

Excursion itineraries - Capel Curig and Betws-y-Coed. Description of 1:25 000 sheet SH 75

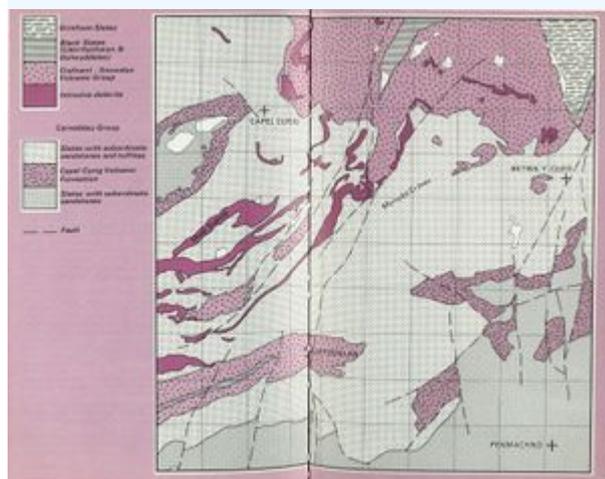
From Earthwise

[Jump to navigation](#) [Jump to search](#)

From: Howells, M. F., Francis, E. H., Leveridge, B. E. and Evans, C. D. R. 1978 [Capel Curig and Betws-y-Coed. Description of 1:25 000 sheet SH 75](#) Classical areas of British geology, Institute of Geological Sciences. (London: Her Majesty's Stationery Office.)

Map: [Sheet SH 75 Capel Curig and Betws-y-Coed. 1:25 000 series - Classical areas of British geology](#)]

Under construction



Map 11 Geological map of the Capel Curig and Betws-y-Coed area (inside back cover).

□

Contents

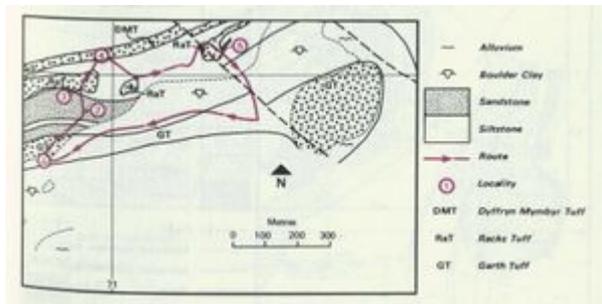
- [1 Excursion itineraries](#)
- [2 A Capel Curig Volcanic Formation, north of Llynnau Mymbyr \(half day\)](#)
- [3 B Carneddau Group and Lower Crafnant Volcanic Formation northeast of Capel Curig \(half day\)](#)
- [4 C Lower Rhyolitic Tuff Formation: Moel Siâbod South \(whole day\)](#)
- [5 D Capel Curig Volcanic Formation, Pigyn Esgob and Rolwyd \(half day\)](#)
- [6 E Snowdon Volcanic Group and overlying Black Slates in the Dolwyddelan Syncline \(half day\)](#)
- [7 References](#)
- [8 Glossary](#)

Excursion itineraries

The district lies within the Snowdonia National Park, but most of the ground is owned privately or by the Forestry Commission. Permission should be obtained for access to any areas away from public footpaths and what is clearly open sheep grazing on the higher ground. In addition, users of the

excursion itineraries set out below are strongly recommended to conform to the Code of Conduct for Geology published by the Geologists' Association.

A Capel Curig Volcanic Formation, north of Llynnau Mymbyr (half day)

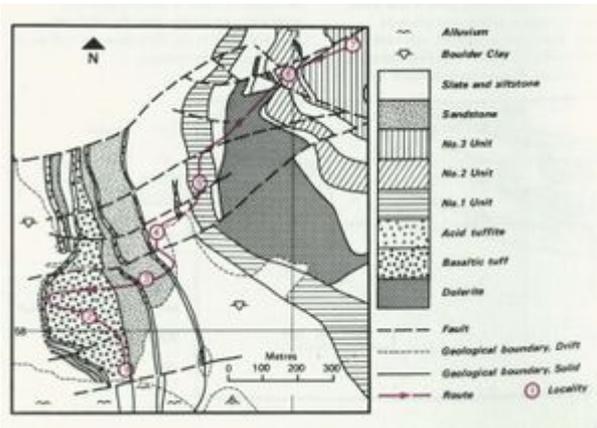


Map 6 Excursion map A Capel Curig Volcanic Formation, north of Llynnau Mymbyr.

Route From Plas-y-Brenin take the Glyders Footpath westwards, bearing south to the lowest crags of the Garth Tuff. Climb through succession to the Dyffryn Mymbyr Tuff, then traverse eastwards to see lateral variation in the Racks Tuff before returning to the starting point. Walking distance 2.5 km.

- | | | |
|---|-------------------------|---|
| 1 | Garth Tuff | The base is not exposed, and the tuffs forming the lowest crags are massive, cream-white and welded, with a few sodic feldspar crystals and isolated siliceous nodules. They pass gradually upwards through tuffs with crude bedding foliation into reworked, flaggy, cross-bedded tuffs. |
| 2 | Fossiliferous sediments | An old quarry in fine sandy siltstone with thin clast-rich bands and bands containing brachiopod shells. |
| 3 | Racks Tuff | On the west bank of the stream the irregular base of this tuff is distorted by a strong cleavage. Patches of siliceous nodules are exposed below the sheepfold, at the top of the feature. Within 150 m to the east, the tuff is wedged out and the mudstones below and above converge to form an uninterrupted sequence, though isolated bodies of tuff occur still farther to the east (e.g. at locality 5 below). The glacially accentuated feature at the top of the Racks Tuff provides a good vantage point for viewing the geological setting of the north-eastern part of the district. |
| 4 | Deign Mymbyr Tuff | Typically epiclastic tuff and tuffite, with both whole and fragmented accretionary lapilli, are seen in small isolated exposures. |
| 5 | Racks Tuff | At the north-eastern margin, the contact of this isolated mass of tuff is extremely irregular and fingers into the adjacent sediments. Thin sections show the tuff to be welded up to the contact. |

B Carneddau Group and Lower Crafnant Volcanic Formation northeast of Capel Curig (half day)

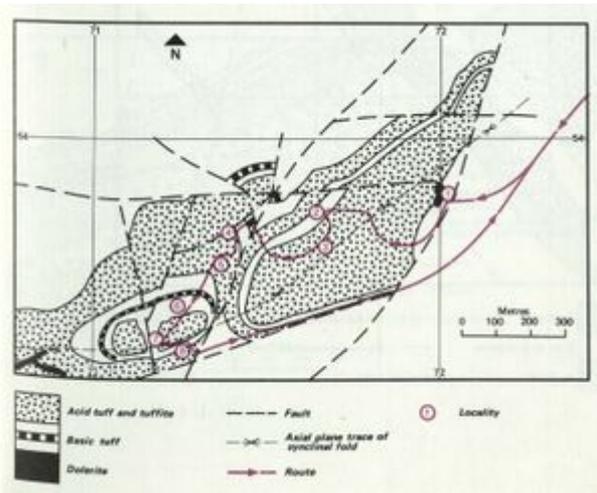


Map 7 Excursion map B Carneddau Group and Lower Crafnant Volcanic Formation northeast of Capel Curig.

Route From the main road, take the path northwards between the Youth Hostel and the Bryntyrch Hotel. From Curig Hill head north-eastwards up the succession to Clogwyn Cigfran: return southwards along track from Nant Geuallt. Walking distance 3 km.

- | | | |
|-----|---|--|
| 1,2 | Spilitic tuff
agglomerate of
Curig Hill | Bedded basic tuffs with isolated basaltic bombs crop out near the path (1). Farther up Curig Hill (2) dips are steeper and a zone of slumping is seen at the centre of the outcrop. On the eastern flanks of the hill the tuffs include a plane of disconformity, and the overlying sediments are inter-fingered with reworked pyroclastic material. |
| 3 | Acid tuffite | The sandstones above the spilitic rocks contain a thin bed of fine-grained tuffite which has a bleached weathered surface; it has disturbed current-bedding structures at the top. |
| 4 | Mufow and
basic tuff | This 3-m unit at the top of the sandstones consists of basic tuff below and mudflow breccia containing oriented blocks of sediment and acid tuff above. It is overlain successively by siltstones and mudstones forming the top of the Carneddau Group. |
| 5 | No. 1 Unit | In this lowest unit of the Lower Crafnant Volcanic Formation lithic clasts are concentrated at the base. The unit shows crude upward grading and is fine and flinty at the top. Clasts of pumice can be distinguished on the weathered surface. |
| 6 | No. 2 Unit | The outcrop of this unit is reached by crossing first a 'slack' feature formed by poorly exposed siltstones, then a thick dolerite sill. The distinctly chloritic tuff at the base of the unit passes upwards into a clean fine-grained vitric tuff with a few sodic feldspars and distinctive patches of siliceous nodules. |
| 7 | No. 3 Unit | This unit is characterised by extreme coarseness, an absence of crystals and its general heterogeneity. A band of coarse agglomerate, up to 0.5 m thick, near the top of the unit, is composed of well-rounded blocks with little matrix. |

C Lower Rhyolitic Tuff Formation: Moel Siâbod South (whole day)

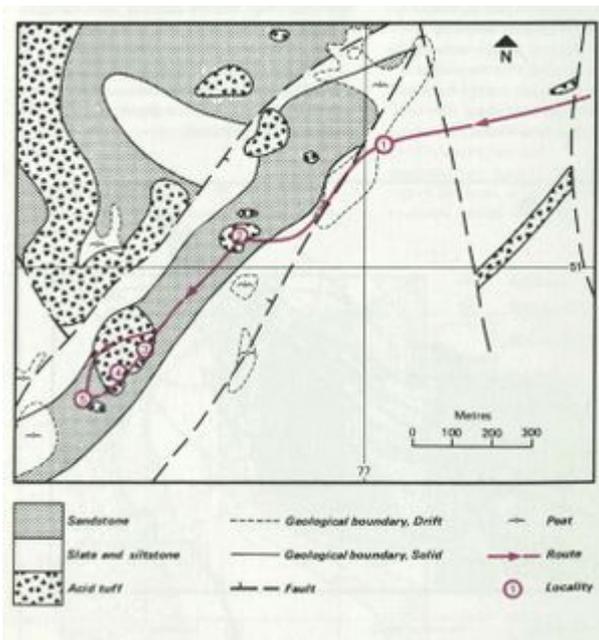


Map 8 Excursion map C Lower Rhyolitic Tuff Formation: Moel Siâbod South.

Route Access is gained by the Forestry Commission Road, leading north off the A496, 1.5 km E of Dolwyddelan, and thence on foot across the peaty alluvial tract adjacent to Mm Ystumiau. Walking distance 4 km.

- Upper
1-3 Acid
Tuff
Approached from the east, the lower of the two local units of acid tuff is faulted out, and here (1) the crystal-rich base of thick upper acid tuff, with faint bedding lamination, cuts down through basic tuff into sediments. The same acid tuff is again seen on the northern flank of the syncline (2) although the base is not exposed: It shows an upward transition from ill-defined massive bedding with faint lamination, through well-defined massive beds, up to 2 m thick, to well-defined flaggy beds, up to 0.5 m (3). Accompanying this transition is an increase in the epiclastic component and sedimentary structures, including channelling and cross lamination.
- Lower
4,5 Acid
Tuff
This unit can be traversed, fairly easily, up the cliffs farther west (4,5). Above the well-bedded crystal-rich base of the unit is a finer tuff which is laminated towards the top. The laminations have been deformed and fragmented by veins and lobate intrusions from the overlying beds. The latter consist of graded silty tuffites which become progressively coarser up the sequence, so that the highest beds are composed entirely of crystal and clast debris (5). A fine bed of basic tuff is exposed within the fine sediments which separate the lower and upper acid tuffs (between 5 and 6).
- Upper
6-8 Acid
Tuff
The coarsely agglomeratic base of the upper tuff is demonstrably channelled by the overlying, thickly bedded vitric tuff. The channelling does not, however, extend down to the basic tuff as seen at locality (1). By descending the crags southwards, across the axial plane of the asymmetric syncline (8), the bedded character of the tuffs can be examined.

D Capel Curig Volcanic Formation, Pigyn Esgob and Rolwyd (half day)

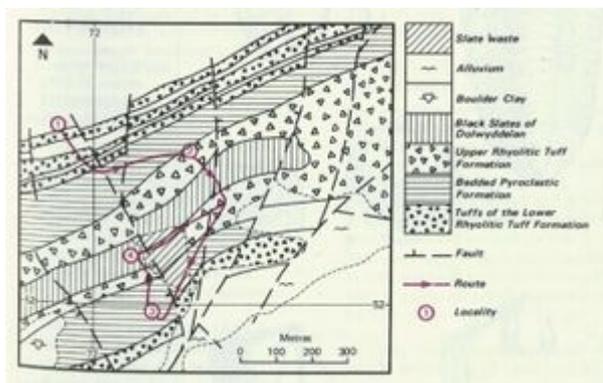


Map 9 Excursion map D Capel Curig
Volcanic Formation, Pigyn Es gob and
Rolwyd.

Route From the road [SH 7754 5145] between Penmachno and Bishop Morgan's Cottage follow the wall westwards to a broad peat depression (1), then walk southwestwards along a scarp of sandstone and siltstone, first to the prominent feature at Pigyn Esgob, then Rolwyd. Return by the same route. Walking distance 3 km.

- 1 Broad peat depression
- 2 Pigyn Esgob
Examine the transgressive character of the main tuff body and of a smaller body farther north. On the southern margin of the main body the original welded fabric is overprinted by perlitic fractures and is almost completely obscured by recrystallisation.
- 3-5 Rolwyd
The irregular base of this welded tuff body transgresses the local sediments (3). Near the contact, here and along the scarp, the sediments are disturbed and are locally totally retextured. In the contact zone the tuff is cleaved and crystal-rich. Traced towards the south-west (4), the irregular base of the tuff forms lobate apophyses into the underlying sediments. A band of mudstone occurs between the contact zone and the main tuff exposed in the higher crags. This band, parallel to the lower contact, curves upwards from nearly horizontal, through vertical in the small gully at the south-west end of the tuff body (5). The eutaxitic foliation in the main tuff is seen to lie nearly parallel to the regional bedding.

E Snowdon Volcanic Group and overlying Black Slates in the Dolwyddelan Syncline (half day)



Map 10 Excursion map E Snowdon Volcanic Group and overlying Black Slates in the Dolwyddelan Syncline.

Route Take the footpath from the Castle car park across the northern limb of the syncline to the inverted base of the Snowdon Volcanic Group. After inspection of the Lower and Upper Snowdon Rhyolitic tuffs, return to the park. Then take the Blaenau Ffestiniog road to see the Bedded Pyroclastic Formation in the slopes above the road. Access to Chwarel Ddu in the Black Slates is via the slate waste tip. Walking distance 2 km.

1 Lower Rhyolitic Tuff Formation

The lowest of the three tuff units of the formation forms a prominent feature. It is bedded with a central siltstone layer. Clasts are dispersed throughout and there is no apparent grading. Farther south the middle and upper units are variably bedded and show an upward grading, with prominent lithic clasts below and pumiceous clasts above. Scour structures are well exposed on the inverted agglomeratic base of the upper unit and worm-tube casts are present at the top.

2 Upper Rhyolitic Tuff Formation

The formation is well exposed by the path between the Castle and Bryn Seion farm. The lithologies are variable, comprising heterogeneous mixtures of tuff and mudstone. Tuff predominates, forming lenses and more continuous bands within tuffaceous black mudstone.

3 Bedded Pyroclastic Formation

Basic tuffs and tuffites are locally well exposed. They are well bedded with good elastic textures, and many beds are graded with pumice-rich bases.

4 Black Slates of Dolwyddelan

Black slates in the core of the Syncline are exposed in Chwarel Ddu. Bedding and cleavage of the northern limb are locally disrupted by thrusting.

References

Glossary

Retrieved from

http://earthwise.bgs.ac.uk/index.php?title=Excursion_itineraries_-_Capel_Curig_and_Betws-y-Coed._Description_of_1:25_000_sheet_SH_75&oldid=44334

Categories:

- [Capel Curig and Betws-y-Coed, classical areas of British geology](#)
- [18. Wales](#)

Navigation menu

Personal tools

- Not logged in
- [Talk](#)
- [Contributions](#)
- [Log in](#)
- [Request account](#)

Namespaces

- [Page](#)
- [Discussion](#)

Variants

Views

- [Read](#)
- [Edit](#)
- [View history](#)
- [PDF Export](#)

More

Search

Navigation

- [Main page](#)
- [Recent changes](#)
- [Random page](#)
- [Help about MediaWiki](#)

Tools

- [What links here](#)
- [Related changes](#)
- [Special pages](#)
- [Permanent link](#)
- [Page information](#)

- [Cite this page](#)
- [Browse properties](#)

• This page was last modified on 3 December 2019, at 13:37.

- [Privacy policy](#)
- [About Earthwise](#)
- [Disclaimers](#)

