite. [NG 4450 2550]

[P216275](#) C02275 An Garbh-choire, SW of Loch Coruisk, 9.7 km. S. of Sligachan. Banded structure in the peridotite group of intrusions in the Cuillins. [NG 4650 2050]

[P216276](#) C02276 An Garbh-choire, SW of Loch Coruisk, 9.7 km. S. of Sligachan. Brecciated appearance, due to xenolithic structure, in the peridotite group of intrusions in the Cuillins. [NG 4650 2050]

[P216277](#) C02277 An Garbh-choire, SW of Loch Coruisk, 9.7 km. S. of Sligachan. Brecciated appearance, due to xenolithic structure, in the peridotite group of intrusions in the Cuillins. [NG 4650 2050]

[P216278](#) C02278 An Garbh-choire, SW of Loch Coruisk, 9.7 km. S. of Sligachan. Veined structure in the peridotite group of intrusions in the Cuillins. [NG 4650 2050]

[P216279](#) C02279 An Garbh-choire, SW of Loch Coruisk, 9.7 km. S. of Sligachan. Veined structure in the peridotite group of intrusions in the Cuillins. [NG 4650 2050]

[P216280](#) C02280 N. face of Preshal More, Talisker, 5.6 km. N. of Loch Eynort. Columnar dolerite sill. [NG 3350 3050]

[P216281](#) C02281 N. face of Preshal More, Talisker, 5.6 km. N. of Loch Eynort. Columnar dolerite sill showing curvature of columns. [NG 3350 3050]

[P216282](#) C02282 N. face of Preshal More, Talisker, 5.6 km. N. of Loch Eynort. Columnar dolerite sill showing curvature of columns. [NG 3350 3050]

[P216283](#) C02283 N. face of Preshal More, Talisker, 5.6 km. N. of Loch Eynort. Columnar dolerite sill showing curvature of columns. [NG 3350 3050]

[P216284](#) C02284 Preshal Beag, 1 1/2 ml. S. of Talisker, 4.0 km. NNW of Loch Eynort. Columnar dolerite sill. [NG 3150 2750]

[P216285](#) C02285 Preshal Beag, 1 1/2 ml. S. of Talisker, 4.0 km. NNW of Loch Eynort. Columnar dolerite sill. [NG 3150 2750]

[P216720](#) C02870 The Cuillins, Skye (Inverness-shire). Gabbro mountains.

[P216721](#) C02871 The Cuillins, Skye (Inverness-shire). Gabbro mountains.

[P002532](#) C03895 The Cuillin Hills, Skye, looking north-west from Tarskavaig. A distant view of the Tertiary central igneous complex. The mountains consisting mainly of gabbro, are the dissected root of a great volcano. The great mountain group of central Skye is eroded out of the Tertiary plutonic mass that consists of an arcuate mass of ultrabasic rock enveloped and intruded by the gabbro. This was succeeded by the acid masses of the Red Hills. This complex is one of several within the British Tertiary Volcanic Province when volcanism extended over a period of 12 million years and on the whole, the life-span of individual central complexes was short at about two to three million years.

[P000891](#) D02544 Oblique aerial view from above Glen Brittle, Skye looking at the western edge of the Cuillins Complex. The Bealach a' Mhaim is on the centre left, the conical hill on the south-east of Loch Sligachan is Glamaig. Roughly, the area to the left of the Bealach a' Mhaim is composed of Lower Tertiary lavas, those to the right are gabbros of the Cuillins Complex. Glamaig, part of the Western Red Hills complex is composed of the Glamaig Granite with overlying Lower Tertiary lavas near the summit. The complex is approximately 8 km. in diameter, dipping at 10–20 degrees inwards at the edges rising to 60–70 degrees at the younger intrusions at the centre. The north-east part of the complex was destroyed by the later intrusions of the granitic complexes of Western Red Hills and Srath na Creitheach. [NG 4350 2650]

[P000892](#) D02545 Oblique aerial view from above Sgurr Thuilm, the Cuillins Igneous Complex, Skye, looking along the outer margin towards the main Cuillin ridge. The valley on the left is the Coire na Creiche. Sgurr Thuilm, in the right foreground is composed of the Outer Marginal Gabbros and Eucrites. The vertical gashes in the cliff face are igneous dykes that are preferentially eroded due to their relative softness compared with the host rock into which they are intruded. [NG 4350 2650]

[P000893](#) D02546 Oblique aerial view of Sgurr nan Gobhar, Cuillins, Skye. Part of the Cuillin Complex, a multi-centred major igneous complex that is found in this part of Skye. Sgurr nan Gobhar ridge showing a well-developed arete. The gashes in the slope in the foreground are caused by weathering along dykes, minor igneous intrusions that occur in great numbers across the Cuillins. Note the very well-developed scree slopes. [NG 4200 2250]

[P000894](#) D02547 Oblique aerial view of Sgurr nan Gobhar, Cuillins, Skye. Part of the Cuillin Complex, a multi-centred major igneous complex that is found in this part of Skye. Close-up of the Sgurr nan Gobhar ridge showing a well-developed arete and the development of scree slopes. [NG 4250 2150]

[P000895](#) D02548 Oblique aerial view of Sgurr nan Gobhar, Cuillins, Skye, taken from Coire na Banachdich one mile east of Glenbrittle House. Close-up of the Sgurr nan Gobhar ridge showing a well-developed arete and the development of scree slopes. The formation of scree below the steep rock of the upper slopes is characteristic of the area. [NG 4250 2150]

[P000896](#) D02549 Oblique aerial view of Sgurr nan Gobhar, Cuillins, Skye, taken from Coire na Banachdich one mile east of Glenbrittle House. In the distance, to the north is an area of lower relief composed of Lower Tertiary lavas. Sgurr nan Gobhar is part of the gabbroic Cuillins Complex. This photograph shows the very well-developed scree slopes, a feature that is characteristic of the area. [NG 4360 2250]

[P000897](#) D02550 Oblique aerial view of Coire Lagan, Cuillins, Skye showing the glaciated corrie and corrie loch in the hanging valley. Sgurr Dearg on the left, Sgurr Mhic Choinnich and Sgurr Alasdair on the right. The area is part of the Cuillins Igneous Complex and is composed of mainly gabbros. A superb example of the development of scree in a 'stone chute' as they are called locally, can be seen on the left wall of the corrie. This one is the Sgurr Dearg Stone Chute. [NG 4400 2050]

[P000898](#) D02551 Oblique aerial view of Loch Coir a' Ghrunnda, Cuillins, Skye. Moving up the slope there are the Outer Marginal Gabbros and Eucrites, then the Border Group moving into the Outer and Inner Layered Allivalite Series while right on the top of Sgurr Alasdair are intrusive Tholeiites. Layering can be seen below the rock lip and above the lochan. Sgurr Sgumain, Sgurr Alasdair and Sgurr nan Eag on the ridge behind. All are part of the Tertiary igneous Cuillin Complex. The loch is a classic corrie with a rock lip holding back the water. [NG 4470 1930]

[P000899](#) D02552 Oblique aerial view of Coire nan Laogh, Cuillins, Skye. Glaciated corrie in the south part of the Cuillins Complex, a Tertiary part-layered, gabbroic, plutonic igneous complex. Layering can just be seen on some of the rock faces. The rocks seen are mostly part of the Outer Marginal Gabbros and Eucrites and are thought to be the earliest units of the Cuillin Complex. The near-vertical gashes running up the slopes are weathered-out igneous dykes, part of a large dyke swarm that was intruded late in the history of the complex. [NG 4570 1850]

[P000900](#) D02553 Oblique aerial view of Gars-bheinn area, Cuillins, Skye. A general view - south edge of Cuillins Complex. Dyke running across foreground. View also shows a good example of scree formation. Lower Tertiary lavas intruded by the Outer Marginal Gabbros and Eucrites of the Cuillins Complex, a Tertiary part-layered, gabbroic, plutonic



igneous complex and cut by later igneous dykes like the one shown. [NG 4750 1850]

[P219574](#) D02554 S. Cuillins, Skye. Gars-bheinn and the Cuillins, layered Tertiary Igneous Gabbroic Complex. [NG 4600 1750]

[P000901](#) D02555 Oblique aerial view of the eastern slopes of Gars-bheinn area in the foreground looking north to the main Cuillin ridge with Sgurr nan Gillean on the right, Skye. The foreground is at the outside edge of the complex. The outcrop of the Outer Marginal Gabbros and Eucrites of the Cuillins Complex seen in the foreground curves round in a semi-circle to the west, outcropping on the far side of the ridge all the way round to the north side of Sgurr nan Gillean where it stops in contact with the later intruded Western Red Hills Complex. The complex is approximately 8 km. in diameter, dipping at 10–20 degrees inwards at the edges rising to 60–70 degrees at the younger intrusions at the centre. The north-east part of the complex was destroyed by the later intrusions of the granitic complexes of Western Red Hills and Srath na Creitheach. [NG 4750 1750]

## [Sheet 71 Glenelg](#)

[P001702](#) B00165 Bla Bheinn (Blaven) from Druim Hain, Skye, Inverness-shire. Layered gabbro cut by cone-sheets and dykes. The ridge from Bla Bheinn (right) to Garbh-bheinn (left) is made of layered gabbros similar to those of the Cuillins. The gabbros are cut by a series of doleritic cone-sheets, dipping gently westward to a centre near Loch Coruisk, and by many subvertical south-east-striking dolerite dykes. The lower ground in the centre-distance is underlain by an intrusion of red granophyric granite, which cuts the layered gabbro and the cone-sheets. [NG 5300 2170]

[P214669](#) C00069 On shore, W. side of Avernish promontory, Kirkton of Loch Alsh. Cliff of granulitic biotite-gneiss and hornblende schist, in thrust Lewisian gneiss. [NG 8340 2600]

[P214670](#) C00070 On shore, W. side of Avernish promontory, Kirkton of Loch Alsh. Folded granulitic biotite-gneiss and hornblende schist in thrust Lewisian gneiss. [NG 8340 2600]

[P214671](#) C00071 On shore, W. side of Avernish promontory, Kirkton of Loch Alsh. Narrow zone of sheared granulitic gneiss and hornblende schist crossing the foliation planes of the gneiss, in thrust Lewisian gneiss. [NG 8340 2600]

[P214672](#) C00072 On shore, W. side of Avernish promontory, Kirkton of Loch Alsh. Folded and sheared granulitic biotite-gneiss and hornblende schist, in thrust Lewisian gneiss. [NG 8340 2600]

[P214673](#) C00073 On shore, W. side of Avernish promontory, Kirkton of Loch Alsh. Folded and sheared granulitic biotite-gneiss and hornblende schist, in thrust Lewisian gneiss. [NG 8340 2600]

[P214674](#) C00074 On shore, W. side of Avernish promontory, Kirkton of Loch Alsh. Folded and sheared granulitic biotite-gneiss and hornblende schist, in thrust Lewisian gneiss. [NG 8340 2600]

[P214675](#) C00075 On shore, W. side of Avernish promontory, Kirkton of Loch Alsh. Breaking up of granulitic biotite-gneiss into phacoids, some of which are included in the adjoining green schist, thus forming 'crush conglomerate'. [NG 8340 2600]

[P214676](#) C00076 On shore, W. side of Avernish promontory, Kirkton of Loch Alsh. Folded granulitic biotite-gneiss and crush-conglomerate, in thrust Lewisian gneiss. [NG 8340 2600]

[P214677](#) C00077 On shore, W. side of Avernish promontory, Kirkton of Loch Alsh. Junction of folded and sheared granulitic biotite-gneiss with crush-conglomerate, in thrust Lewisian gneiss. [NG 8340 2600]

[P214678](#) C00078 On shore, W. side of Avernish promontory, Kirkton of Loch Alsh. Junction of folded and sheared granulitic biotite-gneiss with crush-conglomerate, in thrust Lewisian gneiss. [NG 8340 2600]

- [P214679](#) C00079 On shore, W. side of Avernish promontory, Kirkton of Loch Alsh. Junction of folded and sheared granulitic biotite-gneiss with crush-conglomerate, in thrust Lewisian gneiss. [NG 8340 2600]
- [P214680](#) C00080 On shore, W. side of Avernish promontory, Kirkton of Loch Alsh. Junction of folded and sheared granulitic biotite-gneiss with crush-conglomerate, in thrust Lewisian gneiss. [NG 8340 2600]
- [P214681](#) C00081 On shore, W. side of Avernish promontory, Kirkton of Loch Alsh. Junction of folded and sheared granulitic biotite-gneiss with crush-conglomerate, in thrust Lewisian gneiss. [NG 8340 2600]
- [P214682](#) C00082 On shore, W. side of Avernish promontory, Kirkton of Loch Alsh. Crush-conglomerate, showing phacoids and lenticles of gneiss in green schist, in thrust Lewisian gneiss. [NG 8340 2600]
- [P214683](#) C00083 On shore, W. side of Avernish promontory, Kirkton of Loch Alsh. Crush-conglomerate, showing phacoids and lenticles of gneiss in green schist, in thrust Lewisian gneiss. [NG 8340 2600]
- [P214684](#) C00084 On shore, W. side of Avernish promontory, Kirkton of Loch Alsh. Crush-conglomerate, showing phacoids and lenticles of gneiss in green schist, in thrust Lewisian gneiss. [NG 8340 2600]
- [P214685](#) C00085 On shore, W. side of Avernish promontory, Kirkton of Loch Alsh. Crush-conglomerate, showing rounded and phacoidal blocks of gneiss in green schist, in thrust Lewisian gneiss. [NG 8340 2600]
- [P214686](#) C00086 Shore near manse, 0.8 km. NNW of Glenelg. Rock structures, showing hornblendic gneiss intimately mixed with, and apparently injected by, streaks of pale pink feldspathic gneiss (Lewisian Gneiss Series). [NG 8220 1980]
- [P214687](#) C00087 Shore near manse, 0.8 km. NNW of Glenelg. Rock structures, showing hornblendic gneiss intimately mixed with, and apparently injected by, streaks of pale pink feldspathic gneiss (Lewisian Gneiss Series). [NG 8220 1980]
- [P214688](#) C00088 Shore near manse, 0.8 km. NNW of Glenelg. Rock structures, showing hornblendic gneiss intimately mixed with, and apparently injected by, streaks of pale pink feldspathic gneiss (Lewisian Gneiss Series). [NG 8220 1980]
- [P214689](#) C00089 Shore near manse, 0.8 km. NNW of Glenelg. Rock structures, showing hornblendic gneiss intimately mixed with, and apparently injected by, streaks of pale pink feldspathic gneiss (Lewisian Gneiss Series). [NG 8220 1980]
- [P214690](#) C00090 Shore near manse, 0.8 km. NNW of Glenelg. Rock structures, showing hornblendic gneiss intimately mixed with, and apparently injected by, streaks of pale pink feldspathic gneiss (Lewisian Gneiss Series). [NG 8220 1980]
- [P214691](#) C00091 Shore near manse, 0.8 km. NNW of Glenelg. Rock structures, showing hornblendic gneiss intimately mixed with, and apparently injected by, streaks of pale pink feldspathic gneiss (Lewisian Gneiss Series). [NG 8220 1980]
- [P214692](#) C00092 Shore near manse, 0.8 km. NNW of Glenelg. Rock structures, showing hornblendic gneiss intimately mixed with, and apparently injected by, streaks of pale pink feldspathic gneiss (Lewisian Gneiss Series). [NG 8220 1980]
- [P214693](#) C00093 Shore near manse, 0.8 km. NNW of Glenelg. Rock structures, showing hornblendic gneiss intimately mixed with, and apparently injected by, streaks of pale pink feldspathic gneiss (Lewisian Gneiss Series). [NG 8220 1980]
- [P214694](#) C00094 Shore near manse, 0.8 km. NNW of Glenelg. Rock structures, showing hornblendic gneiss intimately mixed with, and apparently injected by, streaks of pale pink feldspathic gneiss (Lewisian Gneiss Series). [NG 8220 1980]
- [P214695](#) C00095 Shore at landing-place, Glenelg. Basic (hornblendic) gneiss irregularly mixed with more acid strings (Lewisian Gneiss Series). [NG 8090 1930]
- [P214696](#) C00096 Shore at landing-place, Glenelg. Basic (hornblendic) gneiss irregularly mixed with more acid strings (Lewisian Gneiss Series). [NG 8090 1930]

[P214697](#) C00097 Shore at landing-place, Glenelg. Basic (hornblendic) gneiss irregularly mixed with more acid strings (Lewisian Gneiss Series). [NG 8090 1930]

[P214698](#) C00098 Shore at quarry, Glenelg. Lewisian gneiss with various sub-parallel pinkish bands of somewhat more acid composition. The whole rock is crossed by a second foliation. [NG 8100 1900]

[P214699](#) C00099 Shore at quarry, Glenelg. Lewisian gneiss with various sub-parallel pinkish bands of somewhat more acid composition. The whole rock is crossed by a second foliation. [NG 8100 1900]

[P214700](#) C00100 Roadside, 1.2 km. SW of Glenelg. Cliff (6.09 m. high) of Lewisian gneiss. A nearly vertical massive band in the middle of the section is composed of a pink acid gneiss, which perhaps represents a pegmatitic rock older than the Moine Series. [NG 8060 1840]

[P214701](#) C00101 Roadside, 1.2 km. SW of Glenelg. Banded gneiss sharply folded along axial planes. A close crinkling, parallel to the axial planes, is shown on the surface of some of the bands. [NG 8060 1840]

[P001865](#) C00102 Beinn a' Chapuill, 4 km. south-south-east of Glenelg, Inverness-shire. The upper part of the mountain is formed of metamorphosed sandstones of the Moine Series, and the lower part of rocks of the Lewisian Gneiss Series. Flat ground in foreground, in front of trees, is underlain by alluvial deposits. Lower poorly-exposed slopes beyond trees form part of the 'Eastern' Lewisian of the Glenelg Lewisian inlier, and are part of the Moine Nappe above the Moine Thrust. It is characterized by the abundance of metasedimentary rocks, including metalimestone and fayalite-magnetite rock, and also contains pods of eclogite. The upper half of the mountain, with abundant craggy exposures, is made of metamorphosed sandy rocks of the Morar Group of the Moine Supergroup. Due to intense deformation during the Caledonian orogeny, the layering in the two rock groups at the contact is roughly parallel and the original unconformity cannot be seen. [NG 8280 1530]

[P214702](#) C00103 Beinn a' Chapuill, 4.0 km. SSE of Glenelg. The upper part of the mountain is formed of siliceous schist of the Moine Series, and the lower part of rocks of the Lewisian Gneiss Series. [NG 8280 1530]

[P214703](#) C00104 Beinn a' Chapuill, 4.0 km. SSE of Glenelg. The upper part of the mountain is formed of siliceous schist of the Moine Series, and the lower part of rocks of the Lewisian Gneiss Series. [NG 8280 1530]

[P214704](#) C00105 1.2 km. NNW of Glenelg. Cliff of Lewisian gneiss. [NG 8000 2000]

[P214705](#) C00106 Hillside, 2.4 km. NE of Glenelg. Weathered surfaces of marble, with projecting lumps of diopside. Some of the lumps show rims of serpentine. [NG 8300 2100]

[P214706](#) C00107 Hillside, 2.4 km. NE of Glenelg. Weathered surfaces of marble, with projecting lumps of diopside. Some of the lumps show rims of serpentine. [NG 8300 2100]

[P214707](#) C00108 Hillside, 2.4 km. NE of Glenelg. Weathered surfaces of marble, with projecting lumps of diopside. Some of the lumps show rims of serpentine. [NG 8300 2100]

[P214708](#) C00109 Hillside, 2.4 km. NE of Glenelg. Weathered surfaces of marble, with projecting lumps of diopside. Some of the lumps show rims of serpentine. [NG 8300 2100]

[P214709](#) C00110 Hillside, 2.4 km. NE of Glenelg. Weathered surfaces of marble, with projecting lumps of diopside. Some of the lumps show rims of serpentine. [NG 8300 2100]

[P214710](#) C00111 Hillside, 2.4 km. NE of Glenelg. Weathered surfaces of marble, with projecting lumps of diopside. Some of the lumps show rims of serpentine. [NG 8300 2100]

[P214711](#) C00112 Hillside, 2.4 km. NE of Glenelg. Weathered surface of marble with a large lump of diopside. Various thin veins, representing lines of movement, are filled with fibrous tremolite (asbestos). [NG 8300 2100]

[P214712](#) C00113 Small stream, 27.43 m. or 26.58 m. N. of road, NNW of Beolary, 3.6 km. NE of Glenelg. Psammitic gneiss of the coarse-grained type, with many small augen of pegmatitic material, not usually granulitized. (Moine Schist Series.) [NG 8400 2180]

[P214713](#) C00114 Small stream, 27.43 m. or 26.58 m. N. of road, NNW of Beolary, 3.6 km. NE of Glenelg. Psammitic gneiss of the coarse-grained type, with many small augen of pegmatitic material, not usually granulitized. (Moine Schist Series.) [NG 8400 2180]

[P214714](#) C00115 0.4 km. NNE of Amhaoil, 6.8 km. E. of Glenelg. Dioritic or syenitic rock of the Glenelg-Ratagan igneous complex. [NG 8850 1960]

[P001982](#) C00116 View looking west down the Glenmore River from near Cnoc Fhionn, Inverness-shire. The complex consists of a series of rocks that range from minor ultrabasics through the major constituents of diorite, granodiorite, monzonite to adamellite. It belongs to the 'Newer Granites', a series of plutons and smaller igneous intrusions emplaced later than the main metamorphic recrystallization and deformation of the Caledonian Orogeny. The slopes in the foreground are chiefly composed of plutonic rocks belonging to the Glenelg-Ratagain complex. In the middle distance the rocks are Lewisian gneiss and Moine schists. The Skye hills can be seen in the distance. [NG 8700 1900]

[P001983](#) C00117 The complex covers an area of 18 square km. and consists of a series of intrusions that range from minor ultrabasics through the major constituents of diorite, granodiorite, monzonite to adamellite. The centre of each phase of intrusion has gradually moved to the north-east and they lack chilled contacts between them and all four major rock types are, at least in part, modified by hybridization with the preceding members. The lower smooth slopes are composed of diorite, etc. of the Glenelg-Ratagain complex. The mountains against the skyline are chiefly composed of Moine metasedimentary rocks. [NG 8600 2000]

[P214715](#) C00118 View looking ESE up the Glenmore River, from near Achadhachuirn, about 6.4 km. ENE of Glenelg. The lower smooth slopes are composed of diorite, etc. of the Glenelg-Ratagan complex. The mountains against the skyline are chiefly composed of Moine schist. [NG 8600 2000]

[P214716](#) C00119 W. slope of A' Chrannag, 7.2 km. SE of Glenelg. Psammitic gneiss of the coarse-grained type with thin red pegmatitic streaks and spots (Moine Series). [NG 8790 1560]

[P214717](#) C00120 W. slope of A' Chrannag, 7.2 km. SE of Glenelg. Psammitic gneiss of the coarse-grained type with thin red pegmatitic streaks and spots (Moine Series). [NG 8790 1560]

[P214718](#) C00121 W. slope of A' Chrannag, 7.2 km. SE of Glenelg. Psammitic gneiss of the coarse-grained type with thin red pegmatitic streaks and spots (Moine Series). [NG 8790 1560]

[P214719](#) C00122 Near foot of burn running NNW from A' Chrannag, 4.25 m. SE of Glenelg. Section in glacial sands and gravels. [SV 0000 0000]

[P214720](#) C00123 Near foot of burn running NNW from A' Chrannag, 4.25 m. SE of Glenelg. Section in glacial sands and gravels. [SV 0000 0000]

[P214721](#) C00124 Allt Eassan Mhic Gorraidh, 2.0 km. N. of Beolary, 4.8 km. NE of Glenelg. Weathered surface of marble with projecting spots of diopside and other silicates. Various thin veins representing lines of movement are filled with fibrous tremolite (asbestos). [NG 8540 2220]

[P214722](#) C00125 Allt Eassan Mhic Gorraidh, 2.0 km. N. of Beolary, 4.8 km. NE of Glenelg. Weathered surface of marble with projecting spots of diopside and other silicates. Various thin veins representing lines of movement are filled with fibrous tremolite (asbestos). [NG 8540 2220]

[P214723](#) C00126 Allt Eassan Mhic Gaorraidh, 2.0 km. N. of Beolary, 4.8 km. NE of Glenelg. Weathered surface of marble with projecting lumps of diopside and other silicates. The largest lump shows a rim of serpentine. [NG 8540 2220]

[P214724](#) C00127 Allt Eassan Mhic Gorraidh, 2.0 km. N. of Beolary, 4.8 km. NE of Glenelg. Weathered surface of marble with projecting lumps of diopside and other silicates. The largest lump shows a rim of serpentine. [NG 8540 2220]

[P214725](#) C00128 W. side of Beinn a' Chuirn, 1.6 km. NE of Beolary, 4.8 km. NE of Glenelg. Psammitic gneiss of the coarse-grained type with lumps and lenticles of pegmatitic material (Moine Schist Series). [NG 8600 2100]

[P214726](#) C00129 W. side of Beinn a' Chuirn, 1.6 km. NE of Beolary, 4.8 km. NE of Glenelg. Psammitic gneiss of the coarse-grained type with lumps and lenticles of pegmatitic material (Moine Schist Series). [NG 8600 2100]

[P214727](#) C00130 W. side of Beinn a' Chuirn, 1.6 km. NE of Beolary, 4.8 km. NE of Glenelg. Psammitic gneiss of the coarse-grained type with lumps and lenticles of pegmatitic material (Moine Schist Series). [NG 8600 2100]

[P214728](#) C00131 W. side of Beinn a' Chuirn, 1.6 km. NE of Beolary, 4.8 km. NE of Glenelg. Psammitic gneiss of the coarse-grained type with lumps and lenticles of pegmatitic material (Moine Schist Series). [NG 8600 2100]

[P214729](#) C00132 W. side of Beinn a' Chuirn, 1.6 km. NE of Beolary, 4.8 km. NE of Glenelg. Psammitic gneiss of the coarse-grained type with lumps and lenticles of pegmatitic material (Moine Schist Series). [NG 8600 2100]

[P214730](#) C00133 W. side of Beinn a' Chuirn, 1.6 km. NE of Beolary, 4.8 km. NE of Glenelg. Psammitic gneiss of the coarse-grained type with lumps and lenticles of pegmatitic material (Moine Schist Series). [NG 8600 2100]

[P214731](#) C00134 W. side of Beinn a' Chuirn, 1.6 km. NE of Beolary, 4.8 km. NE of Glenelg. Psammitic gneiss of the coarse-grained type, showing many lenticular pegmatitic seams in repeated isoclinal folds (Moine Schist Series). [NG 8600 2100]

[P214732](#) C00135 W. side of Beinn a' Chuirn, 1.6 km. NE of Beolary, 4.8 km. NE of Glenelg. Psammitic gneiss of the coarse-grained type, showing many lenticular pegmatitic seams in repeated isoclinal folds (Moine Schist Series). [NG 8600 2100]

[P214733](#) C00136 W. side of Beinn a' Chuirn, 1.6 km. NE of Beolary, 4.8 km. NE of Glenelg. Psammitic gneiss of the coarse-grained type, showing many lenticular pegmatitic seams in repeated isoclinal folds (Moine Schist Series). [NG 8600 2100]

[P214734](#) C00137 W. side of Beinn a' Chuirn, 1.6 km. NE of Beolary, 4.8 km. NE of Glenelg. Psammitic gneiss of the coarse-grained type, showing many lenticular pegmatitic seams in repeated isoclinal folds (Moine Schist Series). [NG 8600 2100]

[P214735](#) C00138 W. side of Beinn a' Chuirn, 1.6 km. NE of Beolary, 4.8 km. NE of Glenelg. Psammitic gneiss of the coarse-grained type, showing many lenticular pegmatitic seams in repeated isoclinal folds (Moine Schist Series). [NG 8600 2100]

[P214736](#) C00139 Beinn a' Chuirn., 4.8 km. NE of Glenelg. Looking E. Rough craggy ground formed by the pegmatized coarse psammitic gneisses of the Moine Series. [NG 8600 2100]

[P214737](#) C00140 Small burn, 274.32 m. or so NNW of Mam nan Uranan, 4.0 km. SSW of Glenelg. Part of the supposed conglomerate-schist near the margin of the Moine Schist Series. [NG 7930 1670]

[P214738](#) C00141 Small burn, 274.32 m. or so NNW of Mam nan Uranan, 4.0 km. SSW of Glenelg. Part of the supposed conglomerate-schist near the margin of the Moine Schist Series. [NG 7930 1670]

[P214739](#) C00142 Hillside, nearly 0.8 km. WSW of Mam nan Uranan, 4.0 km. SSW of Glenelg. Supposed conglomerate-schist of the Moine Series. [NG 7900 1670]

[P214740](#) C00143 Hillside, nearly 0.8 km. WSW of Mam nan Uranan, 4.0 km. SSW of Glenelg. Supposed conglomerate-schist of the Moine Series. [NG 7900 1670]



[P214741](#) C00144 Hillside, nearly 0.8 km. WSW of Mam nan Uranan, 4.0 km. SSW of Glenelg. Supposed conglomerate-schist of the Moine Series. [NG 7900 1670]

[P214742](#) C00145 Hillside, nearly 0.8 km. WSW of Mam nan Uranan, 4.0 km. SSW of Glenelg. Moine schist near the supposed conglomerate-schist. Indications of pebbly character can be discerned in places. [NG 7900 1670]

[P214743](#) C00146 Hillside 2.0 km. S. of Eilanreach, 3.6 km. S. of Glenelg. Scar of eclogite or amphibolite (Lewisian Gneiss Series). [NG 8100 1300]

[P214744](#) C00147 Hillside 2.0 km. S. of Eilanreach, 3.6 km. S. of Glenelg. Scar of eclogite or amphibolite (Lewisian Gneiss Series). [NG 8100 1300]

[P214745](#) C00148 Shore, 1.3 km. S. of Sandaig, 7.2 km. SSW of Glenelg. Large basic lenticle within thinly banded twisted gneisses (biotite granulite chiefly) of the Lewisian Gneiss Series. [NG 7690 1340]

[P214746](#) C00149 Shore, 1.3 km. S. of Sandaig, 7.2 km. SSW of Glenelg. Large knot of foliated basic rock in Lewisian gneiss. [NG 7690 1340]

[P214747](#) C00150 Shore, 1.3 km. S. of Sandaig, 7.2 km. SSW of Glenelg. Large knot of foliated basic rock in Lewisian gneiss. [NG 7690 1340]

[P214748](#) C00151 Shore, 1.3 km. S. of Sandaig, 7.2 km. SSW of Glenelg. Large knot of foliated basic rock in Lewisian gneiss. [NG 7690 1340]

[P214749](#) C00152 Shore, 1.3 km. S. of Sandaig, 7.2 km. SSW of Glenelg. Large knot of foliated basic rock in Lewisian gneiss. [NG 7690 1340]

[P214750](#) C00153 A little more than 1.3 km. S. of Sandaig. Crystals of iron pyrite with a growth of quartz on one side, or on two opposite sides, in hornblende schist (Lewisian Gneiss Series). [NG 7690 1340]

[P214751](#) C00154 Shore 1.6 km. S. of Sandaig, about 8.0 km. SSW of Glenelg. General view of cliff, showing thinly banded biotite granulites, with some basic knots. An axial plane of fold is shown in the lower part of the cliff (Lewisian Gneiss Series). [NG 7750 1260]

[P214752](#) C00155 Shore 1.6 km. S. of Sandaig, about 8.0 km. SSW of Glenelg. Near views of fold referred to in No. C154. [NG 7750 1260]

[P214753](#) C00156 Shore 1.6 km. S. of Sandaig, about 8.0 km. SSW of Glenelg. Near views of fold referred to in No. C154. [NG 7750 1260]

[P214754](#) C00157 Shore cliff, 1.6 km. S. of Sandaig, about 8.0 km. SSW of Glenelg. Thinly banded biotite granulites with basic knots and isoclinal folding in Lewisian Gneiss Series. [NG 7750 1260]

[P214755](#) C00158 Shore cliff, a little over 1.6 km. S. of Sandaig, about 8.0 km. SSW of Glenelg. Flaggy biotite-granulites with isoclinal folds (Lewisian Gneiss Series). [NG 7750 1260]

[P214756](#) C00159 Shore cliff, a little over 1.6 km. S. of Sandaig, about 8.0 km. SSW of Glenelg. Banded biotite-granulites with small pegmatitic augen (Lewisian Gneiss Series). [NG 7750 1260]

[P214757](#) C00160 Shore cliff, a little over 1.6 km. S. of Sandaig, about 8.0 km. SSW of Glenelg. Banded biotite-granulites with small pegmatitic augen (Lewisian Gneiss Series). [NG 7750 1260]

[P214758](#) C00161 Shore cliff, a little over 1.6 km. S. of Sandaig, about 8.0 km. SSW of Glenelg. Thinly banded gneisses with a large basic lenticle (Lewisian Gneiss Series). [NG 7750 1260]

- [P214759](#) C00162 Shore cliff, a little over 1.6 km. S. of Sandaig. Thin banded gneiss with lenticles and knots of dark hornblende rock. On either side of the large knot some thin laminae show nearly flat folds (Lewisian Gneiss Series). [NG 7750 1260]
- [P214760](#) C00163 Shore, over 1.6 km. S. of Sandaig, about 8.0 km. SSW of Glenelg. Thinly banded gneisses of the Lewisian Gneiss Series (?para-gneisses). [NG 7750 1260]
- [P214761](#) C00164 Shore, over 1.6 km. S. of Sandaig, about 8.0 km. SSW of Glenelg. Thinly banded gneisses of the Lewisian Gneiss Series (?para-gneisses). [NG 7750 1260]
- [P214762](#) C00165 Shore, over 1.6 km. S. of Sandaig, about 8.0 km. SSW of Glenelg. Thinly banded gneisses of the Lewisian Gneiss Series (?para-gneisses). [NG 7750 1260]
- [P214763](#) C00166 Shore, over 1.6 km. S. of Sandaig, about 8.0 km. SSW of Glenelg. Thinly banded gneisses of the Lewisian Gneiss Series (?para-gneisses). [NG 7750 1260]
- [P214764](#) C00167 Shore, over 1.6 km. S. of Sandaig, about 8.0 km. SSW of Glenelg. Thinly banded gneisses of the Lewisian Gneiss Series (?para-gneisses). [NG 7750 1260]
- [P214765](#) C00168 A little N. of Sandaig Islands, 6.0 km. SSW of Glenelg. Needles of hornblende in Lewisian gneiss. [NG 7600 1400]
- [P214766](#) C00169 A little N. of Sandaig Islands, 6.0 km. SSW of Glenelg. Needles of hornblende in Lewisian gneiss. [NG 7600 1400]
- [P216267](#) C02265 Ciche na Beinne Deirge, 4.8 km. SE of Sligachan. Basic dykes cutting the granophyre and syenite of the 'Red Cuillins' and showing contrast in mode of weathering of the granophyre compared with the gabbro of the 'Black Cuillins'. [NG 5050 2650]
- [P216268](#) C02266 Glamaig from the NW, 3.2 km. E. of Sligachan. Weathering of a granophyre mountain. [NG 5150 3050]
- [P002278](#) C02267 Marsco is essentially two granite intrusions composed of the Southern Porphyritic Granite and the Marsco Granite. Also associated is the Marscoite Suite of rocks that represent various degrees of intermingling of acid and basic magmas, the resulting hybrid rock occurs as narrow strips separating the gabbro masses (as on the summit) and the surrounding granites. A granophyre mountain with included masses (the prominent features) of gabbro. Part of the Red Hills centre of the larger Tertiary central igneous complex that covers the deeply eroded mountains of central Skye. [NG 5050 2550]
- [P216269](#) C02268 Marsco from the NW, 4.8 km. SSE of Sligachan. A granophyre mountain with included masses (the prominent features) of gabbro. [NG 5050 2550]
- [P216270](#) C02269 Looking SE from Garbh-bheinn, 9.7 km. SE of Sligachan. Mountains of gabbro and inclined sheets of dolerite. Sguarr nan Each (left) and Clach Glas (right). [NG 5350 2350]
- [P216271](#) C02270 Looking S. from Garbh-bheinn, 9.7 km. SE of Sligachan. Mountains of gabbro and inclined sheets of dolerite. [NG 5550 2350]
- [P216272](#) C02271 Clach Glas, from Garbh-bheinn, 9.7 km. SE of Sligachan. Looking S. A mountain of gabbro and inclined sheets of dolerite. [NG 5550 2350]
- [P216273](#) C02272 Sgurr nan Each from Garbh-bheinn, 9.7 km. SE of Sligachan. Looking SE. A mountain of gabbro and inclined sheets of dolerite. [NG 5350 2250]
- [P002279](#) C02273 Blaven from Srath na Creitheach, 9.7 km. south-south-east of Sligachan, looking south-east, Skye, Inverness-shire. The eastern part of the great mass of gabbro that forms part of the Tertiary central igneous complex in

central Skye. The Blaven range is composed of the gabbro of the Outer and Inner Layered Eucrite Series. The lower paler portion of the slopes is formed of the Blaven Granite. The latter has steeply-dipping contacts with the Outer Layered Eucrite Series on the east and on the west it cuts the early pyroclastic rocks. [NG 5350 2150]

[P216274](#) C02274 Druim an Eidhne, 8.0 km. S. of Sligachan. Exposed surface (glaciated) of volcanic agglomerate.

[P216876](#) C03116 Strath, Skye. Weathered surface of Durness (Cambrian) Limestone.

[P216877](#) C03117 Strath, Skye. Durness Limestone: weathered strata showing bedding and 'sponge shapes' (cherty concretion).

[P000589](#) D01485 View looking east-south-east up the Glenmore River, from near Achadhachuirn about 6.4 km. east-south-east of Glenelg. With the cessation of the Caledonian folding there followed in the Old Red Sandstone times (about 370–400 Ma. ago) the intrusion of large igneous masses. The Glenelg-Ratagain complex is one such body. It consists of successive intrusions of granitic and dioritic rocks with basic and ultrabasic rocks. The lower smooth slopes are composed of diorite, etc. of the Glenelg-Ratagain complex. The mountains against the sky are chiefly composed of Moine schist. [NG 8570 2030]

[P000590](#) D01486 Beinn a' Chapuill, 4.0 km. south-south-east of Glenelg. The upper part of the mountains is formed of siliceous schist of the Moine series, and the lower part is Lewisian gneiss. The rocks in this area are part of the Moine Nappe, highly folded Lewisian and Moine rocks that have been moved along the Moine Thrust, the most easterly of the major thrust planes of the Caledonian Thrust Zone. The Lewisian is thought to occur as either the core of tight anticlinal folds or as thrust slices. [NG 8050 1820]

[P000591](#) D01487 View looking west down the Glenmore River from near Cnoc Fhionn. Glenelg-Ratagain complex consists of successive intrusions of granitic and dioritic rocks with basic and ultrabasic rocks and was emplaced in Old Red Sandstone times (about 370–400 Ma. ago) after the cessation of Caledonian folding. The slopes in the foreground are chiefly composed of plutonic rocks belonging to the Glenelg-Ratagain complex. The middle distance embraces rocks of the Lewisian gneiss and Moine schist series. Skye hills in the distance. [NG 8830 1970]

[P219048](#) D01570 Port na h-Uamha, S. of Sandaig, near Glenelg. A large knot of foliated basic rock in Lewisian gneiss. [NG 7700 1370]

[P219052](#) D01579 Torrin Quarry, Skye. Basalt sill in marbled Cambrian limestone. [NG 5830 2030]

[P219053](#) D01580 Torrin Quarry, Skye. Basalt sill (dark-grey) in marbled Cambrian limestone above granophyre (brownish rubble). [NG 5830 2030]

[P005830](#) D01583 Sea cliff at Rudha Sloc an Earna, 1.5 m. SSW of Tarskavaig, Isle of Skye. Outcrop of Tarskavaig Thrust Plane: mylonized Lewisian carrying Tarskavaig Moines above deformed Torridonian. [NG 5790 0830]

[P219568](#) D02522 South Skye. Middle distance is the mountain Blaven (Bla Bheinn) - gabbro of the Cuillin Tertiary Igneous Complex. In the background is the mountain group of the Red Hills - granophyres and allied rocks of the Red Hills Tertiary Complex. These show a pale colour contrast with the darker gabbros. [NG 5550 1650]

[P219569](#) D02523 Above Loch Slapin, South Skye. In the foreground the dark area lies mainly within Mesozoic strata. The pale hills in the background are part of the Red Hills Tertiary Complex, of granophyre and allied types. The white quarries and spoil lie in the Cambro-Ordovician limestone. [NG 5550 1650]

[P214088](#) B00114 Ard Shieldaig, Loch Torridon. Foliated pegmatite containing large 'eyes' of microcline. [NG 8150 5350]

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[P214089](#) B00115 Ard Shieldaig, Loch Torridon. Foliated pegmatite containing large 'eyes' of microcline. [NG 8150 5350]

[P214090](#) B00116 Ard Shieldaig, Loch Torridon. Hornblende gneiss with veins of pegmatite, showing transition from brecciated condition on left to banded condition on right. [NG 8150 5350]

[P214091](#) B00117 Ard Shieldaig, Loch Torridon. Fragment of banded and contorted hornblende gneiss, enclosed in foliated pegmatitic gneiss. [NG 8150 5350]

[P214092](#) B00118 Ard Shieldaig, Loch Torridon. Pegmatite cutting and isolating basic gneiss. [NG 8150 5350]

[P001682](#) B00119 Ard Shieldaig, Loch Torridon, Ross & Cromarty. Cliff of Lewisian gneiss showing dark amphibolite layers within pale quartzofeldspathic gneiss. The Lewisian rocks are well-layered and are well-jointed parallel to the layering. The pale layers, forming most of the rock are quartzofeldspathic gneisses. The darker layers are made of amphibolite, typically with large feldspar crystals in the centres of the layers. These amphibolites are interpreted as Scourie dykes which were intruded into the quartzofeldspathic gneisses about 2400 million years ago, and then recrystallized and rotated into parallelism with the layering in the gneisses during the Laxfordian reworking, about 1800 million years ago. [NG 8150 5350]

[P214093](#) B00120 Ard Shieldaig, Loch Torridon. Cliff showing basic bands (?later dykes) in gneiss (in strike section). [NG 8150 5350]

[P214094](#) B00121 Ard Shieldaig, Loch Torridon. Cliff showing basic bands (?later dykes) in gneiss (in dip section). [NG 8150 5350]

[P001701](#) B00148 0.8 km. north-east of Tornapress, head of Loch Kishorn, Ross & Cromarty. Looking south-west. Valley cut along outcrop of Kishorn thrust plane. Torridon Sandstone on left overriding Cambrian rocks on right. The Cambrian rocks below the thrust (to the right) are grey limestones of the Eilean Dubh Formation (Durness Group). Karstic weathering probably accounts for the largely dry river bed. The trees form the Rassal Oak Wood, one of the few remnants of the original Caledonian Forest. The Torridonian rocks above the Kishorn thrust plane belong to the Diabaig Formation, and contain more argillaceous beds than the Applecross Formation sandstones. The strata are inverted, and a short distance to the east are overlain by Lewisian gneiss in the inverted limb of the Kishorn Nappe. [NG 8390 4280]

[P214646](#) C00034 N. face of Beinn Liath Mhor, 0.48 km. NW of Achnashellach Lodge. Folded and thrust Torridon Sandstone with infolds of Cambrian quartzite. [NG 9800 5100]

[P214647](#) C00035 N. face of Beinn Liath Mhor, 0.48 km. NW of Achnashellach Lodge. Folded and thrust Torridon Sandstone with infolds of Cambrian quartzite. [NG 9800 5100]

[P001853](#) C00036 North face of Beinn Liath Mhor, 4 km. north-west of Achnashellach Lodge, Ross & Cromarty. Folded and thrust Torridon Sandstone with infolds of Cambrian quartzite. At extreme right of view dark Torridonian rocks have been thrust over Cambrian strata, cutting out the overturned limb of an anticline. The pale-coloured part of the ridge, marked by abundant white scree, marks the outcrop of the quartzites of the Cambrian Eriboll Sandstone Formation, which have been folded into a syncline. In the distance, the dark rocks on the eastern summit of Beinn Liath Mhor are Torridonian sandstone in the core of the next anticline to the east. This anticline is gradually replaced northwards by a second thrust plane, which cuts out the inverted limb on Beinn Liath Bheag. [NG 9800 5100]

[P214648](#) C00037 N. face of Beinn Liath Mhor, 0.48 km. NW of Achnashellach Lodge. Folded and thrust Torridon Sandstone with infolds of Cambrian quartzite. [NG 9800 5100]

[P214649](#) C00038 Ob Mheallaidh, near Shieldaig, Loch Torridon. Folded hornblendic gneiss. [NG 8260 5400]

[P214650](#) C00039 Ard Shieldaig, Loch Torridon. Hornblendic gneiss with veins of pegmatite, showing transition from brecciated condition on left to banded condition on right. [NG 8100 5300]

[P001981](#) C00040 1.2 km. west-north-west of Lochcarron village, Ross & Cromarty. An outcrop of Moine Thrust plane (the figure is standing upon the 'sole' of the thrust). The gneiss above is much more crushed and disturbed than that

underlying the thrust plane. The Moine Thrust is the highest of a series of thrusts stretching from Loch Eriboll to the north coast of Skye. Beneath the thrust is what was once called the 'Zone of Complication', a succession of several thrust bound nappes stacked one above the other. The zone comprises a sequence of thrusts, overfolded and faulted Cambrian-Ordovician sediments, Torridonian sediments and as in this photograph Lewisian gneiss. [NG 8900 4000]

[P001854](#) C00041 North-east of Tornapress, head of Loch Kishorn, looking north-west, Ross & Cromarty. Valley cut along outcrop of Kishorn thrust plane. Cambrian dolomite on right; Lower Torridon shale on left. Closely-spaced fractures dipping to the left at about 50 degrees just to the left of the large pale limestone exposure in the stream bed mark the approximate position of the Kishorn thrust. In the steep slopes on the left are exposures of argillaceous rocks of the Diabaig Formation (Torridonian), which are inverted and a short distance away to the east (left) are overlain by Lewisian gneiss in the inverted limb of the Kishorn Nappe. [NG 8330 4230]

[P001855](#) C00042 North-east of Tornapress, head of Loch Kishorn, looking north-west, Ross & Cromarty. Valley cut along outcrop of Kishorn thrust plane. Cambrian dolomite on left; Lower Torridon shale on right. The Cambrian rocks below the thrust (to the left) are grey limestones of the Eilean Dubh Formation (Durness Group). They are tightly folded and show signs of shattering along steeply-dipping fractures (dipping to right on photo at c. 50 degrees). Karstic weathering probably accounts for the largely dry river bed. The Torridonian rocks above the Kishorn thrust plane (right) belong to the Diabaig Formation, and contain more argillaceous beds than the Applecross Formation sandstones. The strata are inverted, and a short distance away to the east are overlain by Lewisian gneiss in the inverted limb of the Kishorn Nappe. [NG 8330 4230]

[P214651](#) C00043 NE of Tornapress, head of Loch Kishorn. Looking NW. Valley cut along outcrop of Kishorn thrust plane. Cambrian dolomite on left; Lower Torridon shale on right. [NG 8330 4230]

[P001856](#) C00044 Coire na Ba, Applecross, Ross & Cromarty. Characteristic scenery of the Torridon Sandstone. On right is the then recently-constructed road over the Bealach na Ba, reaching over 600 m. above sea level. The road exploits a typical glaciated U-shaped valley with a well-developed corrie at its head. The cliffs on either side are made of gently-dipping sandstone of the Applecross Formation (Torridon Group, Torridonian). [NG 7000 4000]

[P214652](#) C00045 SE flank of Meall Gorm, Applecross. Characteristic scenery of the Torridon Sandstone. [NG 7790 4100]

[P001857](#) C00046 Sgurr a' Ghaorachain, Applecross, Ross & Cromarty. Characteristic scenery of the Torridon Sandstone. Thickly-bedded red-brown sandstones of the Applecross Formation (Torridon Group, Torridonian) dip gently away from camera. Subvertical gullies in cliffs exploit joints and minor faults. Between hills are U-shaped glacial valleys. [NG 7860 4240]

[P001858](#) C00047 Sgurr a' Ghaorachain, Applecross, Ross & Cromarty. Characteristic scenery of the Torridon Sandstone; typical 'hanging corrie'. Thickly-bedded red-brown sandstones of the Applecross Formation (Torridon Group, Torridonian) dip gently away from camera. Subvertical gullies in cliffs exploit joints and minor faults. Corrie formed by ice-action in mountains has steep lip due to overdeepening of main valley by valley glacier. Note frost-shattered arete on right-hand spur. [NG 7900 4200]

[P001859](#) C00048 Sgurr a' Ghaorachain, Applecross, Ross & Cromarty. Characteristic scenery of the Torridon Sandstone; typical 'hanging corrie'. Thickly-bedded red-brown sandstones of the Applecross Formation (Torridon Group, Torridonian) dip gently away from camera. Flat floor of corrie formed by glacial erosion. Steep lip of corrie due to overdeepening of main valley by valley glacier. Note frost-shattered arete on right-hand spur. [NG 7900 4200]

[P214653](#) C00049 Sgorr na Caorach, Applecross. Characteristic scenery of the Torridon Sandstone; bastion-like formation due to weathering along bedding planes and vertical joints. [NG 7800 4200]

[P214654](#) C00050 Sgorr na Caorach, Applecross. Characteristic scenery of the Torridon Sandstone; bastion-like formation due to weathering along bedding planes and vertical joints. [NG 7300 4200]



[P214655](#) C00051 Sgorr na Caorach, Applecross. Characteristic scenery of the Torridon Sandstone; bastion-like formation due to weathering along bedding planes and vertical joints. [NG 7800 4200]

[P214656](#) C00052 Sgorr na Caorach, Applecross. Characteristic scenery of the Torridon Sandstone; bastion-like formation due to weathering along bedding planes and vertical joints. [NG 7800 4200]

[P214657](#) C00053 Sgorr na Caorach, Applecross. Characteristic scenery of the Torridon Sandstone; bastion-like formation due to weathering along bedding planes and vertical joints. [NG 7800 4200]

[P001860](#) C00054 Beinn Bhan of Applecross, Ross & Cromarty. Characteristic scenery of the Torridon Sandstone; typical flat-bottomed ice-moulded valley (on right). Thickly-bedded red-brown sandstones of the Applecross Formation (Torridon Group, Torridonian) with subhorizontal dips form cliffs. Main valley has typical flat-floored U-shape, due to erosion by valley glacier. Note frost-shattered ridge in distance on right. [NG 8000 4400]

[P001861](#) C00055 Beinn Bhan of Applecross, Ross & Cromarty. Characteristic scenery of the Torridon Sandstone; typical flat-bottomed ice-moulded valley (on right). Thickly-bedded red-brown sandstones of the Applecross Formation (Torridon Group, Torridonian) dip gently left and away from camera. Good subvertical and horizontal jointing aids formation of subvertical cliffs. Lip of corrie is large ice-smoothed rock pavement. Flat floor of corrie on right formed by glacial erosion. Note frost-shattered ridge in distance on right. [NG 8000 4400]

[P214658](#) C00055a Beinn Bhan of Applecross. Characteristic scenery of the Torridon Sandstone; typical flat-bottom ice-moulded valley (on right). [NG 8000 4400]

[P001862](#) C00056 Beinn Bhan of Applecross, Ross & Cromarty. Characteristic scenery of the Torridon Sandstone; typical corrie with moraine material in foreground left by glacier emanating from corrie. Thickly-bedded red-brown sandstones of the Applecross Formation (Torridon Group, Torridonian) dip gently to right. Good subvertical and horizontal jointing aids formation of subvertical cliffs. Main valley in foreground contains local mounded morainic deposits. [NG 8000 4400]

[P214659](#) C00057 Beinn Bhan of Applecross. Characteristic scenery of the Torridon Sandstone; typical corrie with moraine material in foreground left by glacier emanating from corrie. [NG 8000 4400]

[P214660](#) C00058 Beinn Bhan of Applecross. Characteristic scenery of the Torridon Sandstone; in middle distance (to left), successive moraine mounds marking stages in the decrease of glacier emanating from corrie. [NG 8100 4400]

[P001863](#) C00059 Beinn Bhan of Applecross, Ross & Cromarty. Characteristic scenery of the Torridon Sandstone; typical 'hanging valley'. Thickly-bedded red-brown sandstones of the Applecross Formation (Torridon Group, Torridonian) dip subhorizontally. Flat floor of corrie formed by glacial erosion. Steep lip of corrie due to overdeepening of main valley by valley glacier. Note frost-shattered arete on right-hand spur. [NG 8000 4400]

[P214661](#) C00060 Beinn Bhan of Applecross. Characteristic scenery of the Torridon Sandstone; typical 'hanging valley'. [NG 8000 4400]

[P214662](#) C00061 Beinn Bhan of Applecross. Characteristic scenery of the Torridon Sandstone; precipices of Torridon Sandstone, and glaciated 'sill' of 'hanging- corrie'. [NG 8100 4500]

[P214663](#) C00062 Beinn Bhan of Applecross. Characteristic scenery of the Torridon Sandstone; precipices of Torridon Sandstone, and glaciated 'sill' of 'hanging-corrie'. [NG 8100 4500]

[P214664](#) C00063 Beinn Bhan of Applecross. Precipices of Torridon Sandstone. [NG 8100 4400]

[P214665](#) C00064 1.2 km. W. of Stromeferry Railway Station. Phacoidal structure in biotite-gneiss and pegmatite, produced by post-Cambrian movements. [NG 8540 3470]

[P214666](#) C00065 1.2 km. W. of Stromeferry Railway Station. Phacoidal structure in biotite-gneiss and pegmatite, produced by post-Cambrian movements. [NG 8540 3470]

[P214667](#) C00066 1.2 km. W. of Stromeferry Railway Station. Cliff of crushed gneiss above Kishorn thrust plane. [NG 8540 3470]

[P214668](#) C00067 1.2 km. W. of Stromeferry Railway Station. Cliff of crushed gneiss above Kishorn thrust plane. [NG 8540 3470]

[P001864](#) C00068 Portchuillin, 2.0 km. west of Stromeferry, Ross & Cromarty. Raised beaches, 9.14 m. and 30.48 m. Overturned Lewisian and Torridonian rocks in the Kishorn Nappe. Low ground in foreground is part of postglacial raised beach, here c. 9 m. above O.D. Platform in middle distance to left of crag is part of late-glacial raised beach, c. 30 m. above O.D. Sand and shingle are exposed in face directly under platform. Creag Mhaol, to right of late-glacial raised beach, is made of Lewisian gneiss with amphibolite sheets, lying over inverted grey sandstones and shales (Diabaig Formation, Torridonian) in the Kishorn Nappe. Hill in left distance, across Loch Carron, is made of inverted grey sandstones and shales (Diabaig Formation, Torridonian), also part of the Kishorn Nappe. [NG 8600 3400]

[P000038](#) C02178 The Raasay Ironstone Mine. 1.6 km. east of Raasay House, Island of Raasay. Inverness-shire. Entrance of No. 1 Mine in Lower Jurassic (Upper Lias) Ironstone. The entrance, an adit, was driven over 300 metres in a north-easterly direction at a slope of 1 in 100. Several kilometres of narrow-gauge railway took the ore from the mine in hutches to the crusher and calcining kilns of the processing plant. A haulage cable runs over the hutch while an incomplete railway on an overbridge is seen in the foreground. William Baird and Company opened this iron ore mine just before the First World War. It was worked by British miners and German prisoners-of-war. [NG 5650 3650]

[P000039](#) C02179 The Raasay Ironstone Mine. 1.6 km. east of Raasay House, Island of Raasay. Inverness-shire. Mines driven into outcrop of Lower Jurassic (Upper Lias) Ironstone, dipping eastwards. The photograph shows a trial adit at the bottom of the outcrop and at the top of the incline from No. 1 Mine. A figure stands near the entrance. Note the trestle stretching across the light railway track with a horizontal pulley attached. [NG 5650 3650]

[P000040](#) C02180 The Raasay Ironstone Mine. 1.2 km. east of Raasay House, Island of Raasay. Inverness-shire. Mines driven into outcrop of Lower Jurassic (Upper Lias) Ironstone, dipping eastwards. The photograph shows a close-up of the trial adit at the bottom of the outcrop and at the top of the incline from No. 1 Mine seen in C02179. There is a closer view of the figure standing near the entrance. [NG 5650 3650]

[P000041](#) C02181 The Raasay Ironstone Mine. Entrance to No. 2 Mine. 1 km. east of Raasay House and 2 km. from the pier, Island of Raasay. Inverness-shire. The No. 2 Mine never went into production due to the severe geological faulting and despite the cost of construction of the mine-head buildings, railway and a high viaduct. The site was later used as a sawmill supplying pit props, railway sleepers and power poles. [NG 5550 3450]

[P000042](#) C02182 The Raasay Ironstone Mine. Entrance to No. 2 Mine. 1 km. east of Raasay House and 2 km. from the pier, Island of Raasay. Inverness-shire. A photograph showing the No. 2 Mine entrances looking slightly derelict and unused. This mine never went into production due to the severe geological faulting and despite the cost of construction of the mine-head buildings, railway and a high viaduct. [NG 5550 3450]

[P000043](#) C02183 At the pier, Suisnish, south of Inverarish, Island of Raasay. Inverness-shire. A view towards the Raasay Ironstone processing plant. Buildings seen include the five calcining kilns, the white building just left of the pier is a store, behind that to the left is the coal dump, and to the right the hopper of 4,400 tons capacity. At the top of the incline is the Pier Incline Haulier House and to the right, the crusher with the covered conveyor to the top of the kilns. The incline railway was used to take coal up from the pier to the crusher where it was mixed with the iron ore and fed to the five calcining kilns by conveyor belt. Below the kilns more conveyors took the processed ore to the hopper, from there it was loaded onto the ships. [NG 5550 3450]

[P000044](#) C02184 The Raasay Ironstone processing plant, Suisnish, south of Inverarish, Island of Raasay. Inverness-shire. Buildings include pier incline hauler house (white, to the left), the crusher with circular oil storage tank in front of it, and a gantry containing the conveyor extending to the top of the kilns. The white building on the right contains stores, offices, blacksmiths and engineers. [NG 5550 3450]

[P000045](#) C02185 Suisnish, south of Inverarish, Island of Raasay. Inverness-shire. The photograph shows the Raasay Ironstone shipment pier, constructed to load the ore onto steamers. This T-shaped pier constructed of hand-mixed and reinforced concrete is 380 feet long and 25 feet wide. The pier frontage is 150 feet. The ore conveyor runs the length of the pier from the hopper to the 50 feet high ore conveyor loading-tower on the pierhead. The pier was designed by F.A. MacDonald and Partners, C.E. Glasgow and built by Robert McAlpine and Sons with teams of Irish labourers. It is still in good condition today. [NG 5550 3450]

[P000046](#) C02186 Suisnish, south of Inverarish, Island of Raasay. Inverness-shire. The photograph shows the Raasay Ironstone shipment pier, constructed to load the ore onto steamers. A steamer is berthed alongside the pier, the conveyor and conveyor loading-tower are clearly seen. The pier was designed for ships up to 5,000 tons, this combined with the exposed conditions led to a massively strong design and construction. [NG 5550 3450]

[P000047](#) C02187 Near entrance to No. 1 Mine in Raasay Ironstone Mines, 1.9 km. east of Raasay House. Inverness-shire. Building of 'steam navy' for removal of superficial deposits. The Bucyrus Steam Dragline or Steam Navy (Class 14 DL Ex No.838) can be seen with its 60 foot boom. It would have had a 2 cubic yard Page bucket and a Drag bucket while the ore itself was extracted using a Bucyrus Size 14-B Rev Shovel. Beyond the No.1 Mine an inclined railway led to the opencast mining area. A rail track was positioned between the digger and the ore outcrop and across the track was a moveable hopper used to load the hutches (trucks). [NG 5650 3650]

[P000048](#) C02188 Near entrance to No. 1 Mine in Raasay Ironstone Mines, 1.9 km. east of Raasay House. Inverness-shire. Building of 'steam navy' or dragline for removal of superficial deposits. A Bucyrus Steam Dragline or Steam Navy (Class 14 DL Ex No.838) under construction by German prisoners-of-war, almost certainly in the summer of 1917. It was used for opencast mining. Notice the armed guard on the left. Strewn in front are empty packing cases. [NG 5650 3650]

[P000049](#) C02189 Near entrance to Main Mine in Raasay Ironstone, 1.9 km. east of Raasay House. Inverness-shire. A close-up of the Bucyrus Steam Dragline or Steam Navy (Class 14 DL Ex No.838) used for removal of superficial deposits. Note the wooden blocks on the caterpillar tracks. The steam navy was purchased from Bucyrus in the USA and shipped in the SS Kelvinbrae in 1916. [NG 5650 3650]

[P002260](#) C02190 Looking north from near Oskaig, 1.6 km. north of Raasay House, Island of Raasay, Inverness-shire. Raised beaches on west side of Raasay. The bare glaciated surface of the Tertiary granophyre sill is seen in middle distance on the right and on Holoman Island, the latter attached to the mainland by beach deposits. A natural arch formed by marine erosion can be seen on Holoman Island. The low raised beaches are of immediately postglacial age. [NG 5450 3850]

[P216210](#) C02191 1.1 km. NE of Raasay House, Island of Raasay. Characteristic scenery of the granophyre area. Bare glaciated surface being broken up by frost action. Peat lochan lying in glaciated hollow. [NG 5450 3750]

[P216211](#) C02192 Allt Fearnas, 4.2 km. E. of Raasay House, Island of Raasay. Section in the upper portion of the Pabba Shales (Lower Lias). [NG 5850 3650]

[P216212](#) C02193 Allt Fearnas, 4.2 km. E. of Raasay House, Island of Raasay. Section in the upper portion of the Pabba Shales (Lower Lias). [NG 5850 3650]

[P216213](#) C02194 Allt Fearnas, 4.2 km. E. of Raasay House, Island of Raasay. Section in the upper portion of the Pabba Shales (Lower Lias). [NG 5850 3650]

[P216214](#) C02195 W. side of Beinn na' Leac, 4.0 km. E. of Raasay House, Island of Raasay. Scree-mound detached from hill slope ('winter-scee'); part of a long ridge parallel with cliffy hill slope, seen end on. [NG 5850 3650]

[P216215](#) C02196 W. side of Beinn na' Leac, 4.0 km. E. of Raasay House, Island of Raasay. Scree-mound detached from hill slope ('winter-cree'); part of a long ridge parallel with cliffy hill slope, seen end on. [NG 5850 3650]

[P216216](#) C02197 W. side of Beinn na' Leac, 4.0 km. E. of Raasay House, Island of Raasay. Scree-mound detached from hill slope ('winter-cree'); part of a long ridge parallel with cliffy hill slope, seen end on. [NG 5850 3650]

[P002261](#) C02198 Eyre Point, south-east end of Island of Raasay. A 20 ft. raised beach bounded by sea cliff with caves, cut out of Triassic conglomerate (c. 220 m.y. old) overlying Torridonian sandstone (c. 810 m.y. old). Relative sea level fell after the disappearance of the glaciers, this was followed by a widespread marine transgression which culminated about 6000–6800 BP. This transgression formed the Flandrian (postglacial) raised beach and old cliff line seen in the photograph. [NG 5850 3450]

[P216217](#) C02199 Eyre Point, SE of Island of Raasay. Junction of Triassic conglomerate (A) and Torridon Sandstone (B) in old sea cliff bounding 20 ft., raised beach. [NG 5850 3450]

[P216218](#) C02200 Shore, E. of Beinn na' Leac, SE Raasay. Hollows left by weathering out of calcareous nodules in Middle Lias sandstones. [NG 5950 3750]

[P216219](#) C02201 Shore, E. of Beinn na' Leac, SE Raasay. Carious weathering in Middle Lias sandstone. [NG 5950 3750]

[P216220](#) C02202 Shore, E. of Beinn na' Leac, SE Raasay. Large calcareous nodule weathering out of Middle Lias sandstone. [NG 5950 3750]

[P216221](#) C02203 Rubha na' Leac, SE coast of Island of Raasay. Triassic conglomerate and sandstone. [NG 5950 3850]

[P216222](#) C02204 SE Raasay. The easterly slope of Beinn na' Leac showing the Jurassic succession from the Middle Lias on the beach to the Inferior Oolite on hill top, over 305 m. Strata dipping westwards. [NG 5950 3750]

[P216223](#) C02205 Gualann na' Leac, Beinn na' Leac, SE Raasay. Cliff of Inferior Oolite, dipping westwards. [NG 5950 3750]

[P002262](#) C02206 Gualann na' Leac, Beinn na' Leac, south-east Raasay, Inverness-shire. A close-up of the Jurassic cliffs of Inferior Oolite, dipping westwards. The Inferior Oolite of Raasay consists of two lithological divisions: a great mass of sandstone 600 feet thick, resting on a series of shales about 20–70 feet thick. The latter is rarely exposed though forms a well-defined sloping feature at the base of the sandstone. The strata for the most part is a relatively soft sandstone, yellowish along fresh fractures and with a white surface on weathering. The lowest 50 feet is calcareous. [NG 5950 3750]

[P216224](#) C02207 Summit of Beinn na' Leac, SE Raasay. Glaciated surface of Inferior Oolite. [NG 5950 3750]

[P002263](#) C02208 Hallaig shore, south-east Raasay, Inverness-shire. View from Hallaig looking south-east across a fault that brings down Jurassic Inferior Oolite against Lower Lias. The strata dip westwards. On the north side of the fault, at Rubha na' Leac, the Trias passes under the Lower Lias. On the south side of fault the succession is from Middle Lias to Inferior Oolite. [NG 5950 3850]

[P216225](#) C02209 Hallaig shore looking SE towards Rubha na' Leac, SE Raasay. Trias and Rhaetic overlain by the Lower Lias (north side of the fault). The Middle Lias (cliff behind on right) on south side of the fault. [NG 5950 3850]

[P002264](#) C02210 A coastal view on the east side of the Island of Raasay, looking northwards from Rubha na' Leac, Inverness-shire. A continuous cliff section from the Rhaetic (Triassic) in the foreground up to the Jurassic Great Oolite on the distant hill top. The ridge running into the sea in the centre is the Lower Lias Limestone while behind is a major landslipped mass. The flat-topped peak on the left is Dun Caan, it has a capping of Tertiary plateau basalt on top of Great Oolite. Note the moored yachts in the bay. [NG 5950 3850]

[P216226](#) C02211 Shore cliff below Hallaig, E. side of Island of Raasay. Gryphea arcuata band in Lower Lias. [NG 5950 3850]

[P216227](#) C02212 At foot of cliff above Loch a' Chada-charnaich, Hallaig, E. side of Island of Raasay. False-bedding in Middle Lias sandstone. [NG 5850 3950]

[P002265](#) C02213 Hallaig, east side of the Island of Raasay, Inverness-shire. General view of Jurassic rocks below Dun Caan. Part of a panorama with C02214. The stratigraphic sequence from the top down includes: 1. The massive Inferior Oolite sandstone, half-way down the upper grass slope is the position of the ironstone below which is the Middle Lias sandstone. In the centre and to the right the large landslipped material. The summit on the right is a capping of Tertiary plateau basalt on Great Oolite forming Dun Caan. [NG 5850 3950]

[P002266](#) C02214 Hallaig, east side of the Island of Raasay, Inverness-shire. General view of Jurassic rocks below Dun Caan. Part of a panorama with C02213. The stratigraphic sequence from the top down includes: 1. Great Estuarine Series (shales). 2. Ledge at position of oil-shale. 3. Inferior Oolite sandstone. 4. Slope of Aalenian shale. 5. Middle Lias sandstone. In the centre is a large landslipped mass. [NG 5850 3950]

[P002267](#) C02215 A general view of the Jurassic rocks below Dun Caan, east coast of Raasay, Inverness-shire. The Loch a' Chada-charnaich is seen on the right. Dun Caan has a capping of plateau basalt that has been variously interpreted as a sill or as lavas with a fresh hard core of columnar form. It was formed in the vast outpouring of lava in the Tertiary Volcanic Province at about 55 Ma. Below, the sequence of Jurassic rocks is as follows: the Great Estuarine Series (shales) on the gentler upper slopes with a basal oil shale at the top edge of the massive cliffs of Inferior Oolite sandstone; at the lower break in slope are the Aalenian shales of the Upper Lias while at sea level are the Middle Lias Scalpa Sandstones. On the left is a large landslip. [NG 5850 3950]

[P216228](#) C02216 Hallaig, E. side of Island of Raasay. General view of Jurassic rocks below Dun Caan. 1. East Estuarine Series (shales). 2. Ledge at position of oil-shale. 3. Inferior Oolite sandstone. 4. Slope of Aalenian shale. 5. Middle Lias sandstone. 6. Position of ironstone. 7. Landslipped material. Capping of Tertiary plateau basalt on Great Oolite forming Dun Caan (centre top). [NG 5850 3950]

[P216229](#) C02217 E. side of Island of Raasay. General view of Jurassic rocks below Dun Caan. 1. East Estuarine Series (shales). 2. Ledge at position of oil-shale. 3. Inferior Oolite sandstone. 4. Slope of Aalenian shale. East side of Island of Raasay. [NG 5850 3950]

[P216230](#) C02218 Druim an Aonaich, E. side of Island of Raasay. Cliff of Inferior Oolite sandstone. [NG 5850 4250]

[P002268](#) C02219 East side of the Island of Raasay, Inverness-shire. Near view of the escarpment of Jurassic Inferior Oolite sandstone. In distance on the left is the hill Dun Caan. It has a capping of Tertiary plateau basalt on Great Oolite, also Jurassic. The massive cliff in the centre is formed of part of the Inferior Oolite, a great mass of sandstone 600 feet thick. Below the cliff are scree slopes that now have a cover of vegetation. The capping of plateau basalt on Dun Caan has been variously interpreted as a sill or as lavas with a fresh hard core of columnar form. It was formed in the vast outpouring of lava in the Tertiary Volcanic Province at about 55 Ma. [NG 5850 3950]

[P216231](#) C02220 E. side of Island of Raasay. Near view of escarpment of Inferior Oolite sandstone. In distance on left - capping of Tertiary plateau basalt on Great Oolite forming Dun Caan. [NG 5850 3950]

[P002269](#) C02221 East side of the Island of Raasay, Inverness-shire. Landslips interfering with and partly masking the outcrops of the Jurassic succession from Lias to Great Oolite. Dun Caan, (on skyline) a capping of Tertiary plateau basalts on Great Oolite. The landslip involves immense masses of Middle Lias and Pabba Shales. [NG 5850 3950]

[P216232](#) C02222 E. side of Island of Raasay. Landslips interfering with the partly masking the outcrops of the Jurassic succession from Lias to Great Oolite. Dun Caan, (on skyline) a capping of Tertiary plateau basalts on Great Oolite. [NG 5850 3950]

[P216233](#) C02223 Above Loch a' Chada charnaich, E. side of Island of Raasay. Ledge marking position of oil-shale ( ). [NG 5850 3950]



[P216234](#) C02224 Top of gully above Loch a' Chada charnaich, E. side of Island of Raasay. Exposure of oil-shale. [NG 5850 3950]

[P216235](#) C02225 Top of Hallaig Cliff, E. side of Island of Raasay. Flat ledge formed by denudation of weak oil-shale outcrop between stronger beds of Inferior Oolite and Great Estuarine sandstones. [NG 5850 3950]

[P216236](#) C02226 Top of Hallaig Cliff, E. side of Island of Raasay. Flat ledge formed by denudation of weak oil-shale outcrop between stronger beds of Inferior Oolite and Great Estuarine sandstones. [NG 5850 3950]

[P216237](#) C02227 S. of Dun Caan, E. side of Island of Raasay. Fissures in Inferior Oolite marking initial stages in the production of landslips. [NG 5750 3950]

[P216238](#) C02228 S. of Dun Caan, E. side of Island of Raasay. Fissures in Inferior Oolite marking initial stages in the production of landslips. [NG 5750 3950]

[P002270](#) C02229 South of Dun Caan, east side of the Island of Raasay, Inverness-shire. Fissures in Jurassic Inferior Oolite marking initial stages in the production of landslips. This fissure is typical of those that occur near the margins of the eastern cliffs, from Beinn na' Leac to Screapadal. They are usually at right angles to the direction of the cliffs, they are deep and vertical and vary in width from one to ten feet. [NG 5750 3950]

[P002271](#) C02230 South of Dun Caan, east side of the Island of Raasay, Inverness-shire. Fissures in Jurassic Inferior Oolite marking initial stages in the production of landslips. This fissure is typical of those that occur near the margins of the eastern cliffs, from Beinn na' Leac to Screapadal. They are usually at right angles to the direction of the cliffs, they are deep and vertical and vary in width from one to ten feet. [NG 5750 3950]

[P216239](#) C02231 S. of Dun Caan, E. side of Island of Raasay. Fissures in Inferior Oolite marking initial stages in the production of landslips. [NG 5750 3950]

[P002272](#) C02232 Dun Caan, east side of the Island of Raasay, Inverness-shire. Tertiary plateau basalts capping Jurassic rocks. Dun Caan has a capping of plateau basalt that has been variously interpreted as a sill or as lavas with a fresh hard core of columnar form. It was formed in the vast outpouring of lava in the Tertiary Volcanic Province at about 55 Ma. It rests on the Jurassic Great Oolite, part of the Great Estuarine Series and consists of a basal oil shale (not seen) followed by massive sandstones, laminated shales with limestones and sandstones. Its total thickness is about 250 feet. [NG 5750 3950]

[P216240](#) C02233 Dun Caan, E. side of Island of Raasay. Tertiary plateau basalts capping Great Oolite. [NG 5750 3950]

[P216241](#) C02234 Looking NNW from Beinn na' Leac, E. side of Island of Raasay. Plateau of Jurassic rocks. On extreme right - capping of Tertiary plateau basalts on Great Oolite forming Dun Caan. [NG 5950 3750]

[P216242](#) C02235 From South Screapadal, E. side of Island of Raasay. Looking N. Showing contrast between features given by Torridon Sandstone (foreground and middle distance) and the Lewisian gneiss (distance). [NG 5850 4450]

[P216243](#) C02236 S. of Holm, 8.0 km. NNE of Portree, Skye. Exposure of oil-shale overlying the Inferior Oolite and forming base of the Great Estuarine Series. [NG 5150 5150]

[P216244](#) C02237 S. of Holm, 8.0 km. NNE of Portree, Skye. Exposure of oil-shale overlying the Inferior Oolite and forming base of the Great Estuarine Series. [NG 5150 5150]

[P216245](#) C02238 S. of Holm, 8.0 km. NNE of Portree, Skye. Exposure of oil-shale overlying the Inferior Oolite and forming base of the Great Estuarine Series. [NG 5150 5150]

[P216246](#) C02239 S. of Holm, 8.0 km. NNE of Portree. Middle Lias sandstone with calcareous nodules ('doggers'). [NG 5150 5150]

- [P216247](#) C02240 Holm, 8.8 km. NNE of Portree. Features given by Jurassic rocks with intrusive sills of dolerite. The succession is the Middle Lias (shore) to Great Oolite (beneath sill of intrusive dolerite on skyline). [NG 5150 5150]
- [P002273](#) C02241 Bearreraig, 9.7 km. north-north-east of Portree, Skye (Inverness). Exposure of Lower Oolite sandstone giving rise to waterfall. A bed of near horizontal strong rock overlying weaker beds located downstream enable the latter to be relatively quickly worn down and the strong resistant bed begins to be undercut. Rapids would have formed first and with development, the face would become vertical and so form a waterfall as in the photograph. [NG 5150 5350]
- [P216248](#) C02242 Bearreraig Bay, 10.5 km. NNE of Portree. On left - cliff of Lower Oolite. In distance - columnar sill of dolerite overlying Lower Oolite. [NG 5150 5350]
- [P216249](#) C02243 Bearreraig Bay, 10.5 km. NNE of Portree. Columnar sill of dolerite overlying Inferior Oolite. [NG 5150 5350]
- [P216250](#) C02244 Bearreraig Bay, 10.5 km. NNE of Portree. Columnar sill of dolerite overlying Inferior Oolite. [NG 5150 5350]
- [P216251](#) C02245 Bearreraig Bay, 10.5 km. NNE of Portree. Columnar sill of dolerite overlying Inferior Oolite. [NG 5150 5350]
- [P216252](#) C02246 Bearreraig Bay, 10.5 km. NNE of Portree. Columnar sill of dolerite overlying Inferior Oolite. [NG 5150 5350]
- [P216253](#) C02247 Ben Tianavaig, 4.8 km. SE of Portree. Lower Jurassic rocks capped by Tertiary plateau basalts repeated by fault and Jurassics partially obscured by landslips. [NG 5150 4050]
- [P216254](#) C02248 Rubha Buidhe, 6.4 km. S. of Portree. Columnar sill of intrusive dolerite. [NG 5150 3650]
- [P216255](#) C02249 Rubha Buidhe, 6.4 km. S. of Portree. Columnar sill of intrusive dolerite. [NG 5150 3650]
- [P216256](#) C02250 Rubha Buidhe, 6.4 km. S. of Portree. Columnar sill of intrusive dolerite. [NG 5150 3650]
- [P216257](#) C02251 Rubha Buidhe, 6.4 km. S. of Portree Bay. Basic dykes cutting plateau basalts (lavas) of Tertiary age. [NG 5150 3650]
- [P217452](#) C03917 Lealt Gorge and waterfall from above Inver Tote. Jurassic sediments with intrusive dolerite sill above.
- [P218746](#) D01167 Looking NW from about 0.8 km. SW of Tornapress, Sgurr a' Chaorachain. Typical mural precipices in Torridon sandstone. [NG 8220 4180]
- [P218747](#) D01168 Looking NW from about 0.8 km. SW of Tornapress, Sgurr a' Chaorachain. Typical mural precipices in Torridon sandstone. [NG 8220 4180]
- [P002698](#) D01169 Looking south-east from Bealach na Ba, Ross & Cromarty. Typical precipices in Torridon sandstone. The Torridonian rocks were deposited on the eroded land surface of the Lewisian gneiss of the North-west Highlands. These rocks formed from a thick accumulation of terrestrial sediments, mostly fluvialite, deposited by a series of large rivers flowing from a continent that existed towards the north-west. Because of the great thicknesses of deposits, up to 7 km. in places it is thought that they were deposited in subsiding basins. Note the old Ford Anglia on the road. [NG 7830 4160]
- [P218748](#) D01170 Looking W. from roadside 0.4 km. SE of Couldoran. Typical Torridon sandstone scenery showing fine mural precipices surrounding deep cup-shaped corries. [NG 8480 4380]
- [P002699](#) D01171 In the 200 Ma interval between the deposition of the Torridonian rocks and the Cambrian there was a period of crustal warping during which the Precambrian rocks of the Caledonian foreland were arched into several large

folds. Considerable erosion followed so by the beginning of the Cambrian a remarkably flat surface had been produced. Onto this surface the Cambrian sediments, beginning with these quartzites were deposited as it progressively and gently subsided to form the floor of a shelf sea. Subsequent uplift and erosion has caused these outliers to form. White Cambrian quartzite screes occur on the summit of Mullach an Rathain, Liathach are distributed round a tiny outlier capping Torridonian sandstone. [NG 8430 5470]

[P002700](#) D01172 Looking south-east from road 0.8 km. east of Torridon House, Upper Loch Torridon, Ross & Cromarty. Gently folded Torridon sandstone in middle distance capped by Cambrian quartzite on farther hills, locally in thrust sheets. This area is situated on the Caledonian foreland, the area that was not affected by the Caledonian Orogeny and its associated intense folding and metamorphism. The result of this is that the rocks are little altered other than arching into several large folds between the deposition of the Torridonian rocks in the Precambrian and unconformable deposition of the Cambrian rocks. [NG 8810 5730]

[P218749](#) D01172a Looking SE from road 0.8 km. E. of Torridon House, Upper Loch Torridon. Gently folded Torridon sandstone in middle distance capped by Cambrian quartzite on farther hills, locally in thrust sheets. [NG 8810 5730]

[P002701](#) D01173 Looking north-west from 0.4 km. north-north-east of Torridon House, Ross & Cromarty. Torridonian sandstone country. The marked 'nick' on the Horns of Alligin (centre) is the result of an immense rock fall determined by fault/joint intersection. The mountains composed of Torridonian rocks typically have developed with precipices of deeply-eroded, generally flat-bedded strata to form some of the most spectacular scenery of the UK. [NG 8720 5770]

[P002702](#) D01174 Looking south-south-west across Lochan an lasgaich, Ross & Cromarty. Hummocky morainic drift in typical 'Ceud Cnoc' or 'Thousand Hills' topography. Probably one of the best examples in the Highlands. Hummocky moraines are the most widespread deposits left by the retreating and wasting ice masses. They cover large areas of the lower ground in the Northern Highlands and in the valley bottoms of more mountainous areas. Torridon Sandstone with Cambrian quartzite outliers repeatedly thrust, from hills in distance. [NG 9580 5660]

[P002703](#) D01175 Looking north-east from the east side of Lochan an lasgaich towards Beinn Eighe, Ross and Cromarty. Cambrian quartzite caps Torridonian sandstone in repeatedly thrust sheets. This area, part of the Caledonian foreland to the west of the Moine Thrust has undergone considerable thrusting associated with the earth movements of the Caledonian Orogeny. The Cambrian quartzites dipping gently to the east have been repeatedly thrust in an imbricate structure with the thrusts also dipping eastwards. [NG 9600 5680]

[P002704](#) D01176 Looking north-west across Lochan an lasgaich, Liathach, Ross & Cromarty. Mural precipices of Torridonian sandstone. Small outliers of Cambrian quartzite form the actual peak of the hill. The Torridonian mountains typically show horizontal bedding in sandstone, producing alternate vertical cliffs and horizontal ledges. The region as a whole is one of a strongly dissected glaciated upland with a series of large massifs such as Liathach separated by glacial troughs such as in the foreground. The tips of the three main peaks all are formed of Cambrian quartzites lying unconformably on the Torridonian sandstone. The time period between the Torridonian and the deposition of the quartzites in a shelf sea is c. 200 Ma. [NG 9620 5630]

[P002705](#) D01177 Looking north-west from the road 1.5 miles west of Lochmore, Ross & Cromarty. Valley eroded along the line of the transcurrent Glen Docherty or Loch Maree Fault - a dextral slip north-west-trending fault complimentary to the Great Glen suite. The Loch Maree Fault is a plane of pre-Torridonian ductile shear within the Lewisian gneiss of the foreland that did not affect the overlying Torridonian, however it did act as a plane of weakness for the much later Caledonian faults. [NH 5880 0720]

[P002828](#) D02524 Oblique aerial view of the south-east coast of Raasay with Skye in the background, Highland Region. Cliff of Jurassic sediments (Middle Lias). The Lias is extensively developed in the Hebrides and as seen in the photograph plays an important part in the structure and scenery of the Jurassic areas not just in Raasay but also in Skye and Mull. It consists chiefly of white, yellowish or greyish sandstones. [NG 6050 3650]

[P002829](#) D02525 Oblique aerial view of Beinn na' Leac, Raasay, Highland Region. Cliffs of Inferior Oolite (Jurassic). Landslip material covers much of the underlying strata. The Inferior Oolite on Raasay consists of two lithological

divisions, a great mass of sandstone 600 feet thick, resting on a series of shales from 20 to 70 feet thick. There are few exposures of the shale though it forms a well-defined sloping feature almost everywhere at the foot of the sandstone. The shale forms its greatest thickness here, at the foot of Beinn na' Leac. [NG 5950 3750]

[P002830](#) D02526 Oblique aerial view at Hallaig, Raasay, Highland Region. The Broadford Limestone (Lower Lias, Jurassic) forms the prominent cliff which runs down into the sea. The irregular surface behind the cliffs is partly covered with landslipped material. In Raasay the Lower Lias strata are of marine origin of which calcareous sandstones and forms prominent scarps belongs to two main lithological divisions. The basal portion seen here, consists mainly of limestones and the overlying Pabba Shales (not seen). The rocks in the photograph dip to the north-west. [NG 5950 3850]

[P002831](#) D02527 Oblique aerial view at Hallaig Burn, Raasay, Highland Region. The contact between the Jurassic Broadford Limestone and Pabba Shale. The stream gully marks the contact in the Lower Lias (Jurassic) between the Broadford Limestone (seen in the prominent cliffs) and the Pabba Shales (covered by landslip material). Both formations are of marine origin. They form the two main lithological divisions of the Lower Lias and cause greatly contrasting landscapes, the limestone forms prominent scarps while the Pabba Shales forms smooth features due to its soft, shaly nature. [NG 5950 3850]

[P002832](#) D02528 East coast of Raasay and Dun Caan, Highland Region. Tertiary igneous sill and lava flows overlying cliffs of Jurassic sediments. Landslipping in foreground. The lavas are a remnant of an extensive and deeply eroded plateau of lavas that covered Skye and the Small Isles. The Jurassic sequence extends from the Great Estuarine Series below the summit of Dun Caan, the massive Inferior Oolite sandstone cliffs while below are the Upper Jurassic shales and Middle Lias Scalpa Sandstone. [NG 6150 4050]

[P002833](#) D02529 East coast of Raasay and Dun Caan, Highland Region. Tertiary igneous sill and lava flows overlying cliffs of Jurassic sediments. The peaks of Skye can be seen in the background. The detached mass of rock on the left is a enormous landslip of Middle Lias and Pabba Shales. [NG 6150 4050]

[P219570](#) D02530 E. coast of Raasay. Jurassic sequence. Cliffs of Inferior Oolite Series, Upper, Middle and Lower Lias. [NG 6050 4150]

[P002834](#) D02531 South Screapadal, Raasay, Inverness-shire. Faulting in the Jurassic rocks. The triangular (grassy) wedge of Lower Lias is faulted against cliffs of Inferior Oolite. The fault is a major north-east trending fault that extends across the island from Holoman to Screapadal. The downthrow has been estimated at c. 1000 feet with the younger Jurassic rocks to the south and the much older Precambrian Torridonian rocks to the north. [NG 5850 4450]

[P219571](#) D02532 East coast of Raasay. Jurassic sequence with Tertiary Igneous capping. Skye in the background. [NG 5850 4450]

[P002849](#) D02828 Kalnakill, coast of Applecross, Ross & Cromarty. Looking south. A high raised beach. Fringing the modern cobble beach can be seen the partly grassed-over storm beach. The raised beach forms a distinctive level platform visible into the far distance. The eustatic lowering of the sea level caused by the abstraction of water to form the great continental ice sheets was more than offset by the isostatic depression of the land by the weight of the ice-caps. In late- and post-glacial times isostatic recovery failed to keep pace with eustatic rise in sea level as the water was returned to the oceans. Consequently raised beaches such as the one in the photograph are now left well above Ordnance Datum, the present sea level. [NC 6940 5520]

[P002850](#) D02829 Skye from Camusteel, in Applecross, looking towards the south-west, Ross and Cromarty. The mountains of Skye are formed of a major Tertiary central igneous complex. The complex contains several centres, the earliest is the Cuillin Centre composed of a succession of gabbroic and peridotitic rocks. This was cut by the granites of the Srath na Creitheach Centre and by the later Western Red Hills Centre, then the Eastern Red Hills Centre followed by minor gabbro and hybrid intrusions. [NC 7100 4230]

[P002851](#) D02830 Russel Burn, looking north-west towards Sgurr a' Chaorachain, Ross and Cromarty. A hanging valley between buttresses of Torridonian sandstone. The hanging valley was created by a tributary valley glacier which failed to

deepen the original valley at the same rate that the main valley was deepened by its much larger and more powerful glacier. With the subsequent removal of the glaciers the tributary valley is left high above the main valley floor. [NC 8140 4130]

[P002852](#) D02831 Russel Burn, looking north-west into Coire nan Arr below Sgurr a' Chaorachain, Ross and Cromarty. A U-shaped glaciated valley in Torridonian sandstone. A river-cut valley that would almost certainly originally have been V-shaped in profile has been modified by the valley glaciers to a well-developed, smoothly glaciated, broad-bottomed, U-shaped cross-section by side or lateral erosion by the glacier. [NC 8140 4130]

[P002853](#) D02832 Loch Kishorn, looking west towards Sgurr a' Chaorachain, Ross and Cromarty. A good example of a glacial hanging valley can be seen between the buttresses of Torridonian sandstone. The steep-sided, often isolated mountains are typical of those composed of Torridonian sandstone. [NC 8320 4090]

[P002854](#) D02833 Loch Kishorn, looking west towards Sgurr a' Chaorachain, Ross and Cromarty. A good example of a glacial hanging valley can be seen between the buttresses of Torridonian sandstone. A closer view than D02832. The Torridonian sandstone itself was deposited on the eroded land surface of the Lewisian basement metamorphic rocks c. 1000–750 Ma. The thick accumulation of terrestrial sedimentary rocks have never been deformed or regionally metamorphosed. They were laid down under fluvial conditions and because of their great thickness and certain palaeoenvironmental indicators it is thought they accumulated in subsiding basins. [NC 8320 4090]

[P002855](#) D02834 Raised beach and modern beach deposits at the head of Loch Kishorn, Ross and Cromarty. Isostatic recovery sometimes failed to keep pace with eustatic rise of sea level as the water was returned to the oceans following the retreat and melting of the ice of the last glaciation. This gave rise to raised beaches in many parts of Scotland. There are both a late-glacial series of higher raised beaches and a series of lower postglacial raised beaches following a period of relatively low sea level. The raised beach at Kishorn will almost certainly be postglacial. [NC 8320 4090]

[P002856](#) D02835 Loch an Loin, looking towards the east, Ross and Cromarty. A valley eroded along a fault line. The peak on the left-hand side is Torridonian and that on the right-hand side is Lewisian. The two are separated by a large fault which runs through the alluvial flat and up the valley. [NC 8530 4490]

[P219712](#) D02836 Loch an Loin, looking towards the E. Kishorn Thrust. Lewisian (hills in the background) has been thrust by the Kishorn Thrust over Cambrian (middle distance). [NC 8530 4490]

[P219783](#) D03030 Loch Shieldaig. Shieldaig village, Loch Shieldaig with remnants of the old Caledonian pine forest in the foreground. [NG 8040 5260]

## [Sheet 82 Lochcarron](#)

[P000228](#) B00078 Beinn Eighe from the north, Loch Maree. Ross & Cromarty. Folded and thrust masses of Torridonian sandstone and Cambrian quartzite weathering and forming screes. Moraines and morainic material in corries and foreground. The Cambrian quartzites rest unconformably on the Torridonian and have undergone folding and considerable low-angle faulting called thrusting, a clear indication of horizontal compression. The extensive moraines were laid down by the retreating glaciers. The Torridonian comprises an assemblage of terrestrial sedimentary rocks laid down under fluvial or lacustrine conditions c. 1000–750 Ma. The Cambrian rocks were deposited c. 200 Ma. later after a period of crustal warping. [NG 9650 5950]

[P214066](#) B00079 Ben Eighe from the E., Loch Maree. Folded and thrust masses of Torridon Sandstone and Cambrian quartzite weathering and forming screes. Moraines and morainic material in corries and foreground (panoramic view showing formation of screes at different levels). [NG 9650 5950]

[P214067](#) B00080 Ben Eighe from the E., Loch Maree. Folded and thrust masses of Torridon Sandstone and Cambrian quartzite weathering and forming screes. Moraines and morainic material in corries and foreground (panoramic view showing formation of screes at different levels). [NG 9650 5950]



[P001674](#) B00081 Beinn Eighe from the east, Loch Maree, Ross & Cromarty. Folded and thrust masses of Torridon Sandstone and Cambrian quartzite weathering and forming scree. In this area there is no basal thrust at the western margin of the Moine thrust belt. Instead, the 'foreland' rocks are folded into broad open folds with north-south axes, and cut by minor thrusts following the axial planes of the anticlines. In the photograph, the dark areas are formed of Torridonian sandstone (Applecross Formation) forming the cores of the anticlines. The pale areas are covered with scree derived from quartzites of the Lower Cambrian Eriboll Formation. Moraines have been deposited during ice retreat in the corries and in the foreground, where they can be seen to consist largely of angular quartzite blocks but with some erratics. [NG 9650 5950]

[P001675](#) B00082 A mountain formed by the thrusting and folding of Torridon Sandstone and Cambrian strata, beds highly folded and with occasional thrusts. In this area there is no basal thrust at the western margin of the Moine thrust belt. Instead, the 'foreland' rocks are folded into broad open folds with north-south axes, and cut by minor thrusts following the axial planes of the anticlines. On the left of the photo, the ridge of Creag Dhubh is made almost entirely of quartzite of the Lower Cambrian Eriboll Sandstone Formation. On the ridge joining Creag Dhubh to Sgurr Ban, the quartzite is repeated by a series of minor thrusts producing the scree which blanket these hills. [NG 9820 6000]

[P001676](#) B00083 A mountain formed by the thrusting and folding of Torridon Sandstone and Cambrian strata, beds highly folded and with occasional thrusts. In this area there is no basal thrust at the western margin of the Moine thrust belt. Instead, the 'foreland' rocks are folded into broad open folds with north-south axes, and cut by minor thrusts following the axial planes of the anticlines. In the far distance on the left, the ridge joining Creag Dhubh to Sgurr Ban, is formed of quartzite of the Lower Cambrian Eriboll Sandstone Formation, repeated by a series of minor thrusts. On Ruadh-stac Beag, centre-right, a small amount of Torridonian sandstone (Applecross Formation) is exposed (left side of hill), but most of the mountain is made of highly folded Eriboll Sandstone, with mudstones of the An t-Sron Formation preserved as small patches near the summit. [NG 9730 6160]

[P001677](#) B00084 A mountain formed by the thrusting and folding of Torridon Sandstone and Cambrian strata. Unconformable junction of Cambrian quartzite and Torridon Sandstone. In this area there is no basal thrust at the western margin of the Moine thrust belt. Instead, the 'foreland' rocks are folded into broad open folds with north-south axes, and cut by minor thrusts following the axial planes of the anticlines. Most of Ruadh-stac Beag (left) is made of folded Eriboll Sandstone, repeated by thrusts, forming extensive scree. Behind and to the right, on Ruadh-stac Mor, the rocks are unfolded. The Torridonian Applecross Formation sandstones (dark) form the lower part of the mountain. These are overlain unconformably (although the angular unconformity is not visible in this view) by quartzites of the Lower Cambrian Eriboll Sandstone formation (pale). A small outlier of mudstone and sandstone of the An t-Sron Formation (previously known as 'Fucoïd beds' and 'Serpulite Grit') occurs on the summit. [NG 9520 6110]

[P000229](#) B00085 Beinn Eighe from Lochan an Iasgaich, 8.851 km. south-west of Kinlochewe. Looking north. Ross & Cromarty. A mountain formed by the thrusting and folding of Torridonian sandstone and Cambrian strata. On the left the beds are undisturbed, in the centre the beds are folded and with occasional thrusts; on right - alternating thrust masses. The deep valley to the left is the Coire Dubh. The line of posts across the photograph and in front of the cottage indicates the route taken by of the B858. [NG 9650 5950]

[P001678](#) B00086 Ruadh-stac Beag, Beinn Eighe, Ross & Cromarty. Looking south-east. Folded and thrust masses of Torridon Sandstone and Cambrian quartzite. Crags formed of quartzites of the Eriboll Sandstone Formation (Lower Cambrian), which have been tilted to dip east, and have been repeated by several minor thrusts. Small outliers of mudstones of the An t-Sron Formation occur near the summit. The dark slopes on the lower right are formed of Torridonian sandstones (Applecross Formation), underlying the Cambrian rocks. [NG 9520 6110]

[P000230](#) B00087 Beinn Eighe, from Glen Grudie. Looking south-south-east. Ross & Cromarty. A mountain of Torridonian sandstone capped unconformably by quartzite, distant view of Ruadh Stac Mor with Sail Mhor on the right. A stand of Scots pine is in the foreground. These outliers of Cambrian rocks on the western end of the Beinn Eighe ridge rest with a gentle unconformity on the much older Torridonian rocks. The structure contrasts significantly with the eastern end where the rocks are folded with minor thrusts into long parallel strips between intervening Torridonian sandstone. [NG 9520 6110]

[P214068](#) B00088 Liathach (Leagach) from Sail Mhor. Looking S. Panoramic view. A mountain of Torridon Sandstone capped unconformably by quartzite. (With B89-B91.) [NG 9250 5750]

[P214069](#) B00089 Liathach (Leagach) from Sail Mhor. Looking S. Panoramic view. A mountain of Torridon Sandstone capped unconformably by quartzite. (With B88, B90, B91.) [NG 9250 5750]

[P214070](#) B00090 Liathach (Leagach) from Sail Mhor. Looking S. Panoramic view. A mountain of Torridon Sandstone capped unconformably by quartzite. (With B88, B89, B91.) [NG 9250 5750]

[P214071](#) B00091 Liathach (Leagach) from Sail Mhor. Looking S. Panoramic view. A mountain of Torridon Sandstone capped unconformably by quartzite. (With B88, B89, B90.) [NG 9250 5750]

[P000231](#) B00092 Liathach (Leagach) rising 3456 ft. from the shores of Upper Loch Torridon, taken from from Sail Mhor at the western end of the Beinn Eighe ridge. The peak is Spidean a' Choire Leith (peak of the grey corrie). Looking south. Ross & Cromarty. A mountain of Torridonian sandstone capped unconformably by Cambrian basal quartzite with a very small outcrop of pipe rock on the extreme summit. The lighter Cambrian rocks markedly contrast with the darker, lower, Torridonian red arkoses and pebbly grits. [NG 9250 5750]

[P001679](#) B00093 Loch Clair, 5.230 km. south-west of Kinlochewe, Ross & Cromarty. Kishorn thrust runs through loch, separating foreland on the right from Kishorn Nappe to the left. Sinuous esker in foreground. Sgurr Dubh, the hill to the right of the loch, is made of Torridonian sandstone overlain by Cambrian quartzite, which have been folded together and cut by small thrusts. The Kishorn thrust runs underneath the loch, dipping to the left, and the hill to the left is made of inverted Torridonian strata overlain by a thin layer of Lewisian gneiss. At near side of loch, the sinuous ridge is probably an esker, i.e. a deposit of sand and gravel laid down by meltwater flowing in a channel within a glacier, and then dropped down onto the land surface when the ice melted. [NH 0010 5750]

[P000232](#) B00094 Lochan an Iasgaich, 8.851 km. south-west of Kinlochewe. A fine example of the 'Ceud Cnoc' or 'Thousand Hills' topography. Ross & Cromarty. An assemblage of hummocky terminal and lateral moraines surrounds the loch marking the retreat of the glaciers that filled the valley of Glen Torridon. The loch in foreground is dammed by cones of debris. The most widespread deposits left by the wasting ice as the glaciers retreated are these hummocky moraines, often interspersed with gravels and sheets of boulder clays. They cover large areas of the lower ground of central Sutherland and the valley bottoms in the more mountainous west. [NG 9580 5650]

[P000233](#) B00095 Lochan an Iasgaich, 8.851 km. south-west of Kinlochewe. A fine example of the 'Ceud Cnoc' or 'Thousand Hills' topography. Ross & Cromarty. An assemblage of hummocky terminal and lateral moraines left by the wasting ice as the glaciers retreated at the end of the last ice age. The hills in the distance are mainly Torridonian sandstone and Cambrian quartzites. [NG 9580 5650]

[P001683](#) B00122 Fuar Tholl, Achnashellach, Ross & Cromarty. Looking north-west. Mountain of folded and thrust Torridon Sandstone. Cambrian quartzite in foreground. Exposures of quartzite of the Lower Cambrian Eriboll Formation in stream (left foreground); the same rock also forms Sgurr a' Mhuillinn (left). Fuar Tholl (centre distance) is made of gently folded Torridonian sandstone (Applecross Formation). [NG 9750 4890]

[P001684](#) B00123 Fuar Tholl, Achnashellach, Ross & Cromarty. Looking north-west. Mountain of folded and thrust Torridon Sandstone. Cambrian quartzite in foreground. Exposures of quartzite of the Lower Cambrian Eriboll Formation in stream (foreground). Fuar Tholl (centre distance) is made of gently folded Torridonian sandstone (Applecross Formation). A small infold of Cambrian quartzite occurs on the left side of the mountain, just out of view. The Torridonian strata can be seen to dip to the left on the skyline, but in the middle distance dip towards the camera. [NG 9750 4890]

[P001685](#) B00124 Coire Lair, Achnashellach, with Sgorr Ruadh in background, Ross & Cromarty. Glaciated surface of Torridonian sandstone. The large ice-smoothed surface of red, slightly pebbly Torridonian sandstone (Applecross Formation) contains many glacial striae, grooves cut in the rock by stones held by the ice while it was moving over the rock. On this surface they run from left to right across the photo. In the background is Sgorr Ruadh, which consists largely of Torridonian sandstone. A small outlier of Cambrian quartzite occurs just west (right) of the main summit. It

forms the core of a syncline whose complementary anticline has been cut out by a thrust. [NG 9750 5050]

[P001686](#) B00125 Fuar Tholl and Creag Mannrichean from Coire Lair, Achnashellach, Ross & Cromarty. Looking south. Torridonian sandstone thrust over Cambrian quartzite. The main part of Fuar Tholl (left and centre) is made of Torridonian sandstone (Applecross Formation) dipping gently to the left. On Creag Mannrichean, the Torridonian rocks dip to the right at the top of the higher crag, but dipping to the left below the snow patch and on the right-hand crag. To the right of the right-hand crag, the white scree marks an outcrop of Cambrian quartzite (Eriboll Formation) which occurs on the left side of the mountain, just out of view. On this side of the mountain the upper contact of the quartzite is a thrust, which has moved westwards along the axial plane of a fold which is preserved on the southern side of the mountain. [NG 9750 4890]

[P001687](#) B00126 Creag Mannrichean, Bealach Mor, etc. Achnashellach, Ross & Cromarty. Torridonian sandstone thrust over Cambrian quartzite (nearer views of part B00125). The main part of Fuar Tholl (left and centre) is made of Torridonian sandstone (Applecross Formation) dipping gently to the right at the top of the left-hand crag, but dipping to the left below the snow patch and on the right-hand crag. To the right of the right-hand crag, the white scree marks an outcrop of Cambrian quartzite (Eriboll Formation) occurs on the left side of the mountain, just out of view. On this side of the mountain the upper contact of the quartzite is a thrust, which has moved westwards along the axial plane of a fold which is preserved on the southern side of the mountain. [NH 0020 4850]

[P001688](#) B00127 Creag Mannrichean, Bealach Mor, etc. Achnashellach, Ross & Cromarty. Torridonian sandstone thrust over Cambrian quartzite. Outcrop of thrust plane (nearer views of part No. B00125). The upper main part of Fuar Tholl (left and centre) is made of Torridonian sandstone (Applecross Formation) dipping gently to the right. Creag Mannrichean and the lower part of Fuar Tholl, the Torridonian rocks dip to the left. At the extreme right, is the thrust plane along which the Torridonian rocks have been thrust over Lower Cambrian Eriboll Formation quartzites. [NH 0020 4850]

[P001689](#) B00128 Creag Mannrichean, Bealach Mor, etc. Achnashellach, Ross & Cromarty. Torridonian sandstone thrust over Cambrian quartzite. Near view of outcrop of thrust plane. Above the white scree are Torridonian (Applecross Formation) sandstones which have been thrust over Cambrian quartzite (Eriboll Formation). The Cambrian outcrop, marked by pale scree, lies in the core of a synclinal fold whose upper limb has been removed by the thrust. The break of slope below the pale scree probably marks the lower contact of the Cambrian rocks. [NH 0020 4850]

[P001690](#) B00129 Creag Mannrichean, Achnashellach, Ross & Cromarty. Cliff of folded and thrust Torridon Sandstone. The large crag consists of Torridonian (Applecross Formation) sandstone dipping gently to the right. In the foreground the bedding appears to be folded in an anticline, but the fracturing associated with the folding has made the bedding harder to follow. The scree slope beneath the main cliff may conceal further thrusts. [NH 0020 4850]

[P214095](#) B00130 Creag Mannrichean, Achnashellach. Cliff of folded and thrust Torridon Sandstone. [NH 0020 4850]

[P001691](#) B00131 Sgorr Ruadh from the north-east, Achnashellach, Ross & Cromarty. A mountain formed of thrust Torridon Sandstone with wedges of Cambrian quartzite. Sgorr Ruadh consists largely of Torridonian sandstone. An infold of Cambrian quartzite on the western slope of the mountain has its base at the prominent pale bed in the middle ground. The top of the outlier occurs at the break of slope below the left summit. The outlier forms the core of a syncline whose complementary anticline has been cut out by a thrust. The quartzite is easily distinguished by its pale colour and tendency to form screes. [NG 9590 5050]

[P001692](#) B00132 North face of Sgorr Ruadh, Achnashellach, Ross & Cromarty. Thrust plane; Torridonian sandstone thrust over Cambrian quartzite, and showing folding in Torridonian sandstone just above thrust plane. The abrupt change in colour, with the pale Cambrian quartzite below and the dark Torridonian sandstone above, marks the plane of the thrust. Gentle, open folds of the bedding in the Torridonian strata can be seen above the thrust plane. The quartzite below the thrust plane has been shattered and broken into small blocks, but at the bottom right in the photo the bedding in the quartzites is conspicuous. [NG 9590 5050]

[P214096](#) B00133 N. face of Sgorr Ruadh, Achnashellach. Thrust plane; Torridon Sandstone thrust over Cambrian quartzite, and showing folding in Torridon Sandstone just above thrust plane. [NG 9590 5050]

[P214097](#) B00134 0.805 km. N. of Sgorr Ruadh, Achnashellach. Thrust wedges of Cambrian quartzite in Torridon Sandstone. [NG 9590 5130]

[P214098](#) B00135 S. face of Beinn Liath Mhor, Achnashellach. Folded Torridonian and Cambrian strata with thrust Torridon Sandstone on right (dark), above bare thrust plane of quartzite (light). [NG 9700 5100]

[P214099](#) B00136 S. face of Beinn Liath Mhor, Achnashellach. Folded Torridonian and Cambrian strata with thrust Torridon Sandstone on right (dark), above bare thrust plane of quartzite (light). [NG 9700 5100]

[P001693](#) B00137 South face of Beinn Liath Mhor, Achnashellach, Ross & Cromarty. Folded Torridonian and Cambrian strata with thrust Torridonian sandstone on right, above bare thrust plane of quartzite. The quartzite and sandstone are easily distinguished by colour. The slight angular discordance between the Torridonian (dark) and Cambrian (pale) strata becomes harder to see where the rocks are folded. White screes are developed at the foot of the Cambrian outcrop. Just below the skyline on the right is a bare surface of quartzite, marking the plane of the thrust along which the Torridonian strata have been moved upwards and westwards. [NG 9700 5100]

[P001694](#) B00138 South face of Beinn Liath Mhor, Achnashellach, Ross & Cromarty. Folded Torridonian and Cambrian strata with thrust Torridonian sandstone on right, above bare thrust plane of quartzite. The quartzite and sandstone are easily distinguished by colour. On the left of the picture a complementary syncline and anticline have depressed then raised the plane of unconformity of Cambrian on Torridonian strata. White screes are developed at the foot of the Cambrian outcrop. Just below the skyline on the right is a bare surface of quartzite, marking the plane of the thrust along which the Torridonian strata have been moved upwards and westwards. [NG 9700 5100]

[P001695](#) B00139 North face of Beinn Liath Mhor, Achnashellach, Ross & Cromarty. Folded and thrust Cambrian quartzite and Torridonian sandstone. In right of view Cambrian quartzite dipping to the left overlies Torridonian sandstone. Just east of summit, the rocks are folded in a syncline whose easterly (left) limb is vertical to overturned. The complementary antiform, bringing up Torridonian strata to the level of the ridge, has been cut out and replaced by a thrust. A second outcrop of Cambrian strata in the left of the photo, is truncated to the left by a second thrust. [NG 9700 5100]

[P001696](#) B00140 North face of Beinn Liath Mhor, Achnashellach, Ross & Cromarty. Folded and thrust Cambrian quartzite and Torridonian sandstone. At extreme right of view Cambrian quartzite dipping to the left overlies Torridonian sandstone. Dips to the left continue to just left of centre of quartzite outcrop. From there to the thrust, where dark Torridonian rocks are moved over Cambrian strata, the rocks are folded in a syncline whose easterly (left) limb is vertical to overturned. The complementary antiform, bringing up Torridonian strata to the level of the ridge, has been cut out and replaced by a thrust. A second outcrop of Cambrian strata in the far left of the photo, is truncated to the left by a second thrust. [NG 9700 5100]

[P001697](#) B00141 North face of Beinn Liath Mhor, Achnashellach, Ross & Cromarty. Folded and thrust Cambrian quartzite and Torridonian sandstone. At extreme right of view Cambrian quartzite dipping to the left overlies Torridonian sandstone. Dips to the left continue to just left of centre of quartzite outcrop. From there to the thrust, where dark Torridonian rocks are moved over Cambrian strata, the rocks are folded in a syncline whose easterly (left) limb is vertical to overturned. The complementary antiform, bringing up Torridonian strata to the level of the ridge, has been cut out and replaced by a thrust. The dip of the Torridonian strata in the foreground is visibly less steep than that of the Cambrian quartzite. The lochans occupy hollows scoured by ice in the floor of the corrie. [NG 9700 5100]

[P001698](#) B00142 South-east face of Beinn Liath Mhor, Achnashellach, Ross & Cromarty. Folded and thrust Cambrian quartzite and Torridonian sandstone. Eastern edge of one infold of Cambrian quartzite, cut off by a thrust, on left. Centre crag made of Torridonian (Applecross Formation) sandstone. Low part of ridge, covered in pale scree, marks another infold of Lower Cambrian (Eriboll Formation) quartzite. This outlier is bounded on the east by an anticline, although this is cut out by thrusting not far to the north. The eastern peak of the mountain is made of Torridonian sandstone with a small cap of gently-dipping quartzite on top. [NG 9700 5100]

[P001699](#) B00143 South-east face of Beinn Liath Mhor, Achnashellach, Ross & Cromarty. Folded and thrust Cambrian quartzite and Torridonian sandstone. Two synclinal infolds of Cambrian quartzite are separated by anticlinal cores along this ridge. The anticline bounding the western (left) infold has been largely cut out by thrusting, but the eastern anticline is virtually intact, though it is cut out progressively to the north by thrusting. The folding can be followed by following the dip of the Torridonian strata in the lower part of the cliffs. [NG 9700 5100]

[P214100](#) B00144 SE face of Bienn Liath Mhor, Achnashellach. To show dispersion of talus by torrential action. [NG 9700 5100]

[P001700](#) B00145 View looking down Coire Lair, Achnashellach, Ross & Cromarty. Glaciated surfaces, moraines and later screes. Typical U-shaped glaciated valley with steep rocky sides, and glacially smoothed rock exposures in floor. In the distance large spreads of hummocky glacial deposits were laid down during deglaciation. The Torridonian rocks to the right tend to form near-vertical cliffs, while the Cambrian quartzite to the left breaks into smaller fragments, which form extensive screes. [NG 9750 5050]

[P214101](#) B00146 Distant view of Liathach (Leagach) from head of Coire Lair, Achnashellach. Panoramic view. A mountain of Torridon Sandstone capped unconformably by quartzite. Moutonneed surface of Torridon Sandstone in middle distance. Lateral moraines to left. [NG 9230 5750]

[P214102](#) B00147 Distant view of Liathach (Leagach) from head of Coire Lair, Achnashellach. Panoramic view. A mountain of Torridon Sandstone capped unconformably by quartzite. Moutonneed surface of Torridon Sandstone in middle distance. Lateral moraines to left. [NG 9230 5750]

[P214553](#) B00778 Looking NNE from near Inverchoran, Strath Conon. River valley developed along shatter belt of the Strath Conon fault. [NH 2550 5250]

[P001824](#) B00779 Looking north-north-east from near Inverchoran, Strath Conon. River valley developed along shatter belt of the Strathconon fault. The Strathconon Fault extends over 100 km. across Scotland from Loch Hourn to Garve and beyond. It is a strike-slip fault with a sinistral displacement of the order of 20 km. The rocks adjacent to the fault have been weakened by intense fracturing and the zones of weakness have been exploited by several rivers. Here the River Conon has excavated a steep-sided valley along the line of the fault between Inverchoran and Milltown. The rocks on the left side of the fault are pelites of the Moine Supergroup (?Glenfinnan Subgroup), while those on the right are Lewisian gneisses which have been thrust and folded along with the Moine rocks during the Caledonian Orogeny. [NH 2550 5250]

[P001825](#) B00780 Gleann Meinich, 6 km. west-south-west of Strath Conon Inn, Ross & Cromarty. Glacial U-shaped valley with truncated spur. Bedrock is psammite and pelite of Moine Supergroup (?Glenfinnan Subgroup) with, in distance Lewisian gneisses which have been thrust and folded along with the Moine rocks during the Caledonian Orogeny. Glacial U-shaped valley with truncated spur in distance on right. Possible terminal moraine crosses valley in distance. Peaty alluvial flat in foreground. [NH 2550 5350]

[P001826](#) B00781 Gleann Meinich, 6 km. west-south-west of Strath Conon Inn, Ross & Cromarty. Glacial U-shaped valley with truncated spur. Bedrock is psammite and pelite of Moine Supergroup (?Glenfinnan Subgroup) with, in far distance, Lewisian gneisses which have been thrust and folded along with the Moine rocks during the Caledonian Orogeny. Glacial U-shaped valley with truncated spur in distance on right. Possible terminal moraine crosses valley in distance. Lateral moraine ascends hillside on left. Peaty alluvial flat in foreground. [NH 2550 5350]

[P001827](#) B00782 Gleann Meinich, 6 km. west-south-west of Strath Conon Inn, Ross & Cromarty. Glacial U-shaped valley with truncated spur. Bedrock is psammite and pelite of Moine Supergroup (?Glenfinnan Subgroup) with, in far distance, Lewisian gneisses which have been thrust and folded along with the Moine rocks during the Caledonian Orogeny. Glacial U-shaped valley with truncated spur in distance on right. Possible terminal moraine crosses valley in distance. Peaty alluvial flat in foreground. [NH 2550 5350]

[P214554](#) B00783 Sgurr a' Ghlas Leathaid from Glen Meinich, 7.242 km. W. of Strath Conon Inn. A mountain of almost vertical siliceous Moine schist. Glaciated abraded spur on side of valley overdeepened by glacial erosion. Hanging valley



on right, and moraines in foreground. [NH 2550 5350]

[P214555](#) B00784 Sgurr a' Ghlas Leathaid from Glen Meinich, 7.242 km. W. of Strath Conon Inn. A mountain of almost vertical siliceous Moine schist. Glaciated and abraded spur on side of valley overdeepened by glacial erosion, and moraines in foreground. [NH 2550 5350]

[P001846](#) B00912 Sgurr Dubh, Coulin, Ross & Cromarty. A mountain of folded Torridonian sandstone and Cambrian quartzite. Lower slopes of Sgurr Dubh (centre distance) consist of dark red Torridonian (Applecross Formation) sandstone folded into a complex syncline. On the upper slopes Lower Cambrian (Eriboll Formation) quartzites form the core of the syncline. On the western slopes, the Torridonian sandstone is thrust along relatively steeply-dipping thrust planes over Cambrian quartzite. In the far distance is Liathach, a mountain composed of Torridonian sandstone with a cap of Cambrian quartzite. Note isolated Scots pines along river. [NG 9780 5680]

[P214610](#) B00913 Ruadh-stac Mor, Beinn Eighe, from Glen Grudie, Ross & Cromarty. Looking south-south-east. A mountain of Torridon Sandstone capped unconformably by quartzite. See also B00087, Ruadh-stac Mor). Abrupt colour change on Ruadh-stac Mor (centre-right) marks unconformity at base of Lower Cambrian Eriboll Formation quartzites, which dip gently to left, while underlying Torridonian sandstones are horizontally bedded. A small outlier of quartzite occurs on Sail Mhor (far right). Ruadh-stac Beag (extreme left) and Sgurr Ban are made of quartzite which has been repeated by numerous small thrusts, and has also been shattered, leading to the formation of widespread screes. [NG 9520 6120]

[P000342](#) B00914 Achnasheen. Ross & Cromarty. Glaciofluvial terraces. A classic landform site as an example of glaciofluvial outwash and delta terraces formed by meltwater deposition in an ice-dammed lake during the Loch Lomond Stadial c. 11,000–10,000 years ago. The large terrace on the left is designated the highest terrace, the railway indicated by the line of telegraph poles runs at its base on a lower terrace. On the right numerous fragments of terraces remain with drift mounds on the upper slopes. The building is the Ledgowan Hotel. [NH 1550 5850]

[P000343](#) B00915 Achnasheen. Ross & Cromarty. Glaciofluvial terraces. A classic landform site as an example of glaciofluvial outwash and delta terraces formed by meltwater deposition in an ice-dammed lake during the Loch Lomond Stadial c. 11,000–10,000 years ago. Conspicuous high-level terraces and numerous fragments of lower level terraces occur down to the present river flood plain. The height of the terraces are in the range of 25–30 metres above the existing flood plain. [NH 1550 5850]

[P000344](#) B00916 Achnasheen. Ross & Cromarty. Glaciofluvial terraces. A classic landform site as an example of glaciofluvial outwash and delta terraces formed by meltwater deposition in an ice-dammed lake during the Loch Lomond Stadial c. 11,000–10,000 years ago. The large terrace on the left is designated the highest terrace, the railway indicated by the line of telegraph poles runs at its base on a lower terrace. On the right numerous fragments of terraces remain with drift mounds on the upper slopes. Ledgowan Lodge is on the extreme left with the Ledgowan Hotel left of centre. [NH 1550 5850]

[P000345](#) B00917 Achnasheen. Ross & Cromarty. Glaciofluvial terraces. A classic landform site as an example of glaciofluvial outwash and delta terraces formed by meltwater deposition in an ice-dammed lake during the Loch Lomond Stadial c. 11,000–10,000 years ago. A view of the terraces with the Achnasheen railway station in the foreground just before the railway crosses the flood plain of the River Bran. The Ledgowan Hotel is in the distance. [NH 1550 5850]

[P214611](#) B00918 Achnasheen. Fluvioglacial and alluvial terraces. [NH 1550 5850]

[P214612](#) B00919 Glen Meinich, 5.633 km. WSW of Strath Conon Inn. Glacially deepened valley showing lateral and terminal moraines. See also B780- B782. [NH 2650 5350]

[P000349](#) C00029 The greater part of the Beinn Eighe ridge is composed of Cambrian quartzites resting unconformably on the much older Torridonian Sandstone. A small patch of Fucoïd Beds and overlying Serpulite Grit occur on Sgurr Ban. The conspicuous valley in the centre is the Allt na Doire-daraich, a track can be seen just to the left ascending the mountain. Shows three platforms of denudation, mountain peaks forming 'monadnocks'; intermediate platform cut out of

thrust quartzite and Torridon sandstone; the valley above Loch Maree not seen but (to the right) now being filled up by a delta. [NG 9650 6100]

[P000350](#) C00031 The unconformity represents a substantial break in the geological record. The Cambrian rocks are not in continuous succession with the much older Torridonian rocks. Cambrian quartzite resting unconformably on Torridonian sandstone. The loch is located in a typical hanging corrie. The last glaciers would have retreated into valleys such as these. [NG 9420 6080]

[P214644](#) C00032 Beinn Liath Bheag, 4.8 km. NNW of Achnashellach Lodge. Infolds of Cambrian quartzite in Torridon Sandstone. [NG 9800 5300]

[P214645](#) C00033 Beinn Liath Bheag, 4.8 km. NNW of Achnashellach Lodge. Infolds of Cambrian quartzite in Torridon Sandstone. [NG 9800 5300]

[P001902](#) C01306 West end of Loch a' Mhuillidh, Glen Strathfarrar, Inverness-shire. Irregular fluvioglacial terrace. Low terrace occupies foreground and extends on other side of inlet. The top is just below the level of the road. Beyond are typical ice-smoothed rock knobs. The loch basin has been glacially overdeepened. This typically occurs because of variations in hardness of the bedrock. The loch has been eroded in pelite (metamorphosed mudstone), commonly garnetiferous and gneissose, belonging to the Moine Supergroup. Most of the distant hills are made of Moine psammite (metamorphosed sandstone). [NH 2650 3750]

[P001903](#) C01307 Loch a' Mhuillidh, Glen Strathfarrar, Inverness-shire. Looking east. In distance on left - glacial dry valley. At far end of loch, to left of small hill, is overflow channel cut by meltwater during the glaciation of Glen Strathfarrar. Much of the valley cut by the meltwaters has been filled in by postglacial alluvium, and the flat ground is occupied by the hydroelectric power station exploiting the waters of the Monar Dam. The loch basin has been eroded in pelite (metamorphosed mudstone), commonly garnetiferous and gneissose, belonging to the Moine Supergroup. Most of the distant hills are made of Moine psammite (metamorphosed sandstone). [NH 2750 3850]

[P001904](#) C01308 Torr a' Chlarsair, 1.8 km. west of Ardchuik, Glen Strathfarrar, Inverness-shire. Small hill separating two glacial dry valleys on north side of present course of River Farrar. Silted up lake-basin in foreground. East end of postglacial lake in foreground (see photos C01310, C01311). Rock bar damming lake in middle distance (just above road) has two notches, possibly overflow channels when present exit to lake basin was still blocked by ice. Left notch is sizeable gully with oversteepened rock face extending up to skyline. Right notch is followed by road; it is only a small distance above present outlet to basin. Bedrock is mostly psammite (metamorphosed sandstone), with units of pelite (metamorphosed mudstone), here commonly garnetiferous and gneissose, up to 0.5 km. wide. All these rocks belong to the Moine Supergroup (probably Glenfinnan Group). [NH 2550 3850]

[P001905](#) C01309 2.4 km. west of Ardchuik, Glen Strathfarrar, Inverness-shire. In middle distance - two glacial dry valleys on north side of River Farrar. On left are remnants of a fluvioglacial terrace. Silted-up lake basin in the foreground. East end of postglacial lake in foreground (see photos C01310, C01311). Low terrace of glaciofluvial deposits in left foreground to middle ground, crossed by road. Rock bar damming lake in middle distance (just above road) has two notches, possibly overflow channels when present exit to lake basin was still blocked by ice. Bedrock is mostly psammite (metamorphosed sandstone), with units of pelite (metamorphosed mudstone), here commonly garnetiferous and gneissose, up to 0.5 km. wide. All these rocks belong to the Moine Supergroup (probably Glenfinnan Group). [NH 2450 3850]

[P001906](#) C01310 From near Inchvuilt, Glen Strathfarrar, Inverness-shire. Looking west. Silted-up lake basin on the River Farrar. A lake about 2 km. long and up to 500 m. wide formed in postglacial times has now been filled with clay and silt. The level ground has been partly drained by ditches. The lake basin was dammed by a rock bar. The gneissose pelites (metamorphosed mudstones) forming the bar may have been slightly more resistant to erosion than the flaggy psammites (metamorphosed sandstones) in which the basin is carved. At the west end of the loch, a 1.5 km.-wide inlier of Lewisian gneiss, terminated to the west by the Sgurr Beag Slide, crosses Glen Strathfarrar. [NH 2250 3850]

[P001907](#) C01311 From near Inchvuilt, Glen Strathfarrar, looking east, Inverness-shire. Silted-up lake basin on the River Farrar. A lake about 2 km. long and up to 500 m. wide formed in postglacial times has now been filled with clay and silt. The level ground has been partly drained by ditches. The lake basin was dammed by a rock bar, seen in distance. The glacial overdeepening of valleys is typically due to variations in hardness of the bedrock. Here the gneissose pelites (metamorphosed mudstones) forming the bar may have been slightly more resistant to erosion than the flaggy psammities (metamorphosed sandstones) in which the basin is carved. [NH 2250 3850]

[P001908](#) C01312 Distant view from near Braulen Lodge, Strathfarrar, Inverness-shire. Reworked Lewisian in foreground. Sgurr na Lapaich, capped by Moine metasediments, in distance. This part of Glen Strathfarrar, together with the stretch of country leading towards the lower slopes of Sgurr na Lapaich, is underlain by an inlier of Lewisian gneiss, folded with the Moine rocks and remetamorphosed during the Caledonian orogeny. To the left and right, and also on the upper slopes of Sgurr na Lapaich, are Moine metasediments, which here are largely pelitic, i.e. formed by metamorphism of mudstones. The broad valley of Glen Strathfarrar narrows in the middle distance, where the river draining Loch Monar joins the River Farrar. [NH 2350 3850]

[P001909](#) C01313 East face of Sgurr na Muice, 3 km. north of Braulen Lodge, Strathfarrar, Inverness-shire. Lewisian gneiss underlying band of gneissose Moine pelite, and massive Moine psammite. Lower slopes of mountain are underlain by a thin slice of Lewisian gneiss, reworked during the Caledonian orogeny. Close to the lowest snow patch on the right, is the Sgurr Beag Slide, along which the Moine Supergroup rocks have moved over the Lewisian. They are mostly psammities (metamorphosed sandstones), some almost quartzites, and form the steep, regularly-jointed face near the summit of the mountain. Between the two prominent snow-filled gullies is a layer of gneissose pelite (metamorphosed mudstone). [NH 2250 4150]

[P215718](#) C01314 E. face of Sgurr na Muice, 3.2 km. N. of Broulin Lodge, Strathfarrar. Lewisian gneiss (I) underlying band of pelitic moine gneiss (II), and massive siliceous Moine granulite (III). [NH 2250 4150]

[P215719](#) C01315 Allt na Feithe Baine, 2.4 km. SSW of Broulin Lodge. Rock structure resembling sheared conglomerate which occurs along the junction of old gneiss and Moine granulites. [NH 2250 3650]

[P215720](#) C01316 Allt na Feithe Baine, 2.4 km. SSW of Broulin Lodge. Rock structure resembling sheared conglomerate which occurs along the junction of old gneiss and Moine granulites. [NH 2250 3650]

[P002101](#) C01317 The main phases of the Caledonian Orogeny which included folding and igneous emplacement were followed by a period of crustal uplift and cooling during which ductile deformation gave rise to fracturing. The Strathconon Fault formed during this period and is part of the major suite of north-east - south-west trending faults that include the Great Glen Fault and the Strath Glass Fault. A river valley developed along the shatter belt of the major Strathconon Fault. The main phase of movement along the fault occurred at the end of the Caledonian Orogeny, thought to be pre-Devonian or early Devonian. [NH 2650 5050]

[P215721](#) C01318 Looking NNE from near Inverchoran, Strath Conon. River valley developed along shatter belt of the Strathconon fault. [NH 2650 5050]

[P002102](#) C01319 Looking north-north-east from near Inverchoran, Strath Conon, Inverness-shire. The River Meig valley developed along the shatter belt of the major Strathconon Fault. The fault has formed a line of weakness from Loch Houran to the Kildermorie Forest in Easter Ross. This enabled preferential erosion during the last glaciation to form the U-shaped valley and now erosion by the river. Note the shingle banks and the cut-off channel in the foreground. [NH 2650 5050]

[P215722](#) C01320 Looking NNE from near Inverchoran, Strath Conon. River valley developed along shatter belt of the Strathconon fault. [NH 2650 5050]

[P002103](#) C01321 Near Achnasheen, Ross and Cromarty. Fluvioglacial terraces of sand and gravel. The height of the terraces is about 25 m. above the present floor of the valley. The terraces were deposited during the retreat of the last main glaciation. Valley glaciers released meltwaters which laid down extensive spreads of sand and gravel whenever the

gradient levelled out. These deposits are typical. Another terrace can be seen in the background. [NH 1650 5850]

[P002104](#) C01322 Near Achnasheen, Ross and Cromarty. A fluvioglacial terrace showing alternations of fine and coarse gravel, with current-bedded laminated sands and capping of coarse torrential gravel in the meander scar. The terrace was deposited during the retreat of the last main glaciation. Valley glaciers released meltwaters which laid down extensive spreads of sand and gravel whenever the gradient levelled out. These deposits are typical. Another terrace can be seen in the background. [NH 1650 5850]

[P002725](#) D01202 Beinn Eighe, 8.9 km. west of Kinlochewe, Ross & Cromarty. In the cliff face is the unconformity of Cambrian quartzite on Torridonian sandstone. Loch Coire Mhic Fhearchair in the foreground corrie. The Basal Cambrian Quartzites dip gently away from the cliff face. The unconformity represents a major break in the sedimentation history. After the deposition of the Torridonian there followed a period of 200 Ma during which there was crustal warping and erosion and then finally deposition of the Cambrian strata on a remarkably flat marine erosion surface in what was a progressively subsiding shelf sea. [NG 9410 6120]

[P219366](#) D02086 Achnashellach Hills. Achnashellach Hills. Prominent peaks showing white Cambrian quartzite unconformably against Torridonian. Foreground Torridonian sandstone. [NG 9550 4550]

[P219367](#) D02087 Fuar Tholl. Fault (?) scarp, the 'Mainreachain Buttress', in Torridonian sandstone, gently dipping bedding planes well displayed on main crag. [NG 9750 4890]

[P219368](#) D02088 Sgor Ruadh. Ridge of Torridonian sandstone showing strong bedding and well-developed jointing. Cambrian/Torridonian unconformity just visible on peaks in the background. [NG 9590 5060]

[P219369](#) D02089 Beinn Liath Mhor. Alternate slices of white Cambrian quartzite and Torridonian sandstone, resulting from a series of repetitive thrust movements. [NG 9830 5160]

[P219370](#) D02090 Beinn Eighe/Liathach from Glen Docherty. Moine schists of foreground in 'thrust' contact against Torridonian sandstone which is unconformably overlain by white Cambrian quartzite. [NH 0550 6350]

[P219371](#) D02091 Beinn Eighe/Liathach from Glen Docherty. Moine schists of foreground in 'thrust' contact against Torridonian sandstone which is unconformably overlain by white Cambrian quartzite. [NH 0550 6350]

[P219372](#) D02092 Beinn Eighe. Well developed corries, due to ice scour, in Cambrian quartzite. [NH 0750 6750]

[P219373](#) D02093 Beinn Eighe. Corrie and glacially smoothed shoulder, with strong bedding picked out in background peak (Sail Mhor). The main Cambrian/Torridonian unconformity is well displayed. [NH 0850 6850]

[P219672](#) D02737 Viewpoint from Glen Torridon Road, looking S. into unnamed river valley. Hummocky moraines of probable Loch Lomond Readvance age. Glen Torridon. [NG 9540 5660]

[P219713](#) D02837 Torridon. Meall Dearg and Maol Chean-dearg from Torridon. Torridonian sandstone. [NC 9040 5550]

[P219714](#) D02838 Glen Torridon. Cambrian quartzite screes. White screes of Cambrian quartzite on Sgurr Ban (Beinn Eighe). [NC 9610 5690]

[P219715](#) D02839 Glen Torridon. White screes of Cambrian quartzite on Sgurr Ban (Beinn Eighe). The gully on the left-hand side is eroded along the line of a fault. The knoll in the middle distance is Torridonian sandstone which underlies the Cambrian. [NC 9610 5690]

[P219781](#) D03028 Glen Grudie. Ruadh-stac Mor and Sail Mhor (Beinn Eighe). [NG 9590 6610]

[P219782](#) D03029 Glen Torridon. Liathach. [NG 9580 5680]

## [Sheet 91 Gairloch](#)

[P214072](#) B00096 Near roadside, below Badnascallaig, Gairloch. Sand dykes (marked) probably of Torridonian or Triassic age, in hornblende schist of the Lewisian Gneiss Series. [NG 8550 7150]

[P214073](#) B00097 Near roadside, below Badnascallaig, Gairloch. Crumpled hornblende schist and quartz veins in Lewisian Gneiss Series, trend NW. [NG 8550 7150]

[P001680](#) B00098 Kerry River Falls, Gairloch, Ross & Cromarty. Waterfall in gorge eroded along fault cutting Loch Maree Group rocks (Lewisian). The river has been eroded along the line of a fault cutting rocks of the Loch Maree Group, part of the Lewisian complex. These are a group of metasedimentary and metavolcanic rocks, including metamorphosed limestone and banded iron-formation. The dark rocks on the left of the waterfall are hornblende schists (?metavolcanic rocks), which are displaced laterally about 500 m. upstream. The cliff on the right is made of micaceous metamorphosed sandstones and siltstones, possibly with granitic veins. [NG 8370 7210]

[P001681](#) B00099 Kerry River Falls, Gairloch, Ross & Cromarty. Waterfall in gorge eroded along fault cutting Loch Maree Group rocks (Lewisian). The river has been eroded along the line of a fault cutting rocks of the Loch Maree Group, part of the Lewisian complex. These are a group of metasedimentary and metavolcanic rocks, including metamorphosed limestone and banded iron-formation. The dark rocks on the left of the waterfall are hornblende schists (?metavolcanic rocks), which are displaced laterally about 500 m. upstream. The cliff on the right is made of micaceous metamorphosed sandstones and siltstones, possibly with granitic veins. [NG 8370 7210]

[P214074](#) B00100 Near Creag Mhor Thollaidh, Poolewe. Fragments of banded hornblende-biotite-gneiss in more acid material (a plutonic breccia). [NG 8650 7750]

[P214075](#) B00101 Near Creag Mhor Thollaidh, Poolewe. Fragments of banded hornblende-biotite-gneiss in more acid material (a plutonic breccia). [NG 8650 7750]

[P214076](#) B00102 Near Creag Mhor Thollaidh, Poolewe. Junction of one of the included fragments with the matrix shown in No. B100. [NG 8650 7750]

[P214077](#) B00103 Near Creag Mhor Thollaidh, Poolewe. Lewisian gneiss showing folds along nearly horizontal axial planes. [NG 8650 7750]

[P214078](#) B00104 Near Creag Mhor Thollaidh, Poolewe. Looking N. Landscape features of Lewisian gneiss. [NG 8650 7500]

[P214079](#) B00105 0.805 km. NE of Meall an Spardain, Poolewe. Rod-like or mullion structure in Lewisian gneiss. Poolewe anticline, produced by movements later than the dykes. [NG 8600 7650]

[P214080](#) B00106 Meall an Spardain, Poolewe. Junction of hornblende schist with banded hornblende gneiss. [NG 8550 7580]

[P214081](#) B00107 Meall an Spardain, Poolewe. Junction of hornblende schist with banded hornblende gneiss. [NG 8550 7580]

[P214082](#) B00108 Meall an Spardain, Poolewe. Junction of hornblende schist with banded hornblende gneiss. [NG 8550 7580]

[P214083](#) B00109 Meall an Spardain, Poolewe. Convoluted hornblende gneiss. Striations on surface to right are parallel to the slope of the mullion surface shown in No. C105. [NG 8650 7750]

[P214084](#) B00110 0.804 km. SW of Loch Thollaidh, Poolewe. Dyke of hornblende schist, 2 km. wide cutting Lewisian gneiss. [NG 8350 7750]

[P214085](#) B00111 0.805 km. SW of Loch Thollaidh, Poolewe. Dykes of hornblende schist in Lewisian gneiss. [NG 8350 7750]



[P214086](#) B00112 0.805 km. SW of Loch Thollaidh, Poolewe. Dykes of hornblende schist in Lewisian gneiss. [NG 8350 7750]

[P214087](#) B00113 About 0.805 km. WSW of Loch Thollaidh, Poolewe. Fine-grained and crumpled granulitic biotite gneiss. [NG 8350 7850]

[P214628](#) C00012 Roadside, 182.88 m. W. of Creag a' Chinn Duibh, Kerry River, Gairloch. Cliff face of mica schist with vertical foliation (Lewisian Gneiss Series). [NG 8100 7300]

[P214629](#) C00013 At Kerry River Falls, Bad an Scalaig, Gairloch. Contorted schist of the Lewisian Gneiss Series. The contortions are almost confined to the central band, the top and bottom portion of the section being nearly unaffected. [NG 8370 7210]

[P214630](#) C00014 At Loch Bad an Sgalaig, Gairloch. Hornblende schist, showing drawn-out feldspars (Lewisian Gneiss Series). [NG 8471 8571]

[P214631](#) C00015 Near Creag Mhor Thollaidh, Poolewe. Junction of large fragment of banded hornblende biotite gneiss with more acid material. [NG 8640 7760]

[P001851](#) C00016 1.5 km. north of Meall an Spardain, Poolewe, Ross & Cromarty. General view of Lewisian gneiss scenery in centre of Poolewe anticline. The largely quartzofeldspathic gneiss has been eroded during Pleistocene glaciations to produce an irregular, hummocky topography with many ice-smoothed surfaces. Poorly-drained hollows are occupied by lochans or filled with peat. The hills in the middle distance have ridges parallel to the direction of ice movement, and blocks have been plucked from the lee side of upstanding hillocks to form roches moutonnees. Linear north-west - south-east trending hollows have been eroded along the lines of the Scourie dykes. [NG 8550 7580]

## [Sheet 92 Inverbroom](#)

[P214046](#) B00053 W. side of Meall Buidhe, Cadha Beag, Little Gruinard. Felspathic gneiss with streaks and lenticles of basic (hornblendic) rock. [NG 9340 8970]

[P214047](#) B00054 W. side of Meall Buidhe, Cadha Beag, Little Gruinard. Felspathic gneiss with streaks and lenticles of basic (hornblendic) rock. [NG 9340 8970]

[P214048](#) B00055 W. side of Meall Buidhe, Cadha Beag, Little Gruinard. Felspathic gneiss with streaks and lenticles of basic (hornblendic) rock. [NG 9340 8970]

[P214049](#) B00056 W. side of Meall Buidhe, Cadha Beag, Little Gruinard. Basic mass with network of pegmatite. [NG 9340 8970]

[P214050](#) B00057 W. side of Meall Buidhe, Cadha Beag, Little Gruinard. Basic mass with larger veins of pegmatite. [NG 9340 8970]

[P214051](#) B00058 W. side of Meall Buidhe, Cadha Beag, Little Gruinard. Lumps of basic rock mainly composed of hornblende, separated by quartzo- felspathic material. [NG 9340 8970]

[P214052](#) B00059 W. side of Meall Buidhe, Cadha Beag, Little Gruinard. Lumps and fragments of more or less foliated basic rock in pegmatite gneiss. [NG 9340 8970]

[P214053](#) B00060 W. side of Meall Buidhe, Cadha Beag, Little Gruinard. Basic hornblende gneiss traversed by quartzo-felspathic (pegmatite) veins. [NG 9340 8970]

[P214054](#) B00061 W. side of Meall Buidhe, Cadha Beag, Little Gruinard. Rock face showing imperfect separation of hornblende and felspathic constituents. [NG 9340 8970]

[P214055](#) B00062 2.414 km. NW of Heights of Kinlochewe. Epidiorite dykes cutting thrust Lewisian gneiss (see also No. C23 half-plate.) [NH 0920 6580]

[P214056](#) B00063 NW of Heights of Kinlochewe. Gneiss showing basic knots and bands in more acid gneiss. [NH 0920 6580]

[P214057](#) B00064 NW of Heights of Kinlochewe. Gneiss showing basic knots and bands in more acid gneiss. [NH 0920 6580]

[P001669](#) B00065 Mullach Coire Mhic Fhearchair, 10 km. north of Kinlochewe, Ross & Cromarty. Escarpment of Cambrian strata (quartzite, etc.) with overthrust mass of Lewisian gneiss above Kinlochewe thrust plane. Thrust Lewisian gneiss in foreground, Torridon Sandstone in middle distance. In the distance, the hill on the left is made of undisturbed Torridonian sandstone (Applecross Formation), with subhorizontal dips. The pale-coloured, steeply-sloping part of Mullach Coire Mhic Fhearchair displays the Lower Cambrian Eriboll Sandstone and An t-Sron formations unconformably overlying the Torridonian rocks and dipping eastwards at about 20 degrees. At the summit, this succession is truncated by the Kinlochewe Thrust, which carries Lewisian gneiss over the Cambrian strata. The notch at the eastern edge of the photograph marks the line of a fault running diagonally across the photograph and throwing down the overthrust Lewisian rocks to the south-east, causing the Lewisian rocks to be exposed in the foreground. [NH 0750 7380]

[P001670](#) B00066 Slioch, from above Furnace, Loch Maree, Ross & Cromarty. Buttressed escarpment of Torridon Sandstone resting on irregular surface of Lewisian gneiss. Foreground consists of Lewisian gneiss. Pale-coloured rocks are feldspathic gneiss and granite and pegmatite sheets, but the almost 'bedded' appearance of the gneiss terrain is due to the large numbers of south-east dipping amphibolite sheets which form part of the Lewisian complex here. The Torridonian rocks (Applecross Formation) which form the upper part of Slioch were laid down on an irregular land surface under semi-arid conditions. At least 600 metres of relief in the pre-Torridonian surface can be demonstrated at Meall Each on the south side of Slioch. [NH 0050 6910]

[P001671](#) B00067 Meallan Ghobhar, south-east end of Loch Maree, Ross & Cromarty. Cambrian strata resting on Torridon Sandstone and overlain by thrust Lewisian gneiss, with infolds of Torridon Sandstone and Cambrian quartzite above Kinlochewe thrust plane. Panorama with B00068. Lower slopes consist of Torridonian sandstones (Applecross Formation). Prominent pale cliff with almost flat-lying bedding consists of quartzite of the Lower Cambrian Eriboll Sandstone Formation. The dark line near the top of the cliff marks the Kinlochewe Thrust plane, above which Lewisian gneiss has been overthrust from the east (back of picture). [NH 0700 5870]

[P001672](#) B00068 Meallan Ghobhar, south-east end of Loch Maree, Ross & Cromarty. Cambrian strata resting on Torridon Sandstone and overlain by thrust Lewisian gneiss, with infolds of Torridon Sandstone and Cambrian quartzite above Kinlochewe thrust plane. Panorama with B00067. Lower slopes consist of Torridonian sandstones (Applecross Formation). Prominent pale cliff with bedding sloping down to the right consists of quartzite of the Lower Cambrian Eriboll Sandstone Formation. The dark line at the top of the lower cliff marks the Kinlochewe Thrust plane. Above the thrust plane, Lewisian gneiss, Torridonian sandstone and Cambrian quartzite have been involved in complex folding before being carried from the east over the Cambrian rocks below. [NH 0700 5870]

[P214058](#) B00069 Letterewe Burn (Allt Folais), Loch Maree. Folded and mylonized limestone lying above hornblende schist. [NG 9550 7250]

[P214059](#) B00070 Near summit of Pass between Letterewe and Carnmore, Loch Maree. Lenticles of saussurite in a matrix of hornblende schist. [NG 9630 7380]

[P214060](#) B00071 Near summit of Pass between Letterewe and Carnmore, Loch Maree. Lenticles of saussurite in a matrix of hornblende schist. [NG 9630 7380]

[P214061](#) B00072 Leth Craig, Letterewe, Loch Maree. Dykes of hornblende schist in gneiss (the evidence of intrusion is not clear). [NG 9530 7130]

[P214062](#) B00073 Leth Craig, Letterewe, Loch Maree. Dykes of hornblende schist in gneiss (the evidence of intrusion is not clear). [NG 9530 7130]

[P214063](#) B00074 Leth Craig, Letterewe, Loch Maree. Dykes of hornblende schist in gneiss (the evidence of intrusion is not clear). [NG 9530 7130]

[P214064](#) B00075 Leth Craig, Letterewe, Loch Maree. Dykes of hornblende schist in gneiss (the evidence of intrusion is not clear). The gentle inclination of the dykes is probably due to folding. [NG 9530 7130]

[P214065](#) B00076 Leth Craig, Letterewe, Loch Maree. Dykes of hornblende schist in gneiss (the evidence of intrusion is not clear). The gentle inclination of the dykes is probably due to folding. [NG 9530 7130]

[P001673](#) B00077 Meall a' Ghiubhais, Beinn Eighe, Loch Maree, Ross & Cromarty. Outlier (klippe) of Lewisian, Torridonian and Cambrian strata, above Kinlochewe thrust plane, resting on Cambrian An t-Sron Formation rocks. Foreground consists of quartzites of the Lower Cambrian Eriboll Sandstone Formation. This passes up, in the vegetated area at the foot of the hill into mudstones and sandstones of the An t-Sron Formation, and limestones of the Durness Group are locally present underneath the Kinlochewe Thrust. Above the Kinlochewe thrust plane, the rocks are mostly Torridonian sandstones (Diabaig and Applecross formations), but small inliers of Lewisian gneiss and thrust slices of Cambrian quartzite are present. [NG 9780 6370]

[P214556](#) B00785 An Coileachan (918.97 m.) from the SE, Fannich Forest. Mountain of flaggy quartz-biotite schists (Moine Series). Rock contours produced by ice-action shown in corries and adjoining ridges. Moraines below corrie. In foreground - alluvial flat covered with peat at the east end of Loch Fannich. [NH 2420 6800]

[P001828](#) B00786 An Coileachan (923 m.) from the south-east, Fannich Forest, Ross & Cromarty. Gently dipping flaggy micaceous psammite with gentle fold. Hummocky glacial deposits in foreground. Mountain consists of flaggy micaceous psammite (metamorphosed impure sandstone) with more micaceous pelite (metamorphosed mudstone) on summit (Moine Supergroup). Foliation, largely dipping gently to left, clearly visible. On crag nearest camera, foliation is gently folded, and appears to dip to right on spur. Floor of corrie ice-smoothed, but some angular debris on top of rock. Hummocky glacial deposits with angular blocks of psammite in foreground. [NH 2420 6800]

[P214557](#) B00787 An Coileachan (918.97 m.) from the SE, Fannich Forest. Mountain of flaggy quartz-biotite schists (Moine Series). Rock contours produced by ice-action shown in corrie and adjoining ridges. Moraines below corrie. [NH 2420 6800]

[P001829](#) B00788 Sgurr nan Clach Geala, (1093 m.) from the north, Fannich Forest, Ross & Cromarty. Mountain and cliff scenery characteristic of the Moine psammite and pelite. Valley (on left) filled with hummocky glacial deposits. Steep slopes on left side of mountain largely made of flaggy, micaceous psammite (metamorphosed sandstone) while summit ridge is made of pelite (metamorphosed mudstone). Gentler slopes on right are made of Lewisian gneiss which has been thrust and folded with the Moine rocks during the Caledonian orogeny. Abundant hummocky glacial deposits fill valley on left. [NH 1850 7150]

[P001830](#) B00789 Sgurr nan Clach Geala, (1093 m.) from the north, Fannich Forest, Ross & Cromarty. Mountains of Moine Supergroup psammite and pelite, well-foliated. Joint planes and crush-lines forming lines of erosion and giving rise to gashes in rock face. Steep slopes on left side of mountain largely made of flaggy, micaceous psammite (metamorphosed sandstone) while summit ridge is made of pelite (metamorphosed mudstone). Lithological units on map strike north-south and are steeply inclined, but subhorizontal features on steep slopes look like bedding. Rock is cut by abundant subvertical joints and ?minor faults. [NH 1850 7150]

[P214558](#) B00790 Sgurr nan Clach Geala, (1108.26 m.) from the N., Fannich Forest. Nearer view of No. 789 showing the scenic contrast between well-banded siliceous schist in lower part of mountain and the massive garnetiferous gneiss above. Joint-planes and crush-lines forming lines of erosion and giving rise to gashes in rock face. Plateau frost-debris on top slope on right. [NH 1850 7150]

- [P214559](#) B00791 Sgurr nan Clach Geala, Fannich Forest. Highest part of the cliff seen in Nos. B789, B790 showing the characteristic features of the massive garnetiferous gneiss of the Moine Series. [NH 1850 7150]
- [P214560](#) B00792 Sgurr nan Clach Geala, Fannich Forest. Typical banding of flaggy siliceous schists of the Moine Series. [NH 1850 7150]
- [P214632](#) C00017 Letterewe Burn (Allt Folais), Loch Maree. Folds in mylonized limestone (Lewisian Gneiss Series). [NG 9500 7230]
- [P214633](#) C00018 Letterewe Burn (Allt Folais), Loch Maree. Boulder of hornblende schist (about 0.91 m. long), with deformed porphyritic feldspars. [NG 9500 7200]
- [P214634](#) C00019 Near summit of Pass between Letterewe and Carnmore, N. side of Loch Maree. Lenticles of saussurite in a matrix of hornblende schist. [NG 9640 7380]
- [P214635](#) C00020 Near summit of Pass between Letterewe and Carnmore, N. side of Loch Maree. Lenticles of saussurite in a matrix of hornblende schist. [NG 9640 7380]
- [P214636](#) C00021 0.4 km. S. of Loch Cadh' a' Ghobhain, 4.0 km. NW of the Heights of Kinlochewe. Surfaces of thrust Lewisian gneiss, showing separation of basic and acid constituents. [NH 0400 6700]
- [P214637](#) C00022 0.4 km. S. of Loch Cadh' a' Ghobhain, 4.0 km. NW of the Heights of Kinlochewe. Surfaces of thrust Lewisian gneiss, showing separation of basic and acid constituents. [NH 0400 6700]
- [P214638](#) C00023 2.4 km. NW of the Heights of Kinlochewe. Epidiorite dyke, with branching vein 0.08 m. broad, traversing thrust Lewisian gneiss. [NH 0600 6200]
- [P214639](#) C00024 2.4 km. NW of the Heights of Kinlochewe. Enclosure of foliated basic gneiss in more acid rock. [NH 0600 6200]
- [P001852](#) C00025 Slioch, from the south-east end of Loch Maree, Ross & Cromarty. A mountain of horizontal Torridon Sandstone enclosing a mountain of Lewisian gneiss. Lewisian gneiss forms the lower slopes facing the camera, as well as the slopes on the extreme right and extending to an altitude of over 600 m. above O.D. The main mass of the mountain, including the main summit (left) and Meall Each (hill nearest camera) are made of reddish pebbly sandstones of the Applecross Formation (Torridonian). The bedding in the sandstones is roughly horizontal, showing that the sandstone gradually filled up hollows in a landscape with almost as much relief as that of the present day. [NH 0050 6910]
- [P214640](#) C00026 Slioch, (I) and Meall Each (II) from the Fasagh Burn, SE end of Loch Maree. Horizontal Torridon Sandstone abutting against steep side of pre-existing mountain of Lewisian gneiss. [NH 0700 6600]
- [P214641](#) C00027 Bonaid Dhonn (Craig Roy), from the Fasagh Burn, SE end of Loch Maree. Unconformable junction of Cambrian quartzite on Torridon Sandstone. [SV 0000 0000]
- [P214642](#) C00028 Bonaid Dhonn (Craig Roy), from the Fasagh Burn, SE end of Loch Maree. Unconformable junction of Cambrian quartzite on Torridon Sandstone. [SV 0000 0000]
- [P214643](#) C00030 Meall a' Ghiubhais, 4.8 km. W. of Kinlochewe (from the SW). Upper part shows mass of Lewisian, Torridon and Cambrian strata above Kinlochewe thrust plane, resting on Olenellus Zone. Lower part shows unconformability of Cambrian quartzite on Torridon Sandstone. [NG 9700 6300]
- [P001910](#) C01323 6 km. west from the head of Loch Fannich, Ross & Cromarty. Wind-gap between Abhainn a' Chadh' Bhuidhe and Gleann Tanagaidh. This broad area of relatively low ground was a major channel for outflow of ice from the Fannich Mountains to the west. During the deglaciation, a relatively smooth cover of morainic material was deposited. This is now partly covered by peat. Bedrock here is psammite (metamorphosed sandstone) of the Moine Supergroup.

The distant mountains lie to the west of the Moine Thrust Zone, and are made of Lewisian gneiss, Torridonian sandstone, and Cambrian quartzite. The principal mountains are Slioch (left), Beinn Lair (centre, distance), and Mullach Choire Mhic Fhearchair (right).

[P215723](#) C01324 6.4 km. W. from the head of Loch Fannich. Wind-gap between Abhainn a' Chadh' Buidhe and Gleann Tanagaidh.

[P215724](#) C01325 6.4 km. W. from the head of Loch Fannich. Wind-gap between Abhainn a' Chadh' Buidhe and Gleann Tanagaidh.

[P215725](#) C01326 6.4 km. W. from the head of Loch Fannich. Wind-gap between Abhainn a' Chadh' Buidhe and Gleann Tanagaidh.

[P002105](#) C01327 Sgurr nan Clach Geala (1109 m.) viewed from the north, Fannich Forest, Ross & Cromarty. Metasedimentary strata of the Moine Succession that were deposited on the Lewisian basement between 1500 and 1025 Ma. ago. Flaggy psammitic schists forming lower part of mountain; garnetiferous muscovite-biotite-gneiss in the higher part. Joint planes and crush-lines forming lines of erosion and giving rise to gashes in rock face. Hummocky moraines can be seen in the valley. [NH 1850 7150]

[P215726](#) C01328 Sgurr nan Clach Geala, Fannich Forest. Highest part of the cliff seen in No. C1327, showing the characteristic features of the massive garnetiferous gneiss of the Moine Series. (See also B788-B792.) [NH 1850 7150]

[P215727](#) C01329 Sgurr nan Clach Geala, Fannich Forest. Typical banding of flaggy siliceous schists of the Moine Series. [NH 1850 7150]

[P215728](#) C01330 Sgurr nan Clach Geala, Fannich Forest. Garnetiferous muscovite-biotite-gneiss with lenticles of pegmatite (Moine Series). [NH 1850 7150]

[P215729](#) C01331 Sgurr nan Clach Geala, Fannich Forest. Garnetiferous muscovite-biotite-gneiss with lenticles of pegmatite (Moine Series). [NH 1850 7150]

[P215730](#) C01332 Sgurr nan Clach Geala, Fannich Forest. Garnetiferous muscovite-biotite-gneiss with lenticles of pegmatite (Moine Series). [NH 1850 7150]

[P215731](#) C01333 S. slope of Sgurr Mor, Fannich Forest. Frost debris, on slope near mountain top, arranged in terraces by 'soil-creep' aided by snow movement. The slabs of rock stand on end at the edge of terrace, while on the gentle slope they lie flat.

[P002106](#) C01334 From the slope of Sgurr Mor, Fannich Forest looking south-south-east, Ross & Cromarty. The eastern crest of Fannich mountains is formed of schists of the Moine Succession. Loch Fannich is in the distance on the right. The hanging corrie holding the rock-basin of Loch an Fhuar Thuill Mhoir is in the foreground to the left. This bowl-shaped hollow has been formed by a former glacier. Frost debris is arranged in parallel terraces due to 'soil-creep' aided by snow movement, on right. The surface of Loch Fannich is at 822 feet while its depth is 282 feet. [NH 2050 7150]

[P215732](#) C01335 From slope of Sgurr Mor, Fannich Forest. Looking SSE. Eastern crest of Fannich mountains in crystalline schists of Moine Series. Hanging corries, the one in the foreground holding rock basin. [NH 2050 7150]

[P002107](#) C01336 Hanging corries on the northern slopes of Meall Gorm, the obvious one in the foreground is the rock-basin of Loch an Fhuar Thuill Mhoir, it drains into the lower corrie of Loch Li. The smooth tops of the mountains are covered with trains of frost riven debris. A dissected plateau surface of Moine metasedimentary rocks. To the left is Beinn Liath Mhor Fannaich and to the right Meall Gorm. Part of a panorama with C01337. The description is for the full panorama. [NH 2050 7150]

[P002108](#) C01337 Hanging corries on the northern slopes of Meall Gorm, the obvious one in the foreground is the rock-basin of Loch an Fhuar Thuill Mhoir, it drains into the lower corrie of Loch Li. The smooth tops of the mountains are



covered with trains of frost riven debris. A dissected plateau surface of Moine metasedimentary rocks. To the left is Beinn Liath Mhor Fannaich and to the right Meall Gorm. Part of a panorama with C01337. The description is for the full panorama. [NH 2050 7150]

[P002109](#) C01338 In the foreground are mountains of crystalline schists of the Moine series. The distant mountains (from Achnashellach on left to An Teallach on right) consist of Cambrian, Torridonian and Lewisian rocks, some of which have been affected by Post-Cambrian Caledonian orogenic movements. The model of a single elevated surface has now given way to a model where there a series of groupings of features at various levels is recognized - this indicates the existence of intermediate erosion surfaces. Debate continues as to whether the surfaces are the result of subaerial erosion during periods of stillstand during upwarping of the planar surface or of marine planation. It is generally accepted that the surfaces were formed after the cessation of the volcanic activity of the Tertiary igneous period. The general uniformity of the levels of the summits gives the impression of a flat elevated plateau-like surface that has been deeply dissected. Part of a panorama with C01339, C01340. The description is for the whole panorama. [NH 1850 7150]

[P002110](#) C01339 In the foreground are mountains of crystalline schists of the Moine series. The distant mountains (from Achnashellach on left to An Teallach on right) consist of Cambrian, Torridonian and Lewisian rocks, some of which have been affected by Post-Cambrian Caledonian orogenic movements. The model of a single elevated surface has now given way to a model where a series of groupings of features at various levels is recognized - this indicates the existence of intermediate erosion surfaces. Debate continues as to whether the surfaces are the result of subaerial erosion during periods of stillstand during upwarping of the planar surface or of marine planation. It is generally accepted that the surfaces were formed after the cessation of the volcanic activity of the Tertiary igneous period. The general uniformity of the levels of the summits gives the impression of a flat elevated plateau-like surface that has been deeply dissected. Part of a panorama with C01338, C01340. The description is for the whole panorama. [NH 1850 7150]

[P002111](#) C01340 In the foreground are mountains of crystalline schists of the Moine series. The distant mountains (from Achnashellach on left to An Teallach on right) consist of Cambrian, Torridonian and Lewisian rocks, some of which have been affected by Post-Cambrian Caledonian orogenic movements. The model of a single elevated surface has now given way to a model where a series of groupings of features at various levels is recognized - this indicates the existence of intermediate erosion surfaces. Debate continues as to whether the surfaces are the result of subaerial erosion during periods of stillstand during upwarping of the planar surface or of marine planation. It is generally accepted that the surfaces were formed after the cessation of the volcanic activity of the Tertiary igneous period. The general uniformity of the levels of the summits gives the impression of a flat elevated plateau-like surface that has been deeply dissected. Part of a panorama with C01338, C01339. The description is for the whole panorama. [NH 1850 7150]

[P215733](#) C01341 From summit of Sgurr nan Clach Geala, Fannich Forest. Looking W. Dissected table-land. Mountains of crystalline schists of Moine Series in foreground. Distant mountains consist of Cambrian and Torridonian strata, some of which have been affected by Post-Cambrian movements. [NH 1850 7150]

[P002112](#) C01342 Valley of Allt a' Choire Mhoir, Fannich Forest, Ross & Cromarty. Moraines and moraine-dammed lochans. In the Fannich Mountains during the last glaciation all the larger valleys were occupied by glaciers. As they retreated the rock debris that was carried by the glaciers that had been either been picked up by erosion of the valley bottom or sides or had fallen onto the glacier surface from the surrounding mountains, was dumped in the valley bottom to form moraines of various types, in this case hummocky moraines. [NH 1950 6850]

[P215734](#) C01343 Valley of Allt a' Choire Mhoir, Fannich Forest. Moraines and moraine-dammed lochans. [NH 1950 6850]

[P001911](#) C01344 Valley of Allt a' Choire Mhoir, Fannich Forest, Ross & Cromarty. Moraines and moraine-dammed lochans. Numerous irregular mounds in valley floor consist of unsorted material ranging from boulders to sand. They were deposited by a melting corrie glacier at the end of the last glaciation. Areas between mounds are typically floored by peat. Mountains in distance have roughly concordant summits at about 900 m. O.D., and are made of metamorphosed sandstones and minor mudstones belonging to the Moine Supergroup. [NH 1950 6850]

[P001912](#) C01345 Head of Choire Mhoir, Fannich Forest, Ross & Cromarty. Gullies and alluvial fans formed by torrential erosion of glacial drift. Floor of corrie was covered by much morainic material at end of last glaciation. Ridge running across photo in middle distance marks limit of moraine. In postglacial period, this material has suffered rapid erosion in an area of high rainfall. Flash floods have removed the vegetation cover and eroded deep gullies in the moraine. At the foot of the steep slope the coarser material washed down the slope has been redeposited as a series of alluvial fans. [NH 1950 7150]

[P002462](#) C03118 Little Loch Broom, Ross & Cromarty. Open view across Little Loch Broom from north-east side towards Sail Mhor and Sail Beag and An Teallach directly behind. Hills of Torridonian sandstone in distance. The dome-shaped hill in middle distance is Sail Mhor, a Torridonian sandstone mountain. The loch itself is glacially overdeepened, near the entrance the depth is between 10 and 26 fathoms while in the centre, the loch show depths up to 57 fathoms.

[P218750](#) D01178 Looking NE from 0.8 km. NW of Taagan, Beinn a' Mhuinidh - Gleann Bianasdail- Meallan Ghobhar. On the left the summit of Beinn a' Mhuinidh consists of Lewisian gneiss thrust over Cambrian strata on the Kinlochewe Thrust (the shelf below the skyline). The main cliff is of Cambrian quartzite with Torridonian forming the underlying grassy slopes. Rightwards from the waterfall the gneiss above the Thrust is itself overlain by Torridonian and Cambrian strata. [NH 0010 6480]

[P218751](#) D01179 Looking NE from 0.8 km. NW of Taagan, Beinn a' Mhuinidh - Gleann Bianasdail - Meallan Ghobhar. On the left the summit of Beinn a' Mhuinidh consists of Lewisian gneiss thrust over Cambrian strata on the Kinlochewe Thrust (the 'shelf' below the skyline). The main cliff is of Cambrian quartzite with Torridonian forming the underlying grassy slopes. Rightwards from the waterfall the gneiss above the Thrust is itself overlain by Torridonian and Cambrian strata (see North West Highlands Memoir Fig. 48). [NH 0010 6480]

[P002706](#) D01180 Looking north-east from entrance to Taagan, Meallan Ghobhar, Ross & Cromarty. The Kinlochewe Thrust. On the left, the summit of Beinn a' Mhuinidh consists of Lewisian gneiss thrust over Cambrian strata on the Kinlochewe Thrust (the 'shelf' below the skyline). The main cliff is of Cambrian quartzite with Torridonian forming the underlying grassy slopes. Rightwards from the waterfall the gneiss above the Thrust is itself overlain by Torridonian and Cambrian strata. [NH 0140 6370]

[P002707](#) D01181 Looking north-east from 0.8 km. north-west of Taagan, Ross & Cromarty. Lewisian basement with the Torridonian sandstone mountain of Slioch above. Torridon sandstone on Slioch rests with marked unconformity on old Lewisian hills represented by Meall Riabhach (the pale-coloured knoll above the loch). Gleann Bianasdail, the main valley is eroded along the line of the Fhasaigh Fault, itself cut and dextrally displaced along the Loch Maree Fault parallel to the loch shore. [NH 0010 6480]

[P002708](#) D01182 Looking east towards Slioch from the A832, 2.8 km. east-south-east of Talladale, Ross & Cromarty. Torridonian sandstone of the upper part of the mountain rests with marked unconformity on the old gneiss land surface. In late Precambrian times (1000–750 Ma) the eroded land surface of the Lewisian gneiss was covered by a thick assemblage of terrestrial sedimentary rocks. They are commonly reddish or reddish-brown and laid down under fluvial conditions with local accumulations of scree-breccia on or near the contacts with the Lewisian. It is thought that the Torridonian represents the last of several cycles of deposition and erosion since the Lewisian first became a land surface. The ancient landscape onto which the Torridonian was deposited was gently undulating however, locally, especially here at Slioch, the land surface had high relief with hills of gneiss rising up to 600 m. above the pre-Torridonian valley floors. [NG 9420 6970]

[P002709](#) D01183 Looking north-east from a point 0.8 km. from Second Coast, Gruinard Bay, Ross & Cromarty. Inselberg mountains of Torridonian sandstone rest on old Lewisian gneiss platform. Unlike the Torridon area where the Torridonian sandstone forms massive mountains separated by deep glacial narrow valleys, in this northern area the mountains have become isolated giving rise to characteristic 'inselberg' or 'island mountain' terrain. The sandstone mountains often form long narrow ridges separated by broad valleys of gneiss. [NG 9390 9030]

[P002759](#) D01615 The form of the gorge is determined by the steeply-dipping or vertical joints trending north-west - south-east and north-east - south-west and has a stepped long profile over the waterfalls including the spectacular Falls of Measach. Interspersed with the waterfalls are deep boulder-filled pools which are thought to be extending progressively upstream by the process of waterfall recession. The gorge was cut in undifferentiated Moine psammites in the last phases of glaciation (and possibly earlier phases) by glacial meltwaters. It is c. 1.25 km. long, 60 m. deep and only 10 m. wide at its narrowest point. [NH 2030 7810]

[P002799](#) D02094 Oblique aerial view of Beinn Lair and Beinn Airigh Charr in the distance. Ross and Cromarty. The valley is that of the Allt Gleann Tulacha that flows into Lochan Fada. The main crags are formed of Lewisian hornblende-schist, while to the right are pale acid gneisses. The base of the cliffs and grassy hollow is mica-schist of the Loch Maree 'series'. Lower ground in between comprises mica-schist also of Lewisian age. The region forms part of the Southern Laxfordian belt. The magnificent cliffs stretch for a distance of six miles in a north-westerly direction. [NG 9560 7475]

[P002800](#) D02095 Oblique aerial view of Beinn Lair and Beinn Airigh Charr in the distance. Ross and Cromarty. The valley is that of the Allt Gleann Tulacha that flows into Lochan Fada. Triple contact of Lewisian rocks from left to right are hornblende-schist, mica-schist and acid gneiss. (Note meandering stream of the Allt Gleann Tulacha and the alluvial terrace in foreground.) The region contains two major belts of supracrustal rocks which together constitute the Loch Maree Group, these rocks to the north-east of Loch Maree, lie in the eastern belt of the group, on the north-eastern limb of a major synform. The magnificent cliffs stretch for a distance of six miles in a north-westerly direction. [NG 9560 7475]

[P002801](#) D02096 Oblique aerial view of Ruadh Stac Mor, Ross and Cromarty. A mountain of Torridonian sandstone unconformable on Lewisian gneiss. The Torridonian sandstone was deposited on the eroded land surface of the Lewisian gneiss. At the bottom of the view an old valley in the Lewisian has been filled with coarse Torridonian sediments. [NH 0190 7570]

[P002802](#) D02097 Oblique aerial view of Ruadh Stac Mor, Ross and Cromarty. A mountain of Torridonian sandstone unconformable on and totally surrounded by Lewisian gneiss. The well-bedded Torridonian sandstone is seen dipping to the north-east. In the middle foreground is the continuation of the Torridonian 'scree' valley in ancient Lewisian landscape. [NH 0190 7570]

[P002803](#) D02098 Oblique aerial view of Sgurr Ban and Beinn a' Chlaidheimh. Torridonian sandstone is unconformably overlain by white Cambrian Quartzite. In the foreground is Beinn Tarsuinn, a Torridonian sandstone mountain and in the background Sail Liath. On Beinn a' Chlaidheimh and Sail Liath the Cambrian Basal Quartzites form outliers, totally surrounded by Torridonian. [NH 0595 7620]

[P002804](#) D02099 Mullach Coire Mhic Fhearchair, Ross and Cromarty. The Kinlochewe Thrust, part of the Moine Thrust Zone. The Torridonian of foreground is unconformably overlain by white Cambrian quartzite, over which is thrust Lewisian gneiss forming the pinnacles at the right-hand side of the photograph. In the background are the Moine schists which lie above the Moine Thrust. [NH 0520 7350]

[P002805](#) D02100 Oblique aerial view of Sgurr Ban, Ross and Cromarty. The dip-slope of Cambrian with underlying Torridonian sandstone immediately behind. Note the well-developed scree on the quartzites. The beds are inclined at an angle of 16–30 degrees in an east-south-east direction. Sgurr Ban was noted for having the only evidence of organic life in the lower division of the Cambrian quartzites in the whole of the north-west Highlands - vertical worm-casts were recorded on the crest of the ridge on the north side of the mountain. [NH 0560 7460]

[P002806](#) D02101 Oblique aerial view of the east flank of An Teallach, Ross and Cromarty. The lower slopes of ice-scoured Torridonian sandstone contrast with the frost-shattered slopes on the ridge and the Glas Mheall Liath quartzite blockslopes. White Cambrian quartzite overlying well-bedded Torridonian sandstone. Corrie Toll an Lochain below the main peak is a spectacular development of a rock-lipped corrie. A lateral moraine and drift limit shows the reach of the Loch Lomond Readvance glacier that occupied the corrie. [NH 0650 8400]

[P000729](#) D02102 The east flank of An Teallach. The lower slopes of ice-scoured Torridonian sandstone contrast with the frost-shattered slopes on the ridge and the Glas Mheall Liath quartzite backslopes. White Cambrian quartzite overlying well-bedded Torridonian sandstone. Corrie Toll an Lochain below main peak is a spectacular development of a rock-lipped corrie. A lateral moraine and drift limit shows the reach of the Loch Lomond Readvance glacier that occupied the corrie. [NH 0650 8400]

[P002807](#) D02103 Oblique aerial view of An Teallach and the Moine Thrust, Ross and Cromarty. Looking west-north-west from Carn a' Bhreabadair with Moine schists forming the foreground thrust over the Cambrian rocks which themselves unconformably overlie Torridonian sandstone of the background. The line of white quartzite and vegetation marks the approximate line of Moine Thrust. The Moine Thrust Zone extends from Loch Eriboll to the Sound of Iona and is a major structural feature of the Caledonian Orogeny. It separates in the east, the mainly metamorphic Moine and to the west the stable foreland of Lewisian basement, its cover of Torridonian sandstone and Cambro-Ordovician strata. [NH 0650 8400]

[P002808](#) D02104 Oblique aerial view of Corrie Hallie/Strath na Sheallag (Seilg) Track, Ross and Cromarty. The Moine Thrust. In the immediate foreground are the white Cambrian quartzites, overlain by thinly-bedded Fucoïd Beds also of the Cambrian (buff colour). They are thrust over the Moine schists which form the major crags. The Moine Thrust effectively coincides with the base of the crags. The Caledonides, the former orogenic belt, have been pushed westwards over the foreland of Lewisian basement, its cover of Torridonian sandstone and Cambro-Ordovician strata and along the network of low-angle thrusts of which the Moine Thrust is the single most important thrust in the zone. The mechanism which gave rise to this overthrusting was plate tectonics, the eventual collision of the Laurentian and Baltic plates much further to the south east. [NH 1350 8450]

[P002809](#) D02105 Oblique aerial view of Corrie Hallie, Ross and Cromarty. The Moine Thrust. Profile view of photograph D02104 with, from bottom left to top right, white Cambrian quartzite overlain by 'buff coloured' Cambrian Fucoïd Beds, followed by Moine schists which form the higher crags above the Moine Thrust. The Moine Thrust is a major structural zone with a network of low-angle thrusts that separate the rocks of an ancient mountain belt, the Caledonides from the more stable foreland of Lewisian, Torridonian and Cambro-Ordovician rocks. [NH 1350 8450]

[P219374](#) D02106 Corrie Hallie. Moine thrust. White Cambrian quartzite, overlain by thinly-bedded Fucoïd Beds over which are thrust Moine schists. Line of Moine thrust runs along base of main crags cutting through shadow area. [NH 1350 8450]

[P219375](#) D02107 Beinn a' Chlaidheimh. Excellent scarp in Torridonian sandstone showing prominent bedding dipping into the picture. [NH 0630 7780]

[P002810](#) D02108 Oblique aerial view of Beinn Tarsuinn, Ross and Cromarty. Horizontal bedding planes in Torridonian sandstone. The scenery is typical of Torridonian sandstone, a large detached mass with rounded buttresses and terraced outlines due to well-bedded sandstones and grits. [NH 0370 7280]

[P002811](#) D02109 Oblique aerial view of Beinn Tarsuinn and Mullach Coire Mhic Fhearchair, Ross and Cromarty. This is a common sequence, basement high grade metamorphic Lewisian gniesses with a strongly undulating ancient land surface onto which undeformed fluvial sandstones have been deposited. After an interval of c. 200 Ma. there was a period of crustal warping in which the Precambrian rocks of what is now part of the Caledonian Foreland were arched into large folds. Considerable erosion followed with much of the Torridonian being eroded away leaving a remarkably flat plain. The Cambrian sediments were deposited on this surface as it progressively and gently subsided. The foreground is Lewisian, overlain by strongly bedded Torridonian in middle ground, which itself is overlain by white Cambrian quartzite on the background peaks. [NH 0445 7315]

[P219376](#) D02110 Slioch. Prominent cliff faces showing horizontal, massive beds of Torridonian sandstone. [NH 0050 6900]

[P002825](#) D02275 Scenery at Gruinard Bay, direction of view west-south-west, Ross and Cromarty. Hills of Torridonian sandstone rise above glaciated outcrops of Lewisian gneiss on the far side of the bay. At the head of the bay are raised beaches originating from isostatic rebound after the melting of the last ice age glaciers. Lewisian gneiss forms the

glaciated surface in the foreground and the large erratic boulder in the bottom right. [NG 9400 9010]

[P002848](#) D02798 Slioch and Loch Maree, Ross and Cromarty. A Torridonian sandstone mountain of the Applecross Formation resting on the Lewisian gneiss basement. The distinction in rock type is clearly seen in the photograph. The pre-Torridonian land surface was irregular and had high relief, in the vicinity of Slioch hills of gneiss rise up to 600 m. above the pre-Torridonian valley floors. The Applecross Formation consists of 2500 m. of fluvial, strongly cross-bedded, red-brown to pale red arkosic sandstone. The source area for its deposition was a mountainous area to the west, the eastern margin of which occupied the area of present day Outer Hebrides [NH 0010 6500]

[P219711](#) D02827 Bridge of Grudie. Looking S. to Beinn Eighe. Ruadh-stac Mor and Sail Mhor (north face of Beinn Eighe). Pipe Rock and basal Cambrian quartzite dipping to the left of the picture rest unconformably on Torridonian sandstone. The unconformity can be seen as a crag half-way up the scarp slopes of the two peaks. [NC 9660 6760]

## **Sheet 101 Ullapool**

[P001663](#) B00036 Stronchrubie Cliffs, Inchnadamph, Sutherland. Thrusting in limestones of the Durness Group, showing imbricated structure (see No. C6 half-plate). Limestones of the Grudaigh and Eilean Dubh formations (Lower Cambrian) of the Durness Group are repeated by several thrusts. The thrust planes are marked by thin grassy ledges in the photograph. The bedding planes, joints and thrusts have been opened out by solution, causing the development of karst topography in the area behind the hill scarp. [NC 2510 2000]

[P214035](#) B00037 Cliff near road, 2.414 km. SW of Knockan. Moine schists overriding Cambrian rocks, with Olenellus Zone. Outcrop of Moine-thrust plane shown thus. [NC 2790 0880]

[P214036](#) B00043 Loch an Eisgbrachaidh, S. of Loch Inver. Early basic gneiss invaded by more acid material. [NC 0740 1720]

[P214037](#) B00044 Loch an Eisgbrachaidh, S. of Loch Inver. Early basic gneiss invaded by more acid material. A further stage showing isolated knots of basic material. [NC 0740 1720]

[P214038](#) B00045 Loch an Eisgbrachaidh, S. of Loch Inver. Early basic gneiss invaded by more acid material. A further stage showing isolated knots of basic material. [NC 0740 1720]

[P214039](#) B00046 Loch an Eisgbrachaidh, S. of Loch Inver. Early basic gneiss invaded by more acid material. A further stage showing isolated knots of basic material. [NC 0740 1720]

[P214040](#) B00047 Loch an Eisgbrachaidh, S. of Loch Inver. Early basic gneiss invaded by more acid material, resulting in the production of banded gneiss. [NC 0740 1720]

[P214041](#) B00048 Loch an Eisgbrachaidh, S. of Loch Inver. Early basic gneiss invaded by more acid material, resulting in the production of banded gneiss. [NC 0740 1720]

[P214042](#) B00049 Loch an Eisgbrachaidh, S. of Loch Inver. Early basic gneiss invaded by more acid material, resulting in the production of banded gneiss. [NC 0740 1720]

[P214043](#) B00050 Loch an Eisgbrachaidh, S. of Loch Inver. Early basic gneiss invaded by more acid material, resulting in the production of banded gneiss. [NC 0740 1720]

[P214044](#) B00051 Loch an Eisgbrachaidh, S. of Loch Inver. Early basic gneiss invaded by more acid material. The acid rock (light) though in excess has followed the folds of the early basic (dark) gneiss. Banding disturbed by small faults. [NC 0740 1720]

[P214045](#) B00052 Loch an Eisgbrachaidh, S. of Loch Inver. Early basic gneiss invaded by more acid material. The more acid bands cutting the foliation of the early basic rock. [NC 0740 1720]



[P001980](#) C00006 Stronechrubie Cliffs, south of Inchnadamph, Sutherland. Cambro-Ordovician limestone, part of the Durness Group forming cliffs. The lower three-quarters, up to the thrust plane shows the whole of the Grudaigh and part of the Eilean Dubh groups in natural order of succession. The topmost part above the thrust plane, the Eilean Dubh Formation occurs as a thrust and imbricated mass characterized by small reversed faults ('schuppen-structure'). A sill of porphyrite is intrusive in the Oolitic zone of the Grudaigh group. [NC 2500 2000]

[P214623](#) C00007 Suilven from the NE. A mountain of horizontal Torridon Sandstone resting on platform of Lewisian gneiss. (From a drawing by Dr. Peach). [NC 2500 1800]

[P214624](#) C00008 Creag nam Broc, 2.4 km. NE of Ullapool. Overthrust mass of Torridon Sandstone, resting upon piled-up Cambrian limestone. [NC 1200 9400]

[P214625](#) C00009 Creag nam Broc, 2.4 km. NE of Ullapool. Overthrust mass of Torridon Sandstone, resting upon piled-up Cambrian limestone. [NC 1200 9400]

[P214626](#) C00010 Poll an Eas, River Achall, 2.4 km. NE of Ullapool. Thrust Lewisian gneiss, with basic knots and strings. [SV 0000 0000]

[P214627](#) C00011 Poll an Eas, River Achall, 2.4 km. NE of Ullapool. Thrust Lewisian gneiss, with basic knots and strings. [SV 0000 0000]

[P002229](#) C02023 View from the south flank of Conival, Ben More Assynt, looking south-west, Sutherland. Part of a panorama with C02024 and C02025. The description is for the whole panorama. Thrust Cambrian Quartzites arching over Breabag. The deep corrie on left is floored by Lewisian rocks in the core of the arch. A fault gives rise to the gully on right which is part of the Bealach Coinne-mheall (Pass of Conival). On the right is the River Oykel, on the centre right skyline is the mass of Cul Mor and right, Canisp, both Torridonian sandstone mountains resting on the Lewisian gneiss basement. [NC 3050 1950]

[P002230](#) C02024 View from the south flank of Conival, Ben More Assynt, looking south-west, Sutherland. Part of a panorama with C02023 and C02025. The description is for the whole panorama. Thrust Cambrian Quartzites arching over Breabag. The deep corrie on left is floored by Lewisian rocks in the core of the arch. A fault gives rise to the gully on right which is part of the Bealach Coinne-mheall (Pass of Conival). On the right is the River Oykel, on the centre right skyline is the mass of Cul Mor and right, Canisp, both Torridonian sandstone mountains resting on the Lewisian gneiss basement. [NC 3050 1950]

[P002231](#) C02025 View from the south flank of Conival, Ben More Assynt, looking south-west, Sutherland. Part of a panorama with C02023 and C02024. The description is for the whole panorama. Thrust Cambrian Quartzites arching over Breabag. The deep corrie on left is floored by Lewisian rocks in the core of the arch. A fault gives rise to the gully on right which is part of the Bealach Coinne-mheall (Pass of Conival). On the right is the River Oykel, on the centre right skyline is the mass of Cul Mor and right, Canisp, both Torridonian sandstone mountains resting on the Lewisian gneiss basement. [NC 3050 1950]

[P002234](#) C02028 Coire Dubh Loch Mor and the Plat Reidh, Ben More Assynt, Sutherland. A mass of Lewisian gneiss with basic dykes, capped with Cambrian Quartzite overlying the Ben More Thrust plane, part of the Moine Thrust Zone. The footpath where it crosses the waterfall (in C02027) is along the line of the outcrop of the thrust plane. There is an infold of Torridonian rocks between the lower cliff of Lewisian gneiss and the footpath. Beneath the Torridonian and separated by a thrust are some Cambrian strata dipping to the north-west. The moraine and peat-covered plateau on which the Dubh Loch lies is known as the Plat Reidh. [NC 1950 0950]

[P002235](#) C02029 Knockan Cliff, 13.7 km. south-south-west of Inchnadamph, looking south, Sutherland. The outcrop of Moine Thrust plane. The sequence from top to bottom is: platy and crushed Moine schist; a wedge of Lewisian gneiss; the thrust plane; white crystalline marble (Cambrian). The Moine Thrust Zone is a zone of thrusting associated with folding and low-grade metamorphism. It forms a narrow but continuous belt stretching south-west from Loch Eriboll on the north coast to Skye. Within the zone there are several major thrusts, the Moine Thrust is the highest and formed the

earliest. [NC 1950 0950]

[P002236](#) C02030 Burn at Druim Poll Eoghainn, 1 m. south-south-west of Knockan, 13.7 km. south-south-west of Inchnadamph, looking east, Sutherland. The outcrop of the Moine Thrust plane. The bared sole of the thrust plane lies over successive schuppen of Cambrian dolomitic limestones of the Eilean Dubh Group. Cliffs of flaggy Moine schists are seen on the right. The Moine Thrust is the highest thrust in the Moine Thrust Zone, a zone of thrusting associated with folding and low-grade metamorphism that stretches from Loch Eriboll to the north coast of Skye and probably to the Sound of Iona. Schuppen or imbricate structure is a tectonic structure displayed by a series of nearly parallel and overlapping high-angle reverse faults or thrusts. It forms a series of similar wedges that have the same displacement and are all inclined in the same direction. [NC 2050 0950]

[P216879](#) C03120 Cailleach Head. Sea cliff of inclined Torridonian sandstone showing dip and strike.

[P216880](#) C03121 Cailleach Head. Sea-cave in inclined Torridonian sandstone.

[P216881](#) C03122 Cailleach Head. Sea-cave in inclined Torridonian sandstone.

[P216882](#) C03123 Cailleach Head. Sea-cave in inclined Torridonian sandstone.

[P216883](#) C03124 Cailleach Head. Inclined Torridonian sandstone, showing wavy bedding in certain layers.

[P216884](#) C03125 Cailleach Head. Sea cliff of inclined Torridonian sandstone showing wavy bedding.

[P002710](#) D01184 Looking north-west from point 1.6 km. to south-east of Ullapool, Ross & Cromarty. Ullapool spit. Cuspate spit of sands and gravels with raised beach/benches. [NH 1430 9280]

[P002711](#) D01185 One of the characteristic isolated 'inselberg' type mountains that are a distinctive part of the scenery in the North-west Highlands. The sandstone mountains often form long narrow ridges, this one is viewed broadside, compare it with D01187 which is the same mountain but viewed end on. Torridonian sandstone showing marked weathering along joints and bedding planes to form buttresses and pinnacles and large scree slopes now becoming vegetated. [NC 0940 0930]

[P218752](#) D01186 Looking E. from 2.2 km. W. of Linneraineach, Cul Beag. Typical mountain of Torridon sandstone. [NC 0940 0930]

[P002712](#) D01187 Looking south-east from 1.6 north-west of Badagyle, Stac Pollaidh (Stac Polly), Ross & Cromarty. Torridon sandstone mountains of Cul Mor on the left and Stac Pollaidh on the right. Massive isolated 'inselberg' or 'island mountain' type mountains that are a distinctive part of the scenery in the North-west Highlands. The sandstone mountains often form long narrow ridges, Stac Pollaidh is viewed end on, compare this with the view seen in D01185 which shows the same mountain but in broadside view. [NC 0790 1180]

[P218753](#) D01188 Looking WNW from Knockanrock on A835, Stac Polly (Stac Pollaidh). Typical isolated mountain (inselberg) of Torridon sandstone. V-shaped glaciated valley contains Loch Lurgainn. [NC 1870 0880]

[P002713](#) D01189 Stac Pollaidh (Stac Polly), looking north-east from two miles west of Linneraineach, Ross & Cromarty. An inselberg mountain of Torridonian sandstone. Showing marked weathering along joints and bedding planes. Unlike the Torridon area where the Torridonian sandstone forms massive mountains separated by deep glacial narrow valleys, in this northern area the mountains have become isolated giving rise to characteristic 'inselberg' or 'island mountain' terrain. The sandstone mountains often form long narrow ridges separated by broad valleys of gneiss. This photograph is a close-up of such a mountain. [NC 0310 1280]

[P002714](#) D01190 Looking east-south-east from 1.6 km. east of Inverpolly Lodge, Cul Mor, Ross & Cromarty. Torridonian sandstone mountain capped by quartzite of Cambrian age resting on the Lewisian gneiss seen in the foreground. In late Precambrian times (1000–750 Ma) an undulating eroded land surface of much older Lewisian gneiss was covered by thick accumulations of terrestrial sedimentary rocks laid down mostly by a series of rivers flowing from the north-west.

These rocks are called the Torridonian sandstone. The Torridonian strata and basement gneisses were tilted westwards and planated prior to the deposition of the lower Cambrian quartzites. Later post-Cambrian earth movements have tilted all rocks as much as 20 degrees to the east with the Torridonian rocks more or less recovering their original horizontal disposition. [NC 0870 1410]

[P002715](#) D01191 Suilven, looking north-east from 1.6 km. south of Rhegreanoch, Ross & Cromarty. Torridonian sandstone forming isolated 'inselberg' on a platform of Lewisian gneiss. The foreground shows a typical outcrop of the Lewisian forming the classic 'knock and lochan' type topography. It is characterized by irregular ice-scoured bedrock lumps and small hills with many intervening irregular rock-basin lakes with poorly integrated drainage. The Lewisian Complex is a residual fragment of the ancient Laurentian continental mass. The gneisses represent a long and varied part of the earth's history. They show evidence of having been formed and repeatedly deformed, often deep in the earth's crust over a period of nearly 1800 Ma up until c. 1100 Ma when they were uplifted, probably to near their present level when they formed the basement on which the Torridonian (and farther to the east Moine) assemblages were deposited. [NC 0950 1550]

[P218811](#) D01269 View down the Ullapool River, from a point on the road by Ullapool Quarry. Beinn Ghobhlach in background. [NH 1500 9530]

[P218812](#) D01270 View down the Ullapool River, from a point on the road by Ullapool Quarry looking northwards to Creag nam Broc. Overthrust Torridonian sandstone, on Cambrian rocks, repeated by Ben More Thrust Plane. [NH 1500 5930]

[P218813](#) D01271 Viewpoint, 366 m. along the road from Ullapool Quarry towards Ullapool looking NE towards Creag nam Broc. Overthrust Torridonian sandstone, on Cambrian rocks, repeated by Ben More Thrust Plane. [NH 1490 9550]

[P218814](#) D01272 Viewpoint, 732 m. along the road from Ullapool Quarry towards Ullapool. Looking NE towards Creag nam Broc. Evenly-dipping Cambrian quartzite in the foreground. [NH 1470 9550]

[P218815](#) D01273 N. end of Loch Dubh reservoir. Salterella Grit resting on Fucoid Beds (at water level). [NH 1500 9550]

[P218816](#) D01274 Creag a' Chnocain. Eilean Dubh limestone overthrust over Grudaigh limestone. [NC 1920 0950]

[P218817](#) D01275 Creag a' Chnocain. Eilean Dubh limestone overthrust over Grudaigh limestone. [NC 1920 0950]

[P218818](#) D01276 Creag a' Chnocain. Eilean Dubh limestone overthrust over Grudaigh limestone. [NC 1920 0950]

[P218819](#) D01277 Creag a' Chnocain, view looking S. Position of thrust plane between Eilean Dubh limestone and the Grudaigh limestone. [NC 1920 0950]

[P218820](#) D01278 General view of Creag a' Chnocain. Cliff showing Cambrian rocks. [NC 1920 0950]

[P218821](#) D01279 Road section near head of Allt Tober na Glaise, Tober na Glaise. Eilean Dubh limestone. [NC 2100 1050]

[P218822](#) D01280 Road section near Knockan. Minor thrusting in Cambrian limestone. [NC 2120 1070]

[P218823](#) D01281 Roadside exposure SW of Knockan village. Intrusion in Cambrian Limestone (marked by hammer). [NC 2072 1039]

[P218824](#) D01282 Roadside exposure SW of Knockan village. Thrust plane in Cambrian Limestone, locality of Assynt Guide page 37. [NC 2062 1040]

[P218825](#) D01283 General view of road section near Knockan. Minor thrusting in Cambrian Limestone. [NC 2120 1070]

[P218826](#) D01284 Loch Awe Quarry. Fucoid beds, flaggy above, massive below. [NC 2500 1590]

- [P218830](#) D01288 Suilven, view from near Rhicarn. Torridonian mountain on Lewisian landscape. [NC 0830 2540]
- [P218831](#) D01289 Suilven, and Canisp viewed from Rhicarn. Torridonian mountain on Lewisian landscape. [NC 0830 2540]
- [P218832](#) D01290 Quinag, viewed from roadside of A837, 1.6 km. NW of Skiag Bridge. Quinag. [NC 2160 2510]
- [P218835](#) D01293 Stac Pollaidh from road near Badagyle. Inselberg' relict mountain of Torridon sandstone. [NC 0630 1130]
- [P218836](#) D01294 Stac Pollaidh with Cul Mor on left and Cul Beag on right, view looking W. from near Knockanrock. Torridon sandstone mountain. [NC 1860 0880]
- [P005829](#) D01577 Roadside 2 m. S. of Ullapool. Folded mylonite from the Moine Thrust plane. [NH 1540 9180]
- [P219384](#) D02155 SW of Stac Pollaidh. Graded bedding in Torridonian sandstone. [NC 0850 1030]
- [P000782](#) D02239 Oblique aerial view taken from above Loch Borraran with the mountains Suilven and Canisp in the background. In the foreground and middle distance are rocks of Cambrian age, while the distant mountains are of Torridonian sandstone, resting unconformably on Lewisian. Cnoc na Sroine is part of a post-Cambrian, Caledonian alkaline igneous intrusive complex called the Loch Borraran Complex. — The rounded hill on the right is Cnoc na Sroine, the type locality of Borraranite. Altnacealgach is on the green patch on the right of the loch. Sutherland. [NC 2850 1050]
- [P000783](#) D02240 Oblique aerial view taken from above Loch Borraran with the mountains Suilven and Canisp in the background. Cnoc na Sroine and the area under and to the left of the loch is part of a post-Cambrian, Caledonian alkaline igneous intrusive complex called the Loch Borraran Complex. The complex is composed of an earlier suite of mafic and ultramafic syenites intruded as a sheeted complex and a later plug-like body of saturated and oversaturated syenites. It lies between the Sole Thrust and the Assynt (Ben More) Nappe and has been dated at c. 430 Ma. The rounded hill on the right is Cnoc na Sroine, the type locality of Borraranite. Altnacealgach is on the green patch on the right of the loch. Sutherland. [NC 2850 1050]
- [P219433](#) D02241 Loch Borraran. Cambrian, Torridonian, Lewisian. Foreground and middle distance - rocks of Cambrian age, with the mountains of Suilven and Canisp in the background. These are mountains of Torridonian sandstone, resting unconformably on Lewisian. Type locality of Borraranite to right of picture. [NC 2850 1050]
- [P000784](#) D02242 Oblique aerial view taken from above Ledbeg, the dwelling in the foreground of Cnoc na Sroine part of the Loch Borraran Complex. Sutherland. Looking south-west. The Loch Borraran Complex is a post-Cambrian, Caledonian alkaline igneous intrusive complex composed of an earlier suite of mafic and ultramafic syenites intruded as a sheeted complex (not seen here) and the later plug-like body of saturated and oversaturated syenites of Cnoc na Sroine. It is the type locality of Assyntite. [NC 2850 1050]
- [P219434](#) D02243 Cnoc na Sroine. Syenite intrusive mass, Cnoc na Sroine from the north-west. Type locality of Assyntite. [NC 2850 1050]
- [P219435](#) D02244 Cnoc na Sroine. Syenite intrusive mass, Cnoc na Sroine from the north-west. Type locality of Assyntite. [NC 2850 1050]
- [P219436](#) D02245 Cnoc na Sroine. Syenite intrusive mass, Cnoc na Sroine from the north-west. Type locality of Assyntite. [NC 2850 1050]
- [P000785](#) D02246 Oblique aerial view taken from above Cam Loch looking towards Cnoc na Sroine and the Loch Borraran Complex. Sutherland. Looking north-east. Cnoc na Sroine is the later plug-like body of saturated and oversaturated syenites, quartz syenites and perthosites while the lower ground at Ledbeg and towards Loch Borraran is part of the earlier suite of mafic and ultramafic syenites intruded as a sheeted complex. [NC 2850 1050]

[P219460](#) D02276 SW of Stac Pollaidh. Torridonian outcrop. A typical outcrop of Torridonian sandstone. [NC 1130 0960]

[P005848](#) D02277 SW of Stac Pollaidh. Torridonian outcrop. A typical outcrop of Torridonian sandstone. [NC 1130 0960]

[P000789](#) D02278 Photograph taken south-west of Stac Pollaidh looking south-east towards Cul Beag, a mountain of Torridonian sandstone. Loch Lurgainn is in the centre. Torridonian country. A typical Torridonian outcrop is seen in the foreground consisting of reddish-brown sandstone originally laid down in late Precambrian times (c. 1000–750 Ma.) in a terrestrial (land) environment under fluvial conditions. [NC 1130 0960]

[P005849](#) D02279 SW of Stac Pollaidh. Graded bedding in Torridonian sandstone. [NC 0850 1030]

[P000790](#) D02280 View west of the Inverpolly Forest with the peaks of Torridonian sandstone, Cul Mor on the right, Cul Beag on the left taken from 1.5 km. north-east of Elphin. Sutherland. Looking west. The scenery is typical of the north-western seaboard of the Northern Highlands. Torridonian sandstone forms steep-sided, often isolated mountains rising abruptly and unconformably from a Lewisian basement. [NC 2270 1230]

[P000792](#) D02282 View across Cam Loch to the Torridonian sandstone mountain of Suilven 9 km. away, taken from the mouth of Na Luirgean, 1.5 km. north-east of Elphin. Sutherland. Looking north-west. Suilven, a relict mountain of reddish-brown Torridonian sandstone forms a detached mountain mass or inselberg typical of this region. [NC 2490 2170]

[P000824](#) D02382 Oblique aerial view of Suilven showing the inselberg form of the mountain and the Lewisian-Torridonian unconformity. Sutherland. View looking north-west. Suilven, a relict mountain of reddish-brown Torridonian sandstone with basal conglomerate resting on an irregular basement of Lewisian gneiss. The Lewisian-Torridonian contact follows approximately the base of the screes and the line of the low cliffs at the right of the picture. [NC 1550 1850]

[P219491](#) D02383 Suilven. Lewisian-Torridonian unconformity: inselberg. Suilven, a relict mountain of reddish-brown Torridonian sandstone with basal conglomerate resting on an irregular basement of Lewisian gneiss. The Lewisian-Torridonian contact follows approximately the base of the screes and the line of the low cliffs at the centre of picture. View looking north-west. [NC 1550 1850]

[P000825](#) D02384 Oblique aerial view of Suilven seen almost broadside showing the Lewisian-Torridonian unconformity. Sutherland. View looking west. Suilven, a relict mountain of reddish-brown Torridonian sandstone with basal conglomerate which can be seen in the small crag in the foreground. The conglomerate is the lowest bed of the Torridonian and sits directly on top of the much older Lewisian gneisses. [NC 1550 1850]

[P000826](#) D02385 Oblique aerial view of Suilven showing the giant buttress of Caisteal Liath, the Lewisian-Torridonian unconformity and the inselberg nature of the mountain. Sutherland. Looking south-west. Suilven is a relict mountain of reddish-brown Torridonian sandstone with basal conglomerate resting unconformably on an irregular basement of rocky undulating Lewisian gneiss, showing an endless succession of ridges and low hills of bare rock with innumerable small lochs. [NC 1550 1850]

[P219492](#) D02386 Suilven and Canisp. Inselberg (island mountains). Suilven and Canisp. Suilven is a relict mountain of reddish-brown Torridonian sandstone with basal conglomerate resting unconformably on an irregular basement of Lewisian gneiss. Canisp is capped by Basal Cambrian Quartzite and intruded by porphyry sills. View eastwards. [NC 1550 1850]

[P000827](#) D02387 Oblique aerial view of Suilven and Canisp, inselbergs or island mountains sitting on undulating Lewisian gneiss showing a succession of ridges and low hills of bare rock with innumerable small lochs. Sutherland. View eastwards. Suilven is a relict mountain of reddish-brown Torridonian sandstone with basal conglomerate resting unconformably on an irregular basement of Lewisian gneiss. Canisp is capped by Basal Cambrian Quartzite and intruded by porphyry sills. [NC 1550 1850]



[P219493](#) D02388 Suilven and Canisp. Inselberg (island mountains). Suilven and Canisp. Suilven is a relict mountain of reddish-brown Torridonian sandstone with basal conglomerate resting unconformably on an irregular basement of Lewisian gneiss. Canisp is capped by Basal Cambrian Quartzite and intruded by porphyry sills. View eastwards. [NC 1550 1850]

[P000828](#) D02389 Oblique aerial view of Suilven with Canisp behind. Sutherland. Both are inselbergs or island mountains sitting on undulating Lewisian gneiss showing a succession of ridges and low hills of bare rock with innumerable small lochs. View north-eastwards. Inselberg (island mountains). Suilven and Canisp. Suilven is a relict mountain of reddish-brown Torridonian sandstone with basal conglomerate resting unconformably on an irregular basement of Lewisian gneiss. Canisp is mostly Torridonian sandstone capped unconformably by Basal Cambrian Quartzite and intruded by porphyry sills. [NC 1550 1850]

[P000829](#) D02390 Oblique aerial view of Canisp showing the Lewisian-Torridonian-Cambrian unconformities. The mountain is capped by a transgressive bed of Cambrian Basal Quartzite which dips from the summit to the right-hand side of the picture. The foreground is composed of Lewisian gneiss and its junction with the Torridonian follows the break of slope along the length of Canisp. The porphyry sills are igneous rocks intruded into the host rock parallel to the bedding. Porphyry is a texture term to denote igneous rocks with relatively large, often well-formed crystals occurring in a fine-grained groundmass. Canisp is a relict mountain of reddish-brown Torridonian sandstone which has been intruded by sills of porphyry, seen forming some of the crags. View looking north. [NC 2050 1850]

[P000856](#) D02422 Oblique aerial view of Stac Polly (Stac Pollaidh) and Cul Beag showing the Torridonian-Lewisian unconformity and the inselberg nature of the mountains. Loch Lurgainn on the right. Ross & Cromarty. View south-eastwards. Relict mountains of reddish-brown Torridonian sandstone resting unconformably on an irregular basement of Lewisian gneiss. [NC 1150 1150]

[P000857](#) D02423 Oblique aerial view of Cul Mor. Torridonian-Lewisian unconformity. Cambrian quartzite forms the two higher conical summits of Cul Mor, it rests unconformably on the Torridonian. Ross & Cromarty. View eastwards. Cul Mor is a relict mountain of reddish-brown Torridonian sandstone resting unconformably on an irregular basement of Lewisian gneiss. The flat-lying rocks in the foreground are also Torridonian resting on the craggier Lewisian. [NC 1750 1350]

[P000858](#) D02424 Oblique aerial view of Stac Polly (Stac Pollaidh) and Cul Beag with Loch Lurgainn on the right. The Torridonian-Lewisian unconformity. Ross & Cromarty. View eastwards. Relict mountains of reddish-brown Torridonian sandstone resting unconformably on an irregular basement of Lewisian gneiss. [NC 1750 1350]

[P000859](#) D02425 Oblique aerial view of Stac Polly (Stac Pollaidh) and Cul Mor. Torridonian-Lewisian unconformity. View north-eastwards. Relict mountains of reddish-brown Torridonian sandstone resting unconformably on an irregular basement of Lewisian gneiss. The steep western flanks of Cul Mor are heavily gullied while below the bristling rocky summit of Stac Pollaidh is a now vegetation-covered scree slope. [NC 1150 1150]

[P000860](#) D02426 Oblique aerial view of Cul Beag and Loch Lurgainn with Beinn an Eoin on the right. Ross & Cromarty. View eastwards. Cul Beag is a relict mountain of flat-lying Torridonian sandstone lying unconformably on much older Lewisian gneiss. The Achiltibuie road, single track with passing places is clearly seen. [NC 1550 0850]

[P000861](#) D02427 The landscape is typical of the north-western Highlands. A very ancient Lewisian gneiss basement (granulite facies gneiss, c. 2700 Ma. old) formed a rocky undulating land surface onto which there was a great deposition of Torridonian sandstones and grits in a semi-arid environment at c. 1000–800 Ma. After a very long period of erosion and glaciation, this essentially stable foreland consists of massive isolated mountains called inselbergs separated by wide expanses of lower-lying undulating areas. A fine panorama of most of the mountains of the Assynt district which are relicts of reddish-brown Torridonian sandstone and conglomerate resting unconformably on an irregular basement of Lewisian gneiss. View northwards. [NC 1150 1150]

[P000862](#) D02428 Oblique aerial view of Ben More Coigach in the foreground, Beinn an Eoin and Stac Polly (Stac Pollaidh) on the left, Cul Beag, Cul Mor, Suilven, Quinag on the right. Ross & Cromarty. Looking north. A fine panorama of most of the mountains of the Assynt district which are relicts of reddish-brown Torridonian sandstone and

conglomerate resting unconformably on an irregular basement of Lewisian gneiss. [NC 1050 0550]

[P219710](#) D02826 Knockan Crag. Moine Thrust. Blue-grey Moine mylonite is thrust over ochreous weathered Durness Limestone. [NC 1890 0920]

[P000986](#) D03026 The north-east face of Suilven photographed from the Allt a' Ghlinne Dhorcha. On the right is Loch na Gainimh. On Suilven the first peak is Meall Bheag, the second, Meall Mheadhonach, at the far end is Caisteal Liath. Sutherland. Looking west. The foreground is the typical undulating Lewisian gneiss terrain onto which the Torridonian sandstone of Suilven was deposited on an ancient land surface into lakes or large alluvial fans and almost certainly in semi-arid conditions. [NC 1880 1880]

[P000987](#) D03027 The south-west face of Canisp photographed from the Allt a' Ghlinne Dhorcha. The middle distance is the typical undulating Lewisian gneiss terrain onto which was deposited unconformably the Torridonian sandstone which makes up most of Canisp. The much lighter rock on the summit is the Cambrian Basal Quartzite, itself lying unconformably on the Torridonian. [NC 1780 1770]

## [Sheet 102 Lairg](#)

[P001660](#) B00033 Ben More Assynt, with Dubh Loch Mor in corrie, Sutherland. Lewisian gneiss forming part of Ben More Nappe; moraine-dammed loch. Ben More Assynt consists largely of Lewisian gneiss, thrust eastwards on the Ben More thrust plane. Basic dykes within the Lewisian are common, and may have been eroded preferentially to form gullies. Screes have developed in places, but the walls of the corrie are largely bare rock. Hummocky moraine damming the loch forms almost the only vegetated part of the scene. [NC 3150 1850]

[P001661](#) B00034 Garbh Choire, Ben More Assynt, Sutherland. Double unconformity: Lewisian gneiss forming lowest part of cliff (I); covered by Torridon Sandstone in middle distance (II); capped by basal quartzites (III). Ben More Assynt is formed of rocks lying above the Ben More thrust plane, which have been transported many kilometres from the east. However, the same stratigraphy is developed as is found to the west of the fold belt. The unconformity between the Lewisian and the Torridonian is irregular; that below the Cambrian quartzite is planar, and at [NC 308 200], just east of this view, cuts out the Torridonian completely. [NC 3150 1850]

[P216114](#) C02021 Bealach Coinnemheall, 6.4 km. ESE of Inchnadamph. Basement Torridon Sandstone and conglomerate with pebbles of Lewisian gneiss. Locally known as the Stone. [NC 3050 2050]

[P216115](#) C02022 Bealach Coinnemheall, 6.4 km. ESE of Inchnadamph. Basement Torridon Sandstone and conglomerate with pebbles of Lewisian gneiss. Locally known as the Stone. [NC 3050 2050]

[P002232](#) C02026 Coire Dubh Loch Mor and the Plat Reidh, Ben More Assynt, Sutherland. A mass of Lewisian gneiss with basic dykes, capped with Cambrian Quartzite overlying the Ben More Thrust plane, part of the Moine Thrust Zone. The footpath where it crosses the waterfall (in C02027) is along the line of the outcrop of the thrust plane. There is an infold of Torridonian rocks between the lower cliff of Lewisian gneiss and the footpath. Beneath the Torridonian and separated by a thrust are some Cambrian strata dipping to the north-west. The moraine and peat-covered plateau on which the Dubh Loch lies is known as the Plat Reidh. [NC 3150 1850]

[P002233](#) C02027 Coire Dubh Loch Mor and the Plat Reidh, Ben More Assynt, Sutherland. A mass of Lewisian gneiss with basic dykes, capped with Cambrian quartzite overlying the Ben More Thrust plane, part of the Moine Thrust Zone. The footpath where it crosses the waterfall (in C02027) is along the line of the outcrop of the thrust plane. There is an infold of Torridonian rocks between the lower cliff of Lewisian gneiss and the footpath. Beneath the Torridonian and separated by a thrust is some Cambrian strata dipping to the north-west. The moraine and peat-covered plateau on which the Dubh Loch lies is known as the Plat Reidh. [NC 3150 1850]

[P005824](#) D01569 Oykeall Bridge. Mullion structure in Moine psammites. [NC 3860 0090]

## [Sheet 107 Lochinver](#)

[P214013](#) B00006 0.402 km. SW of Loch a' Bhaid Daraich, Scourie. Junction of basic dyke with banded pyroxenic or hornblende gneiss. [NC 1740 4880]

[P214014](#) B00007 0.402 km. SW of Loch a' Bhaid Daraich, Scourie. Bands and knots of foliated basic material in more acid gneiss. [NC 1740 4380]

[P001655](#) B00008 Creag a' Mhail, Scourie. Dyke in gneiss. The notch in distant promontory, the small bay in middle distance, and the notch in foreground, are due to the dyke. A c. 20 metre-thick east-south-east trending Scourie dyke, intruded c. 2,400 million years ago into still hot rocks of the Scourian complex, is more susceptible to erosion than the surrounding gneisses. The dyke and surrounding gneisses are both cut by east-north-east trending shear zones. [NC 1440 4580]

[P214015](#) B00009 Creag a' Mhail, Scourie. Imperfect banded structure in hornblende gneiss. [NC 1440 4580]

[P214016](#) B00010 Creag a' Mhail, Scourie. Junction of gneiss and dyke (secondary movement has taken place along the nearly vertical junction plane). [NC 1440 4580]

[P214017](#) B00011 Creag a' Mhail, Scourie. Near view of part of No.B10 showing the imperfectly banded gneiss through which the dyke cuts. [NC 1440 4580]

[P214018](#) B00012 Creag a' Mhail, Scourie. Part of the dyke shown in No.B10 where it is crossed by a zone of disturbance (lower part, massive epidiorite; upper part, hornblende schist). [NC 1440 4580]

[P214019](#) B00013 Creag a' Mhail, Scourie. Section of banded gneiss. [NC 1440 4580]

[P214020](#) B00014 Duart Beg, 2.011 km. S. of Badcall Bay, near Scourie. Granulitic gneiss with quartz veins in secondary shear zone in Lewisian gneiss. [NC 1650 3920]

[P214021](#) B00015 Roadside, about 1.609 km. S. of Scourie. Banded gneiss showing basic bands (dark) and more acid bands (light). [NC 1610 4330]

[P214022](#) B00016 Loch na Fiacail, between Laxford Bridge and Rhiconich. Vein of pegmatite cutting banded hornblende gneiss. [NC 2340 4870]

[P214023](#) B00017 Loch na Fiacail, between Laxford Bridge and Rhiconich. Pegmatites cutting banded hornblende gneiss. [NC 2370 4880]

[P214028](#) B00022 Between Laxford Bridge and Rhiconich. Showing general type of scenery in the Lewisian gneiss. [NC 2300 4600]

[P214029](#) B00023 Between Laxford Bridge and Rhiconich. Showing general type of scenery in the Lewisian gneiss. [NC 2300 4600]

[P214030](#) B00024 Near junction, 0.402 km. NE of Badcall Store-house, Loch Laxford. Pegmatites cutting banded gneiss and showing crumpling and dying out of bands. [NC 2000 5000]

[P214031](#) B00025 NE of Badcall Store-house, Loch Laxford. Quartzo-felspathic veins in basic mass. [NC 2000 5000]

[P214032](#) B00026 NE of Badcall Store-house, Loch Laxford. Pegmatite veins cutting black hornblende schist. [NC 2000 5000]

[P214033](#) B00027 NE of Badcall Store-house, Loch Laxford. Coarse pegmatite cutting gneiss. [NC 2000 5000]

[P214034](#) B00028 2.011 km. ESE of Laxford Bridge. Folded gneiss. [NC 2550 4580]

[P001656](#) B00029 Arkle, seen from the south-west across Loch Stack, Sutherland. Platform of Lewisian gneiss overlain unconformably by Cambrian quartzite; thrust planes within quartzite. The unconformity beneath the Cambrian rocks is planar, probably produced by marine erosion, which has removed all Torridonian strata from this part of the Moine Thrust belt. Screens are well developed on the lower, cross-bedded quartzite, but less so on the upper worm-burrowed 'pipe rock'. [NC 3030 4630]

[P001657](#) B00030 Arkle seen from the west-south-west across Loch Stack, Sutherland. Lewisian gneiss in foothills and half-way up Arkle is overlain unconformably by Cambrian quartzite. Note stone cross on island in Loch Stack. Note absence of Torridonian strata between Lewisian and Cambrian and planar nature of unconformity. Lower part of Cambrian Eriboll Sandstone outcrop undisturbed. Above the Sole thrust, marked by a change in colour in the quartzites, the quartzite has been cut by many steeply-dipping minor thrusts with the same beds repeated many times (the imbricate zone). [NC 3030 4630]

[P001658](#) B00031 Arkle (from the north-east), Sutherland. Characteristic weathering of imbricated quartzites forming screes; glaciated floors of corries (see photo C00003 half-plate). The quartzites forming the upper part of the mountain are cut by many small thrust planes, forming the imbricate zone. This thrusting has left them more vulnerable than the intact quartzites beneath to weathering, leading to the formation of extensive screes. Glacial erosion has produced a classic corrie with an arcuate, frost-shattered ridge and an ice-scoured floor. Note ice-polished bedding- or thrust planes in foreground. [NC 3030 4630]

[P001659](#) B00032 Traligill River, Inchnadamph, looking downstream (west), Sutherland. Bare inclined thrust plane in Cambrian limestone. At Inchnadamph a large number of closely-spaced thrust planes occur in the lower part of the Cambrian Durness Limestone, causing it to be repeated many times, and to be shattered. This has increased its susceptibility to solution by rainwater. As a result, Inchnadamph is one of the few places in Scotland where well-developed karst topography occurs, dry valleys, sink holes and an extensive cave system. [NC 2510 2180]

[P001664](#) B00038 Western cliffs of Quinag seen from near Tumore, west end of Loch Assynt, Sutherland. Escarpment of Torridonian sandstone resting upon irregular platform of Lewisian gneiss. Irregular mounded topography of foothills is typical of the Lewisian rocks. Well-jointed sandstone (Applecross Formation, Torridonian) forms the bulk of the cliffs. However, Spidean Coinich (at right end of cliff) and Sail Gharbh (in distance, through gap) are capped by quartzite of the Eriboll Sandstone Formation (Lower Cambrian). [NC 2010 2890]

[P001665](#) B00039 Minister's Pool', River Inver, west of Loch Assynt, Sutherland. Typical scenery of the Lewisian gneiss. Mountains of Torridon Sandstone in distance. Hummocky terrain, with ice-smoothed hillocks and many poorly-drained hollows, typically filled by lochans, is typical of areas of Lewisian outcrop. In places, linear features may be formed by Scourie dykes, or by shear belts within the Lewisian complex. The mountain in the distance is Quinag, made largely of Torridonian sandstone, but with a thin capping of Cambrian quartzite on Spidean Coinich (far right). [NC 1250 2350]

[P001666](#) B00040 Lochinver village, Sutherland, looking south-east. Platform of Lewisian gneiss, with isolated peaks (Suilven and Cul Mor) of the overlying Torridonian sandstone. Panoramic view with B00041 and B00042. Typical hummocky terrain formed of Lewisian gneiss immediately behind houses. Suilven (left) and Cul Mor (right) consist of subhorizontally-bedded Torridonian sandstone (Applecross Formation) which forms almost sheer cliffs, due to good vertical jointing. A small cap of Cambrian quartzite is preserved on Cul Mor. [NC 0820 2250]

[P001667](#) B00041 Lochinver, Sutherland. Looking south-east, showing pier and Culag Hotel. Platform of Lewisian gneiss. Panoramic view with B00040 and B00042. Typical hummocky terrain formed of Lewisian gneiss immediately behind pier and hotel. [NC 0820 2250]

[P001668](#) B00042 Loch Inver, looking south-east, Sutherland. Platform of Lewisian gneiss. Panoramic view with B00040 and B00041. Typical hummocky terrain formed of Lewisian gneiss. Note absence of raised beaches. [NC 0820 2250]

[P214622](#) C00002 Ben Stack. A mountain of vertical Lewisian gneiss with small outlier of Cambrian quartzite on the top. [NC 3000 4900]

[P001849](#) C00003 Arkle, from the north-east, Sutherland. Characteristic weathering of thrust quartzites forming screes. Moraines fill the floor of the corries. Beyond loch, glaciated surface of Lewisian gneiss. (See photo B00031 full-plate.) The quartzites forming the upper part of the mountain are cut by many small thrust planes, forming the imbricate zone. This thrusting has left them more vulnerable than the intact quartzites beneath to weathering, leading to the formation of extensive screes. Glacial erosion has produced a classic corrie with an arcuate, frost-shattered ridge and an ice-scoured floor. Exposures of Lewisian gneiss underlying the basal, undisturbed quartzite, in low ground beyond lochan (far right). [NC 3000 4900]

[P001979](#) C00004 Head of Loch Glencoul, 8.8 km. north of Inchnadamph, Sutherland. Typical scenery of the Lewisian gneiss area. The craggy ground is formed of Lewisian gneiss, a residual fragment of the ancient Laurentian continental mass. The distant hilltop on right, the Stack of Glencoul is composed of rocks of the Moine Succession, a group of metasedimentary rocks laid down on the Lewisian basement between 1500 and 1025 Ma. They are separated by the Moine Thrust, a major thrust that has forced the Moine over the Lewisian foreland by up to 100 km. [NC 2900 2850]

[P001850](#) C00005 Distant view of Conival (left) and Ben More Assynt (right), from Inchnadamph, Sutherland. Mountains of folded and thrust quartzite and gneiss. Piled-up limestone in middle distance. Low ground in foreground covered by alluvial deposits at head of Loch Assynt. Hill behind Inchnadamph Hotel made of Cambrian An t-Sron Formation (sandstone and mudstone) and Durness Group (limestone) rocks cut by numerous gently-dipping thrusts. The mountains behind lie above the Ben More Thrust Plane. Quartzites of the Cambrian Eriboll Sandstone Formation form the hill slope on the left and the pale screes just to the right of the col. The underlying Lewisian gneiss forms the summit of Ben More Assynt beyond. [NC 2500 2200]

[P216102](#) C02004 Stack of Glencoul, 8.0 km. NNE of Inchnadamph. Looking eastwards. Flaggy Moine schist immediately above Moine Thrust plane (T), resting on rolled-out Cambrian quartzite (Pipe Rock and Basal Quartzite) and Lewisian gneiss. [NC 2950 2850]

[P216103](#) C02005 At base of Stack of Glencoul, 8.0 km. NNE of Inchnadamph. Rolled-out Cambrian quartzite below Moine Thrust plane. [NC 2950 2850]

[P216104](#) C02006 From base of Stack of Glencoul, 8.0 km. NNE of Inchnadamph. Looking NW. Outcrop of Cambrian quartzite (A), resting naturally on mass of Lewisian gneiss (B), carried forward on Glencoul Thrust plane, and over-ridden by Moine schist (C) above Moine Thrust plane. [NC 2850 2850]

[P216105](#) C02007 From base of Stack of Glencoul, 8.0 km. NNE of Inchnadamph. Looking NW. Outcrop of Cambrian quartzite (A), resting naturally on mass of Lewisian gneiss (B), carried forward on Glencoul Thrust plane, and overridden by Moine schist (C) above Moine Thrust plane. [NC 2850 2850]

[P216106](#) C02008 Head of Loch Glencoul (S. side), 8.0 km. N. of Inchnadamph. Outcrop of Glencoul Thrust plane. A. Lewisian gneiss, T.P. Thrust plane, B. Basal Cambrian Limestone. [NC 2650 3050]

[P002224](#) C02009 North side of Loch Glencoul, 9.2 km. north of Inchnadamph, Sutherland. The Glencoul Thrust, one of several major thrusts in the Moine Thrust Zone. Part of a panorama with C02010 and C02011. The description is for the full panorama. The Glencoul Thrust is very distinct near the middle of the picture where its apparent height above the loch is ? in. In this locality the rock above the 'thrust' is Lewisian gneiss and that below is Fucoïd Beds (shale) resting on Cambrian Quartzite. To the west the beds and the 'thrust' both rise gently and the Lewisian gneiss is seen again in natural order below the quartzite. To the east the thrust also rises and becomes underlain by a complicated band of 'schuppen' composed of steep wedges of Fucoïd Beds, Serpulite Grit, and Durness Limestone, separated by minor thrusts. [NC 2650 3150]

[P002225](#) C02010 North side of Loch Glencoul, 9.2 km. north of Inchnadamph, Sutherland. The Glencoul Thrust, one of several major thrusts in the Moine Thrust Zone. Part of a panorama with C02009 and C02011. The description is for the



full panorama. The Glencoul Thrust is very distinct near the middle of the picture where its apparent height above the loch is ? in. In this locality the rock above the 'thrust' is Lewisian gneiss and that below is Fucoïd Beds (shale) resting on Cambrian Quartzite. To the west the beds and the 'thrust' both rise gently and the Lewisian gneiss is seen again in natural order below the quartzite. To the east the thrust also rises and becomes underlain by a complicated band of 'schuppen' composed of steep wedges of Fucoïd Beds, Serpulite Grit, and Durness Limestone, separated by minor thrusts. [NC 2650 3150]

[P002226](#) C02011 North side of Loch Glencoul, 9.2 km. north of Inchnadamph, Sutherland. The Glencoul Thrust, one of several major thrusts in the Moine Thrust Zone. Part of a panorama with C02009 and C02010. The description is for the full panorama. The Glencoul Thrust is very distinct near the middle of the picture where its apparent height above the loch is ? in. In this locality the rock above the 'thrust' is Lewisian gneiss and that below is Fucoïd Beds (shale) resting on Cambrian Quartzite. To the west the beds and the 'thrust' both rise gently and the Lewisian gneiss is seen again in natural order below the quartzite. To the east the thrust also rises and becomes underlain by a complicated band of 'schuppen' composed of steep wedges of Fucoïd Beds, Serpulite Grit, and Durness Limestone, separated by minor thrusts. [NC 2650 3150]

[P002227](#) C02012 Quinag, 8.9 km. north-west of Inchnadamph, looking west, Sutherland. A mountain of Torridonian sandstone capped by Cambrian Basal Quartzite and resting on an uneven surface of Lewisian gneiss. In late Precambrian times c. 1000–750 Ma. the eroded land surface of Lewisian gneiss of the North-West Highlands was covered by a thick accumulation of sediments which in the Caledonian Foreland have never been deformed or regionally metamorphosed. These Torridonian rocks are part of those thick accumulations. It might be that they are only the last of several cycles of deposition and erosion since the gneisses formed the land surface. The Torridonian was deposited on an undulating surface and in the region of Quinag it had high relief, the Torridonian - Lewisian boundary is a major unconformity. The overlying Cambrian quartzite is in turn unconformable on the Torridonian. [NC 2050 2850]

[P216107](#) C02013 Quinag, 8.9 km. NW of Inchnadamph. Looking W. A mountain of Torridon Sandstone capped by Cambrian Basal Quartzite and resting on uneven surface of Lewisian gneiss. [NC 2050 2850]

[P216108](#) C02014 Quinag, 8.9 km. NW of Inchnadamph. Looking NW. A mountain of Torridon Sandstone capped by Cambrian Basal Quartzite. [NC 2050 2850]

[P002228](#) C02015 Quinag and Loch Assynt from near Inchnadamph, Sutherland. A mountain of Torridonian sandstone capped by Cambrian Basal Quartzite and resting on an uneven surface that represents an old land surface of Lewisian gneiss. The mountains in this northern outcrop of the Torridonian sandstone form isolated, characteristic 'inselberg' or 'island mountain' terrain. These sandstones form long narrow ridges separated by broad valleys of Lewisian gneiss. They are a reddish-brown assemblage of terrestrial sedimentary rocks laid down under fluvial conditions. The rocks on the right are Cambro-Ordovician Durness Group that has undergone thrusting to create an imbricate structure. [NC 2050 2850]

[P216109](#) C02016 SE side of Quinag, 4.8 km. NW of Inchnadamph. Percussion marks ('chatter-marks') on glaciated surface of Cambrian quartzite. [NC 2150 2550]

[P216110](#) C02017 SE side of Quinag, 4.8 km. NW of Inchnadamph. Percussion marks ('chatter-marks') on glaciated surface of Cambrian quartzite. [NC 2150 2550]

[P216111](#) C02018 SE of Quinag, 4.8 km. NW of Inchnadamph. False-bedding in Cambrian Basal Quartzite. Looking N. [NC 2150 2550]

[P216112](#) C02019 Roadside at Loch Assynt, 4.8 km. NW of Inchnadamph. Looking N. Unconformable base (A) of Torridon Sandstone resting on Lewisian gneiss. Wind eroded pebbles (dreikanter) are common in layer of conglomerate indicated by shaft of hammer. [NC 2350 2650]

[P216113](#) C02020 Beinn Gharbh, 3.2 km. W. of Inchnadamph. Looking S. across Loch Assynt. Double unconformity. Torridon Sandstone (A) resting on Lewisian gneiss (B), overlain unconformably by Cambrian quartzite and intrusive sill of

Canisp porphyry. [NC 2150 2250]

[P216878](#) C03119 Stoer, Lochiner. Relict hills of Torridonian sandstone in distance resting on Lewisian gneiss (foreground).

[P002501](#) C03540 Looking north-east across Loch Glencoul to Aird da Loch and Beinn Aird, Sutherland. The Lewisian Foreland beneath the Moine Thrust Zone. Part of a panorama with C03541 and C03542. Unmoved Lewisian gneiss forms foreground, Aird da Loch and the hills beyond. This is part of the Lewisian Complex, a residual fragment of the ancient Laurentian continental mass. They have had a long and varied history having been formed then repeatedly deformed, often deep within the earth's crust over a period of 1800 Ma. The greater part of the Lewisian in the Northern Highlands probably formed in the late Archaean around 2900–2700 Ma. when the earth's crust was still relatively hot and mobile. [NC 2550 3250]

[P002502](#) C03541 Before the deposition of the Cambrian, erosion had produced a very flat surface, it is not known if this was due to marine erosion or subaerial peneplain. Cambrian sediments were deposited in a shallow shelf sea. The Glencoul Thrust truncates the Fucoïd Beds and above it comes the huge slice of transported gneiss forming Beinn Aird. Lewisian gneiss is overlain unconformably by eastwardly-dipping Cambrian quartzite followed by a thin band of Cambrian Fucoïd Beds. Part of a panorama with C0340 and C0342. [NC 2550 3250]

[P002503](#) C03542 Looking north-east across Loch Glencoul to Aird da Loch and Beinn Aird, Sutherland. Part of a panorama with C0340 and C0341. Foreground is Lewisian gneiss, lower part of slopes across the loch and islands at head of loch are formed by the zone of imbrication above the lowest thrust or 'sole'. The dark crags above are Lewisian gneiss carried on the Glencoul Thrust. [NC 2550 3250]

[P217236](#) C03543 Looking NE across Loch Glencoul to Aird da Loch and Beinn Aird. Foreground, Aird da Loch, and hills beyond are formed of unmoved Lewisian gneiss. [NC 2550 3250]

[P217237](#) C03544 Looking NE across Loch Glencoul to Aird da Loch and Beinn Aird. Eastwardly-dipping Cambrian Quartzite resting unconformably on Lewisian gneiss and followed by thin band of Fucoïd Beds. The Fucoïd Beds are truncated by the Glencoul Thrust above which rises the dark crags of transported gneiss. [NC 2550 3250]

[P217238](#) C03545 Looking SE from the SW side of Loch Glencoul, 1.6 km. SE of Unapool House, Sutherland. Lewisian gneiss (foreground) followed unconformably by Cambrian Quartzite and Fucoïd Beds (lower part of hillside). Line of trees marks the Zone of imbrication above the 'sole'. A little higher is the outcrop of the Glencoul Thrust. [NC 2550 3050]

[P002504](#) C03546 Looking south-east from the south-west side of Loch Glencoul, 1.6 km. south-east of Unapool House, Sutherland. Lewisian gneiss in the foreground is followed unconformably by Cambrian quartzite and Fucoïd Beds (lower part of hillside). The line of trees marks the zone of imbrication above the 'sole'. A little higher is the outcrop of the Glencoul Thrust. Above the Glencoul Thrust rise the dark crags of transported Lewisian gneiss. Thrust gneiss also forming the hills on the left. In the middle distance is the Stac of Glencoul formed of Moine schists carried on the Moine Thrust. [NC 2550 3050]

[P217239](#) C03547 Looking NE from point above bridge over Unapool Burn on Kylesku Road. View of Aird da Loch, Beinn Aird (C3548) and hills beyond to north-north-east. See description of C3540-C3542. The eastwardly-dipping Cambrian Quartzite can be followed across Aird da Loch and is seen again in C.3547 as a light-coloured patch in right centre of picture. [NC 2350 3050]

[P217240](#) C03548 Looking NE from point above bridge over Unapool Burn on Kylesku Road. View of Aird da Loch, Beinn Aird (C3548) and hills beyond to north-north-east. See description of C.3540-C3542. The eastwardly-dipping Cambrian Quartzite can be followed across Aird da Loch and is seen again in C3547 as a light-coloured patch in right centre of picture. [NC 2350 3050]

[P000541](#) C03549 Looking south-east from a point above the bridge over Unapool Burn on the Kylesku Road. Sutherland. Typical north-west Highlands Lewisian-Torridonian-Cambrian topography. The foreground is Lewisian gneiss overlain

unconformably (low ground middle distance) by Torridon sandstone, Cambrian Quartzite, unconformable on latter, forms low hills to left and right of ravine in centre of picture. Hill on right (Glas Bheinn) is formed of Lewisian gneiss with capping of Cambrian Quartzite above the Glencoul Thrust. [NC 2350 3050]

[P000542](#) C03550 Inchnadamph, knoll between the school and Lochinver road (Cnoc Dubh Dothaig). The Peach and Horne Memorial Cairn (unveiled July 25th, 1930). Rocks in foreground are Cambrian strata (limestones etc.) in zone of imbrication above the 'sole'. Ben Peach and John Horne were members of staff of the Geological Survey of Scotland. They worked in the North-west Highlands from 1883 to 1897 to resolve the long-standing controversy about the structure of the area. The results of their work were written up in the Memoir, 'The geological structure of the North-west Highlands of Scotland' and published by the Survey in 1907. The inscription reads: to Ben N. Peach and John Horne who played the foremost part in unravelling the geological structure of the North-west Highlands 1883–1897. An international tribute erected 1930. [NC 2450 2250]

[P000543](#) C03551 Inchnadamph; knoll between the school and the Lochinver road (Cnoc Dubh Dothaig). Distant view of the Peach and Horne Memorial Cairn. Looking north-west to Quinag (Torridonian sandstone capped by Cambrian Quartzite). Ben Peach and John Horne were members of staff of the Geological Survey of Scotland. They worked in the North-west Highlands from 1883 to 1897 to resolve the long-standing controversy about the structure of the area. The results of their work were written up in the Memoir, 'The geological structure of the North-west Highlands of Scotland' and published by the Survey in 1907. The inscription reads: to Ben N. Peach and John Horne who played the foremost part in unravelling the geological structure of the North-west Highlands 1883–1897. An international tribute erected 1930. [NC 2450 2250]

[P217241](#) C03552 On Ledmore-Unapool road, about 137 m W. of most westerly house at Knockan. View showing outcrop of lowest thrust or 'sole'; above thrust is sheared white Cambrian limestone, below is shattered and thrust dark limestone overlying rusty-weathering dolomitic Furoid Beds. (C3553 nearer view.) [NC 2050 1050]

[P217242](#) C03553 On Ledmore-Unapool road, about 137 m W. of most westerly house at Knockan. View showing outcrop of lowest thrust or 'sole'; above thrust is sheared white Cambrian limestone, below is shattered and thrust dark limestone overlying rusty-weathering dolomitic Furoid Beds. (C3553 nearer view.) [NC 2050 1050]

[P002716](#) D01192 Looking east from 1.2 km. south-south-west of Inchnadamph, Stronechrubie, Sutherland. Cliff of Cambrian dolomite. The lower part up to thrust plane shows the whole of the Grudaidh and part of the Eilean Dubh groups in natural order of succession. Above the thrust plane the Eilean Dubh rocks are piled together by small reversed faults ('schuppen-structure'). A sill of porphyrite is intrusive in the Oolitic zone of the Grudaidh Group. [NC 2530 2120]

[P002717](#) D01193 Subaerial erosion of the Lewisian rocks produced a land surface of considerable relief. On this surface Torridonian rocks were deposited unconformably. They are reddish-brown arkosic and pebbly sandstones and conglomerates that were deposited under semi-arid conditions in temporary lakes and as alluvial fans. After gentle folding extensive marine erosion formed a very flat surface onto which the Cambrian basal quartzites were deposited in a ever deepening sea. Following the quartzites fine-grained calcareous muds were deposited to form the Furoid Beds. Torridon sandstone mountains capped by Cambrian quartzite which also forms the long dip-slope running from the isolated summit towards the camera. Cambrian Furoid Beds etc. in the near and middle distance. [NC 2470 2270]

[P002718](#) D01194 One of the isolated mountains that gives rise to the 'inselberg' or 'island mountain' terrain. There has been two suggestions as to how these isolated mountains formed, 1. The result of scarp retreat and pedimentation during the Tertiary with ice-sheets modifying the the pre-existing land surface and 2. The Torridonian sandstone was breached during the Quaternary, most likely by glacial erosion. Typical Torridonian sandstone mountain, one of a line of hills that are the erosional remnants of a once continuous cover of Torridonian and Cambrian rocks. The two massive butresses of Sail Gorm and Sail Garbh dominate this view. [NC 2410 3030]

[P002719](#) D01195 The Glencoul Thrust at Beinn Aird da Loch, looking north-east from summit of Cnoc Coir a' Bhaic, Sutherland. From right to left: craggy Lewisian gneiss riding on the Glencoul Thrust (feature some way uphill right of stream in centre). Cambrian strata form stream valley (centre) and bedded crags left of centre, and are unconformable on

Lewisian gneiss to left. The Moine Thrust Zone forms a narrow but continuous belt of thrusting, folding and low-grade metamorphism stretching south-south-west from Eriboll on the north coast to Skye. [NC 2430 2980]

[P218754](#) D01196 Looking NE from summit of Cnoc Coire a' Bhaic, Glencoul Thrust (Beinn Aird da Loch). From right to left: craggy Lewisian gneiss riding on the Glencoul Thrust (feature some way uphill right of stream in centre). Cambrian strata form stream valley (centre) and bedded crags left of centre, and are unconformable on Lewisian gneiss to left. [NC 2430 2980]

[P002720](#) D01197 Glencoul, looking south-east from 1.6 km. south-east of Unapool House, Glencoul, Sutherland. The Moine Thrust forms the notch at the base of Stack of Glencoul in the centre of the picture. The Glencoul Thrust lies below the light bluffs above the dark crag-line on the right. Lewisian gneiss in foreground. Though not seen in the photograph, the Lower Cambrian Pipe Rocks in the immediate vicinity of the Glencoul Thrust have been strongly mylonitized. Mylonites are hard, very fine-grained, commonly platy rock formed by intense ductile deformation resulting in a marked grain-size reduction and recrystallization of the parent rock. They are associated with the intense thrusting along the Moine Thrust Zone. [NC 2500 3090]

[P002721](#) D01198 Ben Arkle, looking north from 1.2 km. north of Achfary, Sutherland. Mountains of Cambrian quartzite unconformable on Lewisian gneiss. Unlike many of the mountains further south, the Cambrian rocks are unconformable directly on the Lewisian, there is no intervening Torridonian. The unconformity represents a major stratigraphic break between much older Lewisian which underwent many periods of deformation and the Cambrian whose deposits were laid down on a remarkably flat marine platform. The plane of the unconformity is well seen below screes. [NC 2950 4060]

[P002722](#) D01199 Looking south-east from road 1.6 km. south-east of Laxford Bridge, Ben Stack, Sutherland. Probably the highest mountain in Scotland composed of Lewisian gneiss. A minute patch of Cambrian quartzite forms the actual summit. The Lewisian gneiss represent a long and varied part of the earth's history. They show evidence of being formed and repeatedly deformed deep within the crust over a period of 1800 Ma. The history of the Lewisian is very complex and subject to much debate. [NC 2530 4570]

[P218827](#) D01285 Roadside near Skiag Bridge. Pipe Rock'. [NC 2350 2440]

[P218828](#) D01286 NE face of Quinag from a viewpoint at bend of road near Loch na Gainmhich. Horizontally-bedded Torridon sandstones forming mountain. [NC 2400 2920]

[P218829](#) D01287 View of Quinag from Peach and Horne Memorial, NW of Inchnadamph. Horizontally-bedded Torridon sandstone forming mountain. [NC 2470 2250]

[P218833](#) D01291 General view of Stronechrubie cliff from road. Stronechrubie cliff. Showing complete Cambrian succession. [NC 2480 2000]

[P218834](#) D01292 General view of Stronechrubie cliff from road. Looking S. Stronechrubie cliff showing complete Cambrian succession. [NC 2490 2120]

[P000633](#) D01668 Relict Torridonian mountains. 1/2 km. north-east of Stoer. Mountains of Torridonian sandstone rising above the surface of Lewisian gneiss. Reading left to right they are: Canisp, Suilven, Cul Mor, Cul Beag and Stac Pollaidh. This scenery is typical of the north-western seaboard. Torridonian sandstone forms steep-sided, often isolated mountains rising abruptly from a rocky, lochan-dotted terrain composed of the much older Lewisian rocks. N. highlands regional guide. [NC 0450 2900]

[P005847](#) D02156 3 km. SE of Stoer. Glaciated Lewisian scenery. [NC 0550 2650]

[P000791](#) D02281 View across Loch Assynt to the Torridonian sandstone mountain of Quinag from the mouth of Traligill River at Inchnadamph. Sutherland. Quinag is a relict mountain of Torridonian sandstone which rests unconformably on an irregular basement of Lewisian gneiss. The lighter-coloured boulders in the stream are mainly composed of Cambro-Ordovician Durness Limestones. [NC 2450 2150]

[P000793](#) D02283 Photograph taken from the Clachtoll-Lochinver road 6 km. from Lochinver. Sutherland. The view shows Canisp and Sulven in the distance, the road is in the foreground. The steep-sided, isolated Torridonian sandstone peaks of Canisp (centre) and Sulven (right) rise above the older eroded land surface of Lewisian gneiss. The Torridonian comprises an assemblage of terrestrial sedimentary rocks laid down under fluvial or shallow lacustrine conditions. [NC 0710 2590]

[P000794](#) D02284 A view from the Clachtoll-Lochinver road 6 km. from Lochinver. Sutherland. Canisp, Sulven and Cul Mor. The Torridonian sandstone peaks of Canisp (left), Sulven (centre) and Cul Mor rising above the surface of Lewisian gneiss. The scenery is typical of the north-western seaboard of the Northern Highlands. Torridonian sandstone forms steep-sided, often isolated mountains rising abruptly and unconformably from a rocky, lochan-dotted terrain composed of the much older Lewisian rocks. [NC 0710 2590]

[P005850](#) D02285 Clachtoll. An ancient land-surface. Crags of grey Lewisian gneiss (lower right) buried under brownish Torridonian conglomerate formed from scree and pebble banks along an ancient shore line 1000 million years ago. [NC 0400 2700]

[P005851](#) D02286 Clachtoll. An ancient land-surface. Crags of grey Lewisian gneiss (lower right) buried under brownish Torridonian conglomerate formed from scree and pebble banks along an ancient shore line 1000 million years ago. [NC 0400 2700]

[P219461](#) D02287 2 km. SE of Laxford Bridge. Lewisian gneiss. A basic pod in acid Laxfordian Gneiss. [NC 2530 4600]

[P005853](#) D02288 1/2 km. NE of Stoer. Glaciated Lewisian scenery. [NC 0450 2900]

[P000830](#) D02391 The Cambrian-Torridonian unconformity on Quinag. The shoulder of Quinag in the foreground is capped by pale-coloured Cambrian Pipe Rock and Basal Quartzite which dip towards the viewer and rest unconformably on Torridonian sandstone. The two peaks in the middle distance are composed of gently-dipping Torridonian, thus demonstrating the transgressive nature of the Cambrian-Torridonian contact. View looking west. An unconformity occurs when there is a substantial gap in the geological record due to a period of non-deposition and/or erosion and is usually marked by an absence of parallelism between the beds. [NC 2250 2850]

[P000831](#) D02392 Oblique aerial view of Quinag and Lochan Bealach a' Chornaidh. Sutherland. The lochan is a fine example of a corrie loch lying in an ice-sculptured hollow which was once the source of a glacier. View looking west. Quinag, a relict mountain of Torridonian sandstone is overlain unconformably by the younger Cambrian sedimentary rocks that were deposited in a shelf sea on a remarkably flat erosion platform that progressively and gently subsided. The Cambrian rocks are the lighter rocks in the foreground. [NC 2250 2850]

[P000832](#) D02393 Oblique aerial view of Sail Gharbh, Quinag and the Cambrian-Torridonian unconformity. Sutherland. View looking west. Sail Gharbh, part of a relict mountain of Torridonian sandstone. The very pale rock in the foreground is Basal Quartzite which unconformably overlies the Torridonian. It also crops out on the summit of Sail Gharbh. [NC 2250 2850]

[P000833](#) D02394 Oblique aerial view of Quinag, Sail Gharbh and Sail Ghorm, relict mountains of gently-dipping Torridonian sandstone which rest unconformably on a basement of Lewisian gneiss. View looking south-west. Cambrian-Torridonian-Lewisian unconformities. The gneiss occupies the flat peaty foreground at the extreme right of the picture. The summit of Sail Gharbh, the closer of the two ridges, is capped by Cambrian Basal Quartzite. There are two major unconformities, that of the terrestrial sedimentary rocks of the Torridonian overlying the much older metamorphic Lewisian rocks and the youngest Cambrian marine sedimentary rocks resting on the Torridonian and/or Lewisian rocks. [NC 2250 2850]

[P000834](#) D02395 Oblique aerial view of Quinag. The hanging valley of the Allt a' Bhathaich in Torridonian rocks. Recent glaciation is indicated by this fine example of a hanging valley supported by the spurs of Sail Gharbh and Sail Ghorm. View looking south-east. The large corrie in the distance is that of Loch a' Choire Dhuibh on Glas Bheinn. The partially snow-covered mountain in the distance is Ben More Assynt. [NC 2250 2850]



[P000835](#) D02396 Oblique aerial view of Quinag. Sutherland. The line of the south-west face of Quinag is controlled by a fault which, for part of its length, coincides with the Torridonian/Lewisian contact. View looking south-east. Gleann Leireag is to the right while the top at the end of the ridge is Spidean Coinich. Loch Assynt is in the distance. [NC 2250 2850]

[P000836](#) D02397 Oblique aerial view of Quinag showing the Torridonian-Lewisian unconformity. Sutherland. Sail Ghorm in the foreground and Sail Gharbh behind. The large corrie in the distance is that of Loch a' Choire Dhuibh on Glas Bheinn. View looking south-east. Quinag is a relict mountain of Torridonian sandstone on an irregular basement of Lewisian gneiss. The sub-Torridonian surface was gently undulating but south of Quinag it became more irregular and locally had high relief. One hypothesis is that the gently undulating gneiss surface was part of a 'sub-alluvial bench' a planated piedmont surface formed below a retreating front of gneiss mountains which lay to the west of the Minch and from where most of the Torridonian sediments were derived. [NC 2250 2850]

[P000837](#) D02398 Oblique aerial view of Quinag. Sutherland. The Torridonian-Lewisian unconformity. Loch Assynt on the right and the partially snow-covered slopes of Ben More Assynt in the distance. View looking south-east. A relict mountain of Torridonian sandstone on an irregular basement of Lewisian gneiss. The line of the south-west face of Quinag is controlled by a fault which, for part of its length, coincides with the Torridonian-Lewisian contact. [NC 2250 2850]

[P000838](#) D02399 Loch Glencoul. Aird da Loch. Sutherland. The prominent scarp feature dipping to the right of the picture is formed by Cambrian Basal Quartzite and Pipe Rock which here lie unconformably on Lewisian gneiss. View looking north-east. The peaty flat above the scarp follows the dip of the Pipe Rock and the break in the slope marks the line of the Glencoul Thrust plane which brings the Lewisian gneiss to rest upon Cambrian strata. The ridge in the background shows a similar structure. [NC 2550 3350]

[P000839](#) D02400 Loch Glencoul. Sutherland. Beyond Loch Glendhu the lower ground is again formed by Lewisian gneiss but here it is overlain unconformably by Cambrian Basal Quartzite and Pipe Rock which form the prominent scarp feature with white screes. The peaty flat beyond the scarp follows the dip of the Pipe Rock and beyond that a set of grassy screes marks the outcrop of the zone of imbrication of Cambrian strata which lie under the Glencoul Thrust. The top of the hill is formed of Lewisian gneiss which has been brought forward by the thrust to rest on the Cambrian. In the foreground Lewisian gneiss stretches down to the shores of Loch Glencoul producing a characteristic hummocky, peaty terrain which is continued in the peninsula dividing Loch Glencoul from Loch Glendhu. The distant hills are mainly Lewisian. View looking north-east. [NC 2550 3350]

[P000840](#) D02401 Loch Glencoul. Aird da Loch. Sutherland. Cambrian strata resting unconformably on the Lewisian gneiss with a thrust mass of older Lewisian on top of the Cambrian and below the Glencoul Thrust. In the foreground Lewisian gneiss stretches down to the shores of Loch Glencoul producing a characteristic hummocky, peaty terrain. The prominent scarp feature dipping to the right of the picture is formed of Cambrian Basal Quartzite and Pipe Rock which here lie unconformably on Lewisian gneiss. The peaty flat above the scarp follows the dip of the Pipe Rock and the break in slope marks the line of the Glencoul Thrust plane which brings Lewisian gneiss to rest upon Cambrian strata. The ridge in the background shows a similar structure. [NC 2550 3350]

[P000841](#) D02402 Oblique aerial view of the Kylestrome Ferry (Kylesku Ferry). Sutherland. The island is Garbh Eilean while at the top of the photograph is the entrance to Loch Glendhu (left) and Loch Glencoul (right). View looking south-east. Glaciated valleys. Kylestrome Ferry is the meeting point of Lochs Glencoul and Glendhu whose waters fill valleys overdeepened by glaciation and now produce a fiord-like topography. The ferry can be seen entering the Kylestrome side. [NC 2550 3350]

[P000842](#) D02403 The glaciated valleys of Loch Glencoul (right) and Loch Glendhu (entrance on the left) whose waters fill the valleys overdeepened by glaciation and now produce a fiord-like topography. The hummocky low ground between the two lochs is the Lewisian Gneiss basement, on which the Cambrian Basal Quartzite and Pipe Rock lie unconformably and form the prominent low scarp. Above this the break in slope marks the line of the Glencoul Thrust plane which brings Lewisian gneiss to rest upon Cambrian strata. View looking south-east. Kylestrome Ferry (Kylesku Ferry) is in the

foreground on the left. [NC 2550 3350]

[P000843](#) D02404 Oblique aerial view of Loch Glencoul whose waters fill the valley overdeepened by glaciation. The foreground is composed of Lewisian gneiss and thin lines of trees can be seen following the epidiorite bodies which cut across the gneiss. The line of the Glencoul Thrust plane can be seen cutting across the peninsula between Loch Glencoul and Loch Glendhu. View looking east. To the left of the loch is peninsula Aird da Loch and higher, Beinn Aird da Loch on which a thrust mass of Lewisian gneiss rests on top of Cambrian rocks which in turn rests unconformably on Lewisian gneiss. [NC 2550 3350]

[P219494](#) D02405 Ben Stack. Lewisian mountain. Ben Stack is formed of highly foliated Lewisian gneiss which dips steeply to the left of the picture and trends from the summit towards the viewer. Fault lines can be seen cutting across the foliation, i.e. from bottom left to top right. The summit is capped by basal quartzite. View looking north-west. [NC 2750 4350]

[P000844](#) D02406 Oblique aerial view of the Lewisian gneiss mountain of Ben Stack with a capping of Cambrian Basal Quartzite on the summit. Sutherland. View looking north-west. Ben Stack is formed of highly foliated Lewisian gneiss which dips steeply to the left of the picture. Fault lines can be seen at the left-hand edge of the picture, running from bottom left to top right. The hollow feature on the right-hand slope, running towards the viewer is a shear zone which has been picked out by erosion. [NC 2750 4350]

[P000845](#) D02407 Oblique aerial view of Ben Stack. Sutherland. Loch Stack and the Durness to Lairg road (A838) is seen at its foot. View looking west. Ben Stack is formed of steeply-dipping Lewisian gneiss. The narrow U-shaped valley occupied by Loch Stack has been eroded along the line of several granitic sheets which intrude the Lewisian parallel to its foliation. It also probably follows a major fault line. [NC 2750 4350]

[P219495](#) D02408 Ben Stack. Lewisian mountain. Ben Stack is formed of highly foliated Lewisian gneiss which dips steeply to the right of the picture. Fault lines can be seen running across the foliation, up to the summit. View looking east. [NC 2750 4350]

[P000846](#) D02409 Oblique aerial view of the Lewisian gneiss mountain of Ben Stack with a capping of Cambrian Basal Quartzite on the summit. Sutherland. View looking south-east. Ben Stack is formed of highly foliated Lewisian gneiss which dips steeply to the right of the picture. Fault lines can be seen running across the foliation, up to the summit. [NC 2750 4350]

[P000847](#) D02410 Oblique aerial view of Arkle illustrating the Cambrian-Lewisian unconformity. Sutherland. The slopes show extensive development of screes. Loch Stack in the foreground. View looking north-west. The crags and white screes are formed by much-faulted Cambrian quartzites which rest unconformably on Lewisian gneiss. The break of slope at the base of the screes marks the line of the unconformity. [NC 3050 4550]

[P000848](#) D02411 Oblique aerial view of Arkle illustrating the Cambrian-Lewisian unconformity. Sutherland. The slopes show extensive development of screes. View looking north-west. Cambrian-Lewisian unconformity: screes. Arkle. The crags and white screes are formed by much-faulted Cambrian quartzites which rest unconformably on Lewisian gneiss. The break of slope at the base of the screes marks the line of the unconformity. [NC 3050 4550]

[P000849](#) D02412 Oblique aerial view of Arkle illustrating the Cambrian-Lewisian unconformity and the extremely well-developed scree slopes. Sutherland. View looking east with Ben Hope in background. Pale-coloured Cambrian quartzites form the crest of the ridge and rest unconformably on Lewisian gneiss. Note the very marked change from the lower Lewisian slopes with their rocky hummocky terrain to the well-bedded lighter coloured Cambrian rocks. Scree is a sheet of loose fragmental material lying on a mountain slope usually accumulating at the base of a cliff. [NC 3050 4550]

[P219496](#) D02413 Ben Arkle. Ben Arkle. Pale-coloured Cambrian quartzites form the crest of the ridge and rest unconformably on Lewisian gneiss. View looking east. Ben Hope in background. [NC 3050 4550]

[P000956](#) D02808 Oblique aerial view of Stoer Point. Typically red, reddish-brown Torridonian sandstone. Strike face of gently-dipping beds showing local faulting. Small point 0.3 km. south-west of Point of Stoer. Sutherland. The Torridonian comprises an assemblage of terrestrial sedimentary rocks laid down under fluvial or shallow lacustrine conditions. Due to the great thicknesses and the palaeoenvironmental indicators it is thought that the rocks accumulated in fault-determined subsiding basins. [NC 0160 3540]

[P000957](#) D02809 Old Man of Stoer. Sutherland. South face of a sea stack showing jointing and bedding structures in Torridonian sandstone. The stack was once joined to the headland. Due to wave erosion following lines of weakness, the joints and bedding, caves would form either side of the headland, these would then join to form an arch. With subsequent collapse of the arch the stack would become isolated as in the photograph. [NC 1050 3530]

[P219708](#) D02810 Old Man of Stoer. Old Man of Stoer - east face. Jointing and gently-dipping bedding can be seen in this cliff and sea-stack of Torridonian sandstone. [NC 1070 3540]

[P000958](#) D02811 Suilven, west face, a relict mountain of Torridonian sandstone rising from a basement of Lewisian gneiss. Sutherland. Typical of this country are steep-sided, isolated mountains of Torridonian sandstone unconformably sitting on, and rising abruptly from a considerably older high grade metamorphic Lewisian gneiss basement which forms a typical 'rock ridge and boggy hollow' terrain. [NC 1450 8150]

[P000959](#) D02812 Suilven, west face, a relict mountain of Torridonian sandstone rising from a basement of Lewisian gneiss. Sutherland. Rocky ridge and boggy hollow terrain, typical of glaciated Lewisian gneiss basement. Some of the deeper hollows have lochans. Suilven, one of several isolated mountains in the area is typical of the 'inselberg' or 'island mountain' terrain. [NC 1090 1890]

[P000960](#) D02813 Kirkaig, 2 m. east-south-east of Inverkirkaig. Sutherland. Looking west. The photograph shows typical Lewisian gneiss scenery. Lewisian ridge and hollow terrain. Typical rocky ridge and boggy hollow terrain of glaciated Lewisian gneiss basement. Some of the deeper hollows have lochs in them. [NC 1100 1870]

[P000961](#) D02814 Loch Ardbhair, 2.5 m. east of Drumbeg. Sutherland. Looking north. A sea loch in typical Lewisian gneiss scenery. Coastal Lewisian terrain. Low rounded ridges and sea-filled hollows with numerous islands - typical of Lewisian glaciated topography. The white building on the other side of the loch is Ardvar. [NC 1660 3260]

[P000962](#) D02815 Loch Nedd, 1 m. east of Drumbeg. Sutherland. In the distance is the isolated mountain Quinag showing the west face. Loch Nedd is a fiord type sea loch in a glaciated hollow in the Lewisian gneiss basement. Quinag is a relict mountain of Torridonian sandstone which overlies a former Lewisian undulating land surface unconformably. [NC 1300 3280]

[P005876](#) D02816 Clachtoll Bay. Lewisian/Torridonian unconformity. Near vertically-banded Lewisian gneiss is overlain unconformably by basal breccia of the Stoer Group of the Torridonian sandstone, left half of picture. [NC 0400 2700]

[P005877](#) D02817 Clachtoll Bay. Lewisian/Torridonian unconformity. Steeply-dipping Lewisian gneiss is overlain along a steeply-dipping irregular unconformity by basal breccia of the Stoer Group of the Torridonian sandstone. The breccia contains angular fragments of Lewisian gneiss. [NC 0400 2700]

[P000963](#) D02818 Panorama of (left to right) Quinag, Ben More Assynt, Canisp and Suilven taken from the Stoer Road viewpoint several miles north-west of Lochinver. Sutherland. Typical of the scenery in this area are the steep-sided, isolated mountains of Torridonian sandstone unconformably sitting on, and rising abruptly from a considerably older high grade metamorphic Lewisian gneiss basement. The Lewisian forms a typical 'rock ridge and boggy hollow' terrain. The view shows relict mountains of Torridonian sandstone lying unconformably on Lewisian gneiss. [NC 0810 2570]

[P000964](#) D02819 Panorama of (left to right) Suilven, Cul Mor, Cul Beg, Stac Polly (Pollaidh) and Ben More Coigach, taken from the Stoer Road viewpoint several miles north-west of Lochinver. Sutherland. In the foreground is the rocky ridge and boggy hollow terrain, typical of glaciated Lewisian gneiss basement. Some of the deeper hollows have lochans. The mountains are a few of several isolated mountains in the area and are typical of the 'inselberg' or 'island mountain'

terrain. [NC 0810 2570]

[P000965](#) D02820 Above the scarp lies a peaty platform composed of Cambrian Pipe Rock with some 'Furoid' Beds at the eastern edge. Above the platform rises gneiss which has been carried on the combined Sole and Glencoul Thrust Planes and forms the main hill of Aird da Loch. Glencoul Thrust Plane: on the far side of the loch is the peninsula of Aird da Loch. Undisturbed easterly-dipping Cambrian quartzites can be seen forming the prominent scarp above the grey knolls of Lewisian gneiss. [NC 2340 3160]

[P000966](#) D02821 Stac of Glencoul at the head of Loch Glencoul. Sutherland. The prominent stack on the skyline is formed of Moine schists which rest on mylonite. Beneath the mylonite Cambrian quartzite forms the hilltop below the stack. There are several thrust planes crossing this hillside. The Sole and Glencoul Thrusts cross the loch from left to right and run through the two most distant islands and up into the large crag in shadow. Lewisian gneiss can be seen in the foreground. Mylonite is a hard, very fine-grained, commonly laminated and platy rock formed by intense ductile deformation and resulting in marked grain size reduction and recrystallization of the parent rock. Mylonites are common along the full length of the Moine Thrust Zone. [NC 2370 3220]

[P000967](#) D02822 Sail Gharbh, Quinag. Sutherland. A relict mountain of Torridonian sandstone resting unconformably on an ancient land surface of the Lewisian. Lewisian gneiss occupies the flat peaty hollow in the foreground and the line of unconformity with the Torridonian sandstone can be traced along the low crags behind the loch to the base of Sail Gharbh. An example of a glaciated hanging valley can be seen between the buttress of Sail Gharbh and Sail Ghorm behind it (right-hand edge of picture). [NC 2410 2990]

[P000968](#) D02823 Inchnadamph, looking north-west towards Quinag. Sutherland. Monument to Peach and Horne. Ardvreck Castle can just be seen in the middle distance beside Loch Assynt. Spidean Coinich and Sail Gharbh (parts of Quinag) can be seen in the background. The inscription reads: to Ben N. Peach and John Horne who played the foremost part in unravelling the geological structure of the North-west Highlands 1883–1897. An international tribute erected 1930. [NC 2490 2220]

[P000969](#) D02824 Inchnadamph, looking north-west towards Quinag from the Inchnadamph Hotel forecourt. Loch Assynt can just be seen behind the trees. The flat field in the foreground is alluvium of the River Traligill. The Peach and Horne monument can just be seen on a knoll above the trees. Spidean Coinich and Sail Gharbh (parts of Quinag) are formed of Torridonian sandstone. [NC 2520 2170]

[P219709](#) D02825 Skiag Bridge. Stained bedding structures in strike face of Cambrian Pipe Rock. Red staining from underlying Torridonian sandstone has picked out the sedimentary structures in the Cambrian quartzite. [NC 2350 2450]

## **Sheet 108 Altnaharra**

[P001662](#) B00035 Summit of Ben More Assynt, seen from the north, Sutherland. Landslips and screes of quartzite, dipping parallel to hill slope. On the north side of Ben More Assynt, a thin sheet of Cambrian quartzite unconformably overlies Lewisian gneiss, the Torridonian sandstones being cut out east of [NC 308 200]. Frost-shattering has broken the quartzite into small blocks, which form extensive screes and are prone to landslips. [NC 3180 2020]

[P216892](#) C03139 On right bank of River Mudale, 1.6 km. WNW of Altnaharra (C3140, more distant view). Boss of epidiorite and serpentine in siliceous granulites of Moine Series.

[P216893](#) C03140 On right bank of River Mudale, 1.6 km. WNW of Altnaharra (C3140, more distant view). Boss of epidiorite and serpentine in siliceous granulites of Moine Series.

[P216894](#) C03141 2.8 km. NW of Altnaharra. Boss of epidiorite in siliceous granulites of Moine Series.

[P002469](#) C03142 Loch Meadie, 8.9 km. north-west of Altnaharra, Sutherland. View looking north-eastwards across the plateau underlain by siliceous granulite of the Moine series to the Ben Loyal quartz-syenite intrusions. The Ben Loyal intrusion consists of two quartz syenites of similar chemistry but different mineralogy and habit. In the foreground are

hummocky moraines which also project as islands from the waters of the loch.

[P216895](#) C03143 Strath More, 16.1 km. NW of Altnaharra. Western face of Ben Hope: 610 m. escarpment of siliceous Moine granulites.

[P002470](#) C03144 Alltnacailich, Strath More, 16.1 km. north-west of Altnaharra, Sutherland. Ben Hope (929.6 m.) and Strath More. Ben Hope is formed of metasedimentary siliceous Moine granulites. It shows a buttress in the middle distance and a long escarpment (Leitir Mhuisseil) on right. Dun Dornadilla is in the foreground at the edge of the river alluvium.

[P216896](#) C03145 Alltnacailich, Strath More, 16.1 km. NW of Altnaharra. Escarpment of siliceous Moine granulites of Leitir Mhuisseil, the southern prolongation of Ben Hope.

[P216897](#) C03146 Alltnacailich, Strath More, 16.1 km. NW of Altnaharra. Waterfall on the Allt na Caillich over flaggy siliceous granulites of the Moine Series with two thin bands of hornblende-schists. Part of the Ben Hope granulite escarpment.

[P216902](#) C03151 River Vagastie, 0.4 km. S. of Klibreck Lodge, Altnaharra. River flowing along line of crush in siliceous Moine granulites.

[P002471](#) C03152 Ben Klibreck, from the banks of Klibreck Burn, 1.6 km. south of Klibreck farmhouse, 2.4 km. east of Altnaharra. Part of the Loch Choire migmatite complex formed in an early phase of the Caledonian Orogeny. The western escarpment of Ben Klibreck, formed of siliceous and pelitic Moine rocks injected by granitic material. The migmatites have a sheet-like form with an upward transition from unmigmatized metasediments to structurally overlying migmatized rocks. Half-way up the escarpment is the Pap (A' Choich); the summit of Ben Klibreck, Meall nan Con (959 m.) is seen in centre distance.

[P216903](#) C03153 1.2 km. SE of Klibreck farmhouse, 2.4 km. E. of Altnaharra. Glaciated boss of serpentine in rocks of Lewisian type. Denuded peat-moss containing tree stools in foreground.

[P216904](#) C03154 Craig a' Mhuilinn, 0.8 km. SE of Klibreck farmhouse, 2.4 km. E. of Altnaharra. Striped hornblende-schists belonging to the rocks of Lewisian type, occurring within the Moine Series east of the Moine Thrust.

[P002472](#) C03155 In foreground is the face of the great moraine that separates Loch a' Bhealaich from Loch Choire. The distant hills (summit, Carn an Fheidh) are composed of rocks of the Loch Choire injection complex formed in an early phase of the Caledonian Orogeny.

[P216905](#) C03156 Bealach Easach, at head of Loch a Bhealaich, 6.4 km. ENE of Crask Inn. Landslip, consisting of enormous blocks of rocks of the Loch Choire injection complex.

[P002473](#) C03157 Bealach Easach, Loch a' Bhealaich and Loch Choire, Sutherland. The Loch Choire hollow, in rocks of the Loch Choire migmatite complex. The hollow is a glacially over-deepened valley leading into the flats of the Badanloch Forest. The nearer loch, Loch a' Bhealaich is a simple rock basin separated by a moraine from the farther, Loch Choire, again a simple basin with a depth of 151 feet (seen in detail C03155).

[P216906](#) C03158 Creag an Lochain, 2.0 km. S. of Meall nan Con, Ben Klibreck. Coire and coire-loch in rocks of the Loch Choire injection complex. In front of the loch is a long rampart-like moraine.

[P216907](#) C03159 Creag an Lochain, 2.0 km. S. of Meall nan Con, Ben Klibreck. Coire and coire-loch in rocks of the Loch Choire injection complex. On right of loch is end of the rampart-like moraine.

[P216908](#) C03160 Creag an Lochain, 2.4 km. S. of Meall nan Con, Ben Klibreck. Coire and coire-loch. Rocks of the Loch Choire injection complex forming the corrie walls.



[P216909](#) C03161 Looking SW towards Meall nan Con from near bench-mark, 2367, on Ben Klibreck. Rhacomitrium carpet on the summit ridge of Ben Klibreck.

[P216910](#) C03162 On south-western slopes of Meall nan Con, Ben Klibreck, near level of 610 m. Terraces. ? Frost terraces, composed of light peaty soil and scree.

[P002474](#) C03163 Loch na Glas-choille, 4.8 km. south of Altnaharra, Sutherland. View of the Ben Klibreck escarpment of the Loch Choire migmatite complex. The high summit is Meall nan Con (961 m.) formed of an intimate mixture of metasedimentary pelitic schists modified by the injection of granitic material. There is an upward transition from unmigmatized metasedimentary rocks to migmatitic rocks. Smooth morainic drift mantles the lower slopes in foreground. It is thought that the migmatite is derived from the host schistose rock by a process of partial melting (anatexis) or by a process of segregation involving volatile components some of which may be from external sources, some of the larger granite masses may indeed be truly magmatic.

[P002475](#) C03164 North-west slopes of Carn an Fheidh, 8.0 km. south of Altnaharra, Sutherland. The Ben Klibreck escarpment of rocks of the Loch Choire migmatite complex. Immediately above the loch (Loch nan Uan) is a low escarpment of rocks of 'Lewisian' type; above this and making the great crag of The Pap (A' Choich) follow siliceous and semi-pelitic Moine rocks with migmatitic - granitic material. These rocks are succeeded by mixed injection rocks forming the conical peak (Meall nan Con, 961m.) the summit of Ben Klibreck.

[P002761](#) D01619 Ben Hope from the east, Sutherland. Moine psammite mountain with basic amphibolite sill loosely termed the Ben Hope Sill. The feldspathic and siliceous psammites that form most of Ben Hope dip steadily to the south-east. This easterly dip slope contrasts with the steep western escarpment over 2000 ft. high seen in D01620. Note the large expanse of high flat peat bog in the foreground with peat diggings. This is typical Sutherland wide, open scenery with large isolated mountain ranges. [NC 6050 5250]

[P002762](#) D01620 Ben Hope looking north-north-east from Dun Donadilla, Sutherland. Coarse feldspathic and siliceous psammites of Moine (Precambrian) age, dipping gently to the east. The lower slopes consist of the Ben Hope Sill. The amphibolites of the 'Ben Hope Sill' are associated with the metasedimentary schists occurring between the Moine Thrust and the Meadie Slide in Sutherland. The amphibolites represent a basic intrusion that has subsequently undergone metamorphism to form a schistose, garnetiferous amphibolite that forms an extensive sheet up to 0.5 km. outcrop width. [NC 4550 4500]

[P002763](#) D01621 Ben Hope looking north-north-east from Alltnacaillich, Sutherland. Coarse feldspathic and siliceous Moine psammites dipping gently to the east intruded by the basic 'Ben Hope Sill'. The sill forms the long escarpment and can be traced for many miles and is composed of schistose, garnetiferous amphibolite i.e. the original intrusion of tholeiitic basic rock has undergone considerable metamorphism. It is thought that the sill was intruded along a stratigraphic line of weakness such as a finer grained pelitic band within the psammites. Note the gravel banks in the Strathmore River in the foreground and the low alluvial terrace on the left. [NC 4550 4510]

[P005875](#) D02807 Loch Meadie. Ben Loyal from Loch Meadie. [NC 4900 3960]

## **Sheet 113 Cape Wrath**

[P214010](#) B00001 Cape Wrath. Headland formed of Lewisian gneiss. [NC 2570 7480]

[P214011](#) B00002 A little E. of the lighthouse, Cape Wrath. Cliff of Lewisian gneiss. [NC 2610 7470]

[P001653](#) B00003 Cliff on south side of Lighthouse, Cape Wrath, Sutherland. Folds in banded Lewisian gneiss. Layering in lower part of cliff subhorizontal, with thinner, presumably basic, layers weathering more than more acid layers, and erosion concentrated along boundaries between rock types. Higher up cliff jointing more irregular. Just to left of lighthouse, layering in upper part of cliff dips steeply, and directly below lighthouse relatively tight folding is visible. [NC 2590 7470]

[P214012](#) B00004 S. of the lighthouse, Cape Wrath. Cliff of Lewisian gneiss showing alternating bands of granite gneiss and hornblende gneiss, with veins of pegmatite. [NC 2550 7450]

[P214024](#) B00018 About 1.609 km. S. of Rhiconich. Rock face: upper part consists of coarse pegmatite, lower part of hornblende gneiss with parallel structure. [NC 2560 5060]

[P214025](#) B00019 About 1.609 km. S. of Rhiconich. A portion of the rock face shown in No. B18, exhibiting the intrusive character of the pegmatite. [NC 2560 5060]

[P214026](#) B00020 About 1.609 km. S. of Rhiconich. Perched blocks of banded gneiss. [NC 2560 5060]

[P214027](#) B00021 About 1.609 km. S. of Rhiconich. Perched blocks of banded gneiss. [NC 2560 5060]

[P214621](#) C00001 Cape Wrath. Stack of Lewisian gneiss, capped by a mass of hornblende rock. [NC 2570 7480]

## **Sheet 114 Tongue**

[P001654](#) B00005 Smoo Cave, Leirinmore, Durness, Sutherland. Cliff of Cambrian dolomite with bands of chert. The Allt Smoo reaches the sea at the back of the cave. Subhorizontally-bedded fine-grained granular dolomite and white limestone of the Sangomore Formation (Lower Ordovician) with thin beds of chert forms the cliff. This is an area of karst topography where rainwater has dissolved the rock to form caves and sinkholes. [NC 4200 6730]

[P216719](#) C02869 Smoo, Durness, Sutherland. Granular dolomites and white limestones (Cambrian). (See also C5.)

[P002463](#) C03126 Smoo, Durness, Sutherland. A stream flowing into a swallow hole in Cambrian Durness Limestone. Solution of limestone by rain-water charged with carbon dioxide causes widening of joints and bedding planes as the water works its way down through the rocks. The surface openings eventually become enlarged and in some cases funnel-shaped holes such as this swallow hole or sink hole form.

[P002464](#) C03127 Entrance to Smoo Cave, Durness, Sutherland. Exit of underground river and sea cliff of Durness (Cambrian) Limestone. Smoo Cave is also known as Uamh Smowe, Great Smoo and MacAllister's Cave. The vast entrance to the cave, 100 feet wide and 50 feet high is situated at the head of an inlet, one mile east of Durness. The floor of the main chamber is only a few feet above the normal high tide mark. The cave is about 250 feet long and has a vertical range of 80 feet - the Allt Smoo sinks down a 70 foot deep pothole and appears on the western side of the main entrance.

[P002465](#) C03128 Interior of Smoo Cave, Durness, Sutherland. Underground river in Cambrian Durness Limestone. The interior of the Smoo Cave. The floor of the main chamber is only a few feet above the normal high tide mark, the river comes from the Allt Smoo which falls down a 70 ft. pothole near road. There is a second chamber with a 15 feet deep pool at the base of the pothole. There have been many historical visitations to this cave including one by Sir Walter Scott.

[P216898](#) C03147 Corrie on W. side of An Caisteal, Ben Loyal. Corrie in the syenite mass of Ben Loyal.

[P216899](#) C03148 Near N. end of Loch an Dithreibh. W. side of Ben Loyal group of mountains. Castle and tor weathering of syenite.

[P216900](#) C03149 An Caisteal, Ben Loyal. Castle and tor weathering of syenite.

[P216901](#) C03150 Ben Loyal. Looking N. towards An Caisteal. Castle and tor weathering of syenite. Morainic drift on lower slopes in foreground.

[P217235](#) C03539 Ben Hope, from Gobernuisgach (i.e. from the south). A mountain of coarse feldspathic and siliceous moine granulites. Showing the huge 610 m. western escarpment.

[P002723](#) D01200 Looking south-west from 2.4 km. south-west of Durness on the A838, Sutherland. The photo is taken from the Cambrian limestone outcrops on the sea loch shore. The middle distance is Lewisian gneiss above which rises the Granstackir Feinaren mountains of Cambrian quartzite unconformable on the older Lewisian platform of the area. [NC 3850 6560]

[P002724](#) D01201 Looking south-south-east from road 2.4 km. north of Kinloch Lodge, Ben Loyal, Sutherland. The mountain is made from a late-Caledonian Orogeny intrusion of syenite. The slabby buttresses and summit top are typical of such uniform plutonic masses when they form mountains. The intrusion itself consists of two quartz syenites. An outer syenite has a laminated two-feldspar rock where the lamination roughly concordant with the foliation of the surrounding schists. The inner mass is a coarse, non-laminated syenite with a gradational contact with the outer syenite. [NC 5570 5460]

[P219068](#) D01599 Durness. Underground river in Durness Limestone, Smoo Cave interior. [NC 4180 6720]

[P219069](#) D01600 Durness. Cliff of Cambrian dolomite with bands of chert, Smoo Cave. [NC 4180 6720]

[P219080](#) D01614 Cnoc an Fhreiceadain from W. Cliffs of breccia and conglomerate formerly thought to be of Old Red Sandstone age now believed to be possibly Permo-Triassic or Jurassic age. [NC 6090 5960]

[P000628](#) D01622 Ben Loyal (left) and Ben Hiel (from east). The flat area between is the Bealach Clais nan Ceap. Sutherland. The Late-Caledonian alkaline igneous intrusions of the Ben Loyal complex. The Ben Loyal Intrusion consists of two quartz syenites of similar chemistry but slightly different mineralogy and habit, that have a gradational contact between the two. The form of the intrusion is that of a sheet or laccolith, fed from the south-east which distends and deflects the schist envelope. Three syenitic masses similar to the larger intrusions in Assynt lie around Loch Loyal and well within the Moine Nappe. They comprise Ben Loyal, Cnoc na Cuilean and Beinn Stumanadh intrusions respectively. [NC 6160 4750]

[P000629](#) D01623 Ben Loyal from the north. Sutherland. On the left are the slopes of Ben Heil, the sharp peak in the middle, far distance is An Caisteal while the prominent buttress is Sgor Chaonasaid. The Ben Loyal Intrusion consists of two quartz syenites of similar chemistry but slightly different mineralogy and habit with a gradational contact between the two. The form of the intrusion is that of a sheet or laccolith, fed from the south-east, which distends and deflects the schist envelope. Three syenitic masses similar to the larger intrusions in Assynt lie around Loch Loyal and well within the Moine Nappe. They comprise Ben Loyal, Cnoc na Cuilean and Beinn Stumanadh intrusions respectively. [NC 6050 5240]

[P000630](#) D01624 Ben Hiel (left) and Ben Loyal (right) from the north. The prominent buttresses on Ben Loyal are Sgor Chaonasaid, Sgor a' Bhatain and Sgorr a' Chleirich. The summit peak An Caisteal can be seen just left of Sgor Chaonasaid. The outer of the two quartz syenite intrusions is a laminated two-feldspar rock, the lamination has been ascribed to a flowage of the crystal mush which is concordant with the foliation of the surrounding schists. The inner mass is a coarse, non-laminated syenite with only one type of feldspar, perthite. Three syenitic masses similar to the larger intrusions in Assynt lie around Loch Loyal and well within the Moine Nappe. They comprise Ben Loyal, Cnoc na Cuilean and Beinn Stumanadh intrusions respectively. [NC 5990 5600]

[P000631](#) D01625 Ben Loyal looking south-east from Kinlochburn at head of Kyle of Tongue. The prominent buttresses on Ben Loyal are Sgor Chaonasaid, Sgor a' Bhatain and Sgorr a' Chleirich. The rocks forming the low ground in front of Ben Loyal are Moine granulites. The Ben Loyal Intrusion consists of two quartz syenites of similar chemistry but slightly different mineralogy and habit with a gradational contact between the two. The outer of the two quartz syenite intrusions is a laminated two-feldspar rock while the inner mass is a coarse, non-laminated syenite with only one type of feldspar, perthite. Three syenitic masses similar to the larger intrusions in Assynt lie around Loch Loyal and well within the Moine Nappe. They comprise Ben Loyal, Cnoc na Cuilean and Beinn Stumanadh intrusions respectively. [NC 5540 5330]

[P000850](#) D02414 Oblique aerial view of Foinaven (Ganu Mor), one of a group of mountains including Arkle and Meall Horn, situated in the heart of the Reay Forest. Sutherland. It is a Cambrian quartzite mountain displaying lateral moraines. View looking south-west. Foinaven is composed largely of much-faulted Cambrian quartzites which weather to a pale-coloured scree. Lateral moraines can be seen following the S-shaped curve of the stream which drains off

Foinaven. They formed when rock debris from slopes above a glacier fell onto the edge of the glacier. [NC 3350 5250]

[P000851](#) D02415 Oblique aerial view of Foinaven (Ganu Mor), one of a group of mountains including Arkle and Meall Horn, situated in the heart of the Reay Forest. Sutherland. View looking south-west. Foinaven is composed largely of much-faulted Cambrian quartzites which weather to a pale-coloured scree. Lateral moraines can be seen following the S-shaped curve of the stream which drains off Foinaven. The Lewisian basement can be seen in the crag on the far side of the deep U-shaped valley in the foreground. [NC 3350 5250]

[P000852](#) D02416 Oblique aerial view of Foinaven (Ganu Mor), one of a group of mountains including Arkle and Meall Horn, situated in the heart of the Reay Forest. Sutherland. The photograph illustrates the Cambrian-Lewisian unconformity. View looking south-west. Pale-coloured Cambrian quartzites form the ridge in the foreground and the ridge with much scree in the background. The quartzites rest unconformably on Lewisian gneiss which forms the ice-sculpted lower ground. [NC 3350 5250]

[P000853](#) D02417 The prominent scarp with screes in the middle distance is formed of much-faulted Cambrian quartzites which rest unconformably on an irregular surface of Lewisian gneiss. The hill in the foreground is formed of Lewisian gneiss and is higher in altitude than the quartzite scarp, thus demonstrating the highly irregular nature of the Lewisian land surface on which the Cambrian quartzites were deposited. It illustrates typical Cambrian quartzite topography and the Cambrian-Lewisian unconformity. Sutherland. View looking south-east. [NC 3350 5250]

[P219497](#) D02418 Foinaven. Pale-coloured Cambrian quartzites form the crest of the ridge and rest unconformably on Lewisian gneiss. View looking east. [NC 3350 5250]

[P219498](#) D02419 Foinaven. Cambrian-Lewisian unconformity. Foinaven. Pale-coloured Cambrian quartzites form the crest of the ridge and rest unconformably on Lewisian gneiss. Ben Hope in the background. View looking east. [NC 3350 5250]

[P000854](#) D02420 Oblique aerial view of Foinaven (Ganu Mor), one of a group of mountains including Arkle and Meall Horn, situated in the heart of the Reay Forest. The pale-coloured Cambrian quartzites form the crest of the ridge and rest unconformably on Lewisian gneiss. Note the very marked difference in topography, the Lewisian forms the typical 'rock ridge and boggy hollow' terrain. The deeply gullied face of Ben Hope can be seen in the background. It illustrates typical Cambrian quartzite topography and the Cambrian-Lewisian unconformity. Sutherland. View looking east. [NC 3350 5250]

[P000855](#) D02421 Ben Hope. Sutherland. The overgrown escarpment is formed by flaggy, micaceous Moine schist which dips gently towards the base of Ben Hope. Alluvium and peat fill the low foreground. View looking east. Bands of garnetiferous Lewisian gneiss and amphibolite traverse the face of Ben Hope about half-way up, above the screes. Above these bands lies more flaggy, micaceous Moine schist. Note the very well-developed gully erosion. The Moine Succession, named after the peninsula of a' Mhoine (the Peat Bog) in northern Sutherland is a group of metasedimentary strata the oldest of which were deposited on a Lewisian basement between 1500 and 1025 Ma. ago. Its youngest members are thought to be c. 700 Ma. old. [NC 4750 5050]

[P219702](#) D02801 Smoo. Swallow hole of the Allt Smoo in the Durness Limestone. The river goes underground at this point and emerges again from a cave downstream. [NC 4180 6700]

[P219703](#) D02802 Smoo Cave. Smoo Cave. The Allt Smoo emerging from a cave which it has cut in the Durness Limestone. [NC 4190 6710]

[P219704](#) D02803 Smoo. Looking N. Durness Limestone cliffs. Small gorge cut by the Allt Smoo in the highly soluble Durness Limestone. Note also the shingle bars at the upper tidal limit. [NC 4190 6720]

[P219705](#) D02804 Strathan Bay. Original bedding structures in the Moine. [NC 5740 6480]

[P219706](#) D02805 Head of Loch Eriboll. Raised beach. The flat-topped, slightly dipping spit of land coming into the right-hand side of the picture in the middle distance is a remnant of raised beach. [NC 3950 5600]

[P219707](#) D02806 Rabbit Islands from Rhitongue. Skerries: group of small inshore islands across the mouth of the Kyle of Tongue. [NC 6020 5990]

[P219780](#) D03025 Ben Loyal and Ben Hope from Lochan Leacach near Borgie. Ben Loyal and Ben Hope. [NC 6880 5740]