
Appendix 4 Particulars of the folding-plates

The Folding-Plates 1–12 (but not in 16 and 17) the vertical scale of the section is the same as the horizontal, so that the proportions are those of Nature. Base line — sea-level. The minor folding and shearing in the Mona Complex are of course generalised. The pages, &c., quoted are those where the section is explained, the more important pages being printed in italics.

(Folding-Plate 1) Section along the sea-cliffs from the South Stack to Henborth — Drawn from the lifeboat, and the drawings then combined and brought to one scale. The massive members are the Stack Moor beds, the thin flaggy ones are the Llwyn beds. pp. 183, 207, 256–8, 383, and (Plate 1).

(Folding-Plate 2) Section parallel to the coast at Rhoscolyn — Drawn from boat and cliffs, and then brought to one scale along a line as near the coast as possible. pp. 156, 173, 184, 207–8, 261.

(Folding-Plate 3) Section through Holy Isle from the North Stack to Cymyran Bay — This shows the structure of Holy Isle between the North Stack and Namarch faults. Two tectonic horizons appear in the coloured portion, viz. the inverted upper limb of the Rhoscolyn and the uninverted lower limb of the Holyhead recumbent fold, parted by the folded Tre-Arddur thrust-plane. Two others (which, at the surface, are seen only beyond the faults) are indicated in the uncoloured portions. The indications for close and gape are not positions, but merely directions, the true positions being unknown. pp. 156–7, 173–5, 184, 208–9, 261–8.

(Folding-Plate 4) Section through the Western Region of the Mona Complex — Succession inverted. Many thrusts omitted. pp. 176, 184, 211–12, 278–87. Almost in line with No. 10.

(Folding-Plate 5) Section through the Northern Region of the Mona Complex — Succession inverted. The Llanfairynghornwy Belt appears as a thin lambeau between the Cannel Head and Caerau thrust-planes. pp. 158–9, 177, 184, 215–17, 543–9, 559, (Plate 32). Almost in line with No. 11.

(Folding-Plate 6) Section through the Middle Region of the Mona Complex, from Trefor to Glantraeth — The cautions and reservations expressed on pp. 221, 224 must be borne in mind. Two tectonic horizons are included, viz. the inverted Nappe of Holyhead, and the uninverted Nappe of Bodorgan, parted by the folded Bodorgan thrust-plane. Note the juxtaposition of western and eastern facies of the Skerries and Gwna Groups, the Penmynydd Zone of Metamorphism, and the stratigraphical a-symmetry of the Plâs-bach anticline. pp. 178–9, 184–5, 221–4, 345, 352, 901–2.

(Folding-Plate 7) Generalised Section through the Aethwy Region of the Mona Complex — This is not drawn along any definite line. The tectonic horizons are the uninverted Nappe of Bodorgan, and (probably) the upper inverted limb of the Bodorgan recumbent fold. pp. 180, 184, 228–31.

(Folding-Plate 8) Section through Mynydd Llwydiarth — A local modification of part of No. 7. The Berw faults cut the Aethwy main anticline close to its axis, leaving it a-symmetrical. A narrow part of the Pentraeth Eastern Inlier is also crossed. pp. 228–31, 373–6. Almost in line with No. 12.

(Folding-Plate 9) Section through Mynydd-y-Garn — The Mona Complex is crossed at the Garn Inlier, and at the Llanfairynghornwy Belt of the Northern Region. Cleavage in Ordovician rocks indicated. The folding in the shales on the dip-slope of the Garn is inferred from evidence to the west. The Hendre-fawr inlier within the Carmel Head thrust-plane will be noticed. pp. 213, 216, 287–8, 295–6, 420, 462–3, 542–3.

(Folding-Plate 10) Section from Carmel Head to near Rhos-y-cryman — Drawn to show the Grader and Fydlyn Inliers of the Mona Complex, but also enters the Western Region and the Llanfairynghornwy Belt of the Northern Region. The succession in the Mona Complex is visibly inverted at the southern Fydlyn anticline. Ordovician cleavage indicated. pp. 176, 213–14, 288–92, 463–5, 542–4, 558, 900; (Figure 130), (Figure 270); (Folding-Plate 13), (Plate 25), (Plate 31). Almost in line with No. (Folding-Plate 4).

(Folding-Plate 11) Section across the Principal Ordovician Area from Llanol to Prns-Owen — Where zone-fossils have not been obtained on the line of section, the structures have been drawn from adjacent evidence. Two synclines which are implied in obscure country between Llanbabo and Llanol ought to have been indicated. The horizontality of the Carmel Head thrust-plane, and its truncation both of the Paleozoic dykes and of the ancient folding of the Mona Complex will be noted. pp. 419, 442, 445–7, 451–7, 464, 512, 542–4, 555, 559; (Figure 269). Almost in line with (Folding-Plate 5).

(Folding-Plate 12) Section across the Principal Carboniferous Area from the Vale of Lligwy to the mouth of the Pentraeth River — This line crosses the best developments of the D1 and D3 sub-zones. The sandstones are dotted. Those interbedded with the limestone are here comparatively thin, but thicken rapidly just to the south-west. pp. 616–18, 637–8, 640–4. Almost in line with No. VIII, and with (Figure 277), (Figure 156). Cf. also (Figure 296).

(Folding-Plate 13), (Folding-Plate 14), (Folding-Plate 15). Reproductions of Six-Inch Maps of (13) the North-West Corner of Anglesey, (14) the Skerries, (15) Llanddwyn Island — The lines, lettering, and symbols are photo-lithographic facsimiles of those on the uncoloured manuscript six-inch field-maps, Anglesey sheets 1 S.E., 1 N.E., 24. (See Appendix 1). The colours are not quite the same as those on the published one-inch map; while the formation-symbols are quite different, being provisional ones devised in the course of the surveying. The dip-arrows in the Mona Complex express foliation, with which bedding frequently coincides. The compass-directions of glacial striae are given. The green-ink edgings to the drift-lines (Appendix 1) appear as dark-grey. Abbreviations not explained on the colour-tablets are: chic = chloritic; fd = foliated; ph phyllite; cvge = cleavage; Gt or G Granite; qzse = quartzose; dft = drift; Kλ = clastic; sch = schistose; ellips = ellipsoidal; lent = lenticle; shd sheared; thr = thrust; v qz = vein-quartz

In 13, the Carmel Head thrust-plane emerges in the cove south of Porth y Wig ((Figure 270), (Plate 31) and bounds the Mona Complex past Porth yr Ebol and Porth Gron to the eastern edge of the plate. The small 'windows' in it (pp. 465, 542) can be made out along the coast as little patches of Ordovician shale colour between the Beacon and Porth yr Ebol. pp. 159, 161, 163, 176, 213, 216, 288–95, 318–20, 3802, 420, 463–5, 519, 526, 530–2, 542, 544, 558. See No. 10, and (Plate 25), (Plate 31).

(Folding-Plate 16) Sketch-Section across Anglesey from Torilwyn to Moel-y-don.

(Folding-Plate 17) Sketch-Section across Anglesey from Amlwch to Garth Ferry — These two sections (unlike Folding-Plates 1–12) are not drawn to the proportions of Nature, their sole object being to give a general picture of the structure of the Island. The horizontal scale is about one inch to the mile; the vertical scale about three times the horizontal. But neither scale is quite uniform, small parts, when of importance, being freely enlarged in order to secure visibility. The dips have also been adjusted in order to avoid loss of angular proportions. It will be manifest, therefore, that no measurements must on any account be taken from them. A similar section across the western parts can easily be made as follows. Reduce and generalise from (Folding-Plate 10), (Folding-Plate 4), (Folding-Plate 6) and (Figure 299). Modify the Coal-field and the Aethwy Region somewhat from 16. Fill in the gap at Treiorwerth as a deep, thrust, infold.

Appendices 5–8

Contents: transferred to App. 2—4 and to Chapter 41.

Appendix 9

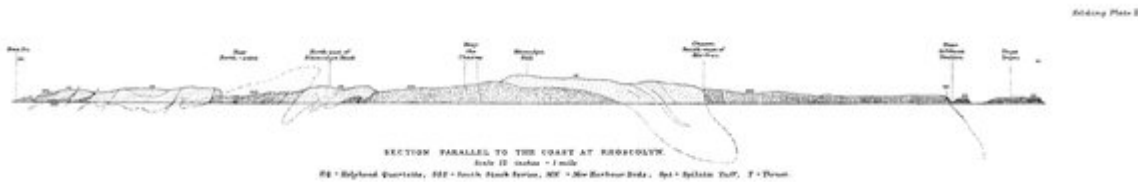
The contents of this have been transferred to Chapter 41, so that the additions referred to on pp. 205, 242, 498, 557 as in Appendix 9 will be found on pp. 909–10, 907–8, 892–3, 900–1, respectively.



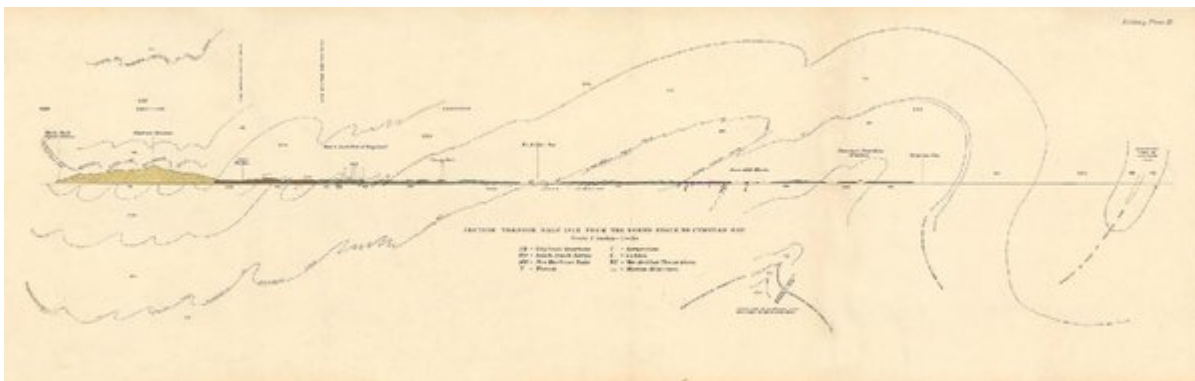
(Folding-Plate 1) Section along the sea-cliffs from the South Stack to Henborth. Scale 16 inches = 1 mile



(Plate 1) The Folding of the Mona Complex, as viewed from the South Stack, Holyhead. Height seen: 445 feet. Frontispiece to Vol 1..



(Folding-Plate 2) Section parallel to the coast at Rhoscolyn. Scale 12 inches = 1 mile. HQ = Holyhead Quartzite, SSS A South, Stack Series, MN = New Harbour Beds , Sp.t Spilitic Tuff, T Thrust.



(Folding-Plate 3) Section through Holy Isle from the North Stack to Cymyran Bay. Scale 3 inches = 1 mile HQ = Holyhead Quartzite. SSS A South, Stack Series, MN = New Harbour Beds T = Thrust. U Serpentine. E Gabbro, TrT Tre-Arddur Thrust-plane [symbol Marine Alluvium.]



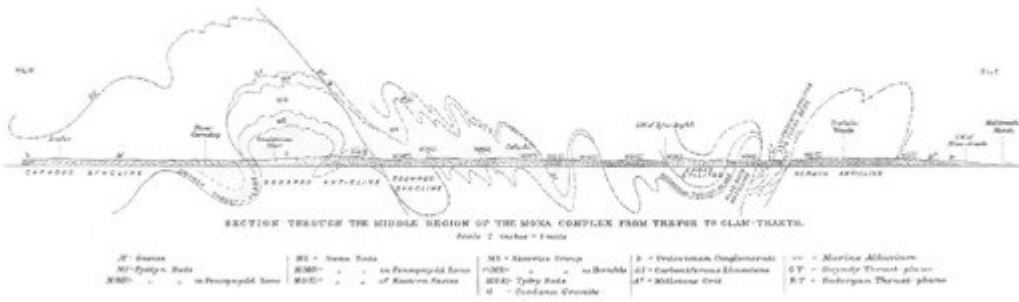
(Folding-Plate 4) Section through the western region of the Mona Complex. Scale: three inches = one mile. MN = New Harbour Beds. SP = Spilitic Lavas. MS = Church Bay Tuffs. B = Ordovician. MG = Gwna Beds. BT = Bodfarden Thrust-Plane.



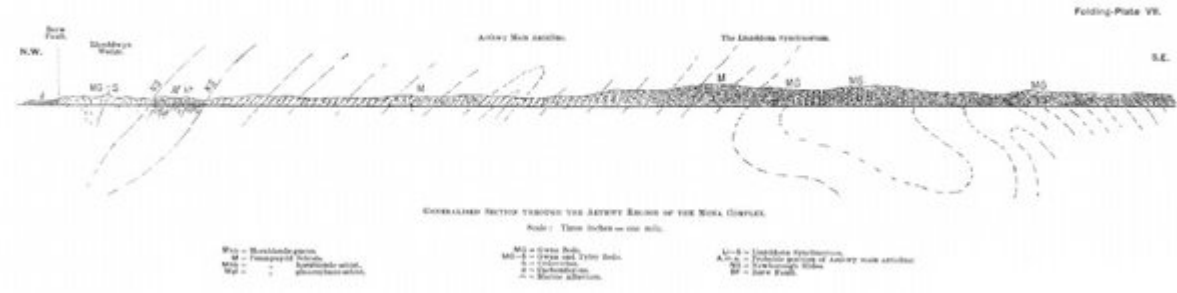
(Folding-Plate 5) Section through the Northern Region of the Mona Complex. Scale: Three Inches = One Mile. MG = Gwna Beds. MN= Amlwch Beds (Bodelwyn Division). WT = Wylfa Thrust-Plane. MS = Skerries Grits and Church Bay Tuffs. MH = Coeden Beds. CT= Caerau Thrust-Plane. MN = Amlwch Beds (Lynas Division). BC = Ordovician (Arenie). CHT = Carmel Head Thrust-Plane.



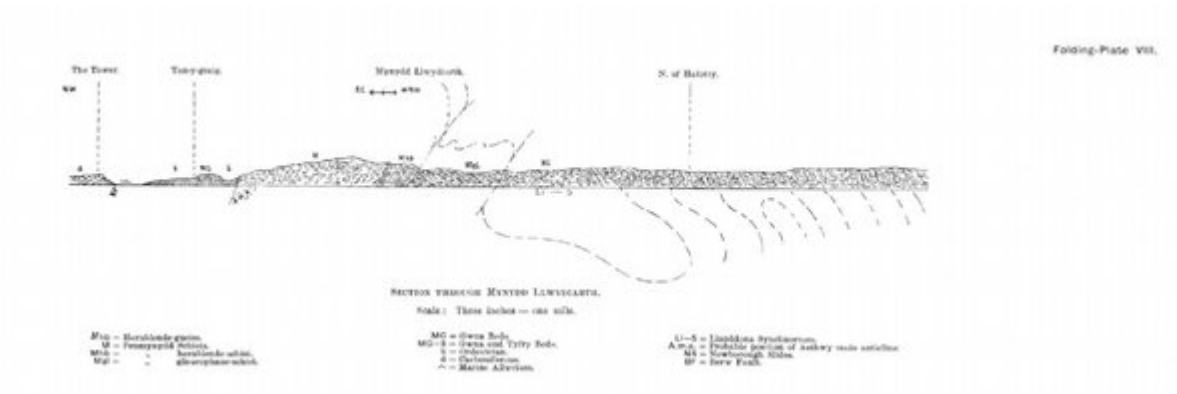
(Plate 32) Brecciation at the Carmel Head thrust-plane. Gwaen-ydog.

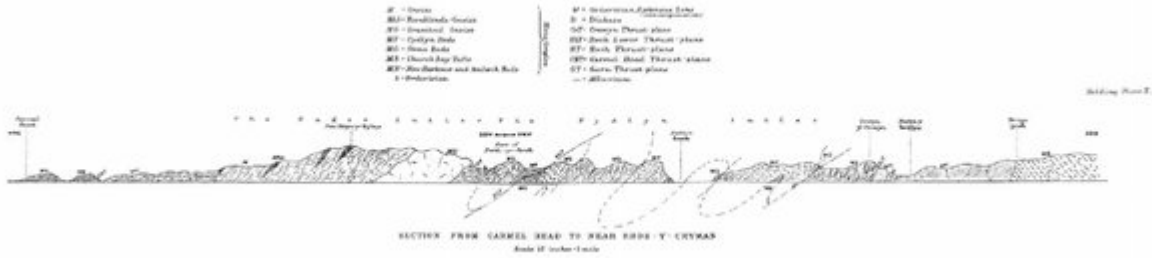


(Folding-Plate 6) Section through the middle region of the Mona Complex from Trefor to Glan-traeth. Scale 2 inches = 1 mile



(Folding-Plate 7) Generalized section through the Aethwy Region of the Mona Complex. Scale: Three inches = one mile





(Folding-Plate 10) Section from Carmel Head to near Rhos-y-Cryman. Scale 12 inches = 1 mile.



FIG. 130.—SECTION ACROSS THE TWO COVES AT PORTH-YR-HWCH.

(Figure 130) Section across the two coves at Porth-yr-hwch. M= granitoid gneiss. MF = Fydyln Beds. MG = Gwna Mélange, with limestone. b = Ordovician shale. Height at north end: about 200 feet

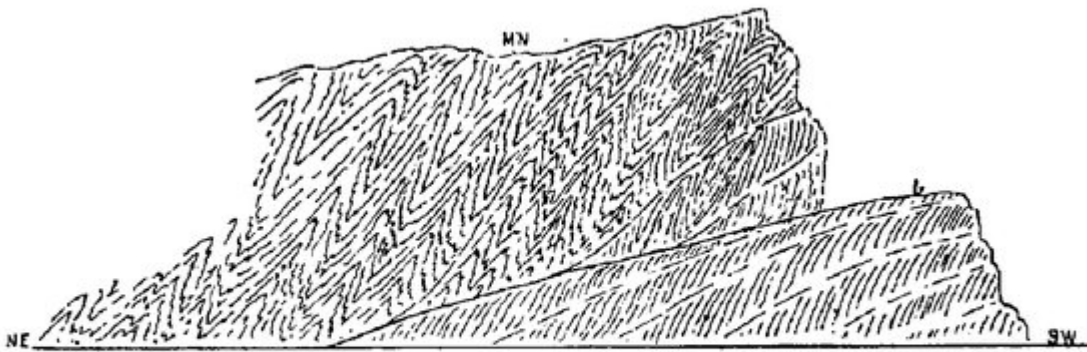


FIG. 270.—THE CARMEL HEAD THRUST-PLANE AT CARMEL HEAD.

MN = Amlwch Beds. b = Cleaved Ordovician Shale.

(Figure 270) The Carmel Head Thrust-plane at Carmel Head. MN = Amlwch Beds. b = Cleaved Ordovician Shale.

NORTH WEST CORNER OF ANGLESEY.

- Alluvium.
- Metamorphic Quartz.
- Palaeozoic Diabase or Dolerite.
- Palaeozoic Felsite.
- Ordovician Shale (black shale).
- Ordovician Conglomerate or Grit.
- Antech Beds (chloritic mica schist).
- Church Bay Tuffe (pelite).
- Omea Diabase.
- Omea Limestone.
- Omea Quartzite.
- Omea Green Schist (chloritic quartzose schist).
- Mithroge (Cretaceous clastic schist).
- Pyllym Beds (Vulcanic schist).
- Granite of the Gneiss.
- Hornblende Gneiss.
- Gneiss.

Scale, 6 inches to one Mile.



Mulvey & Sons Lith.

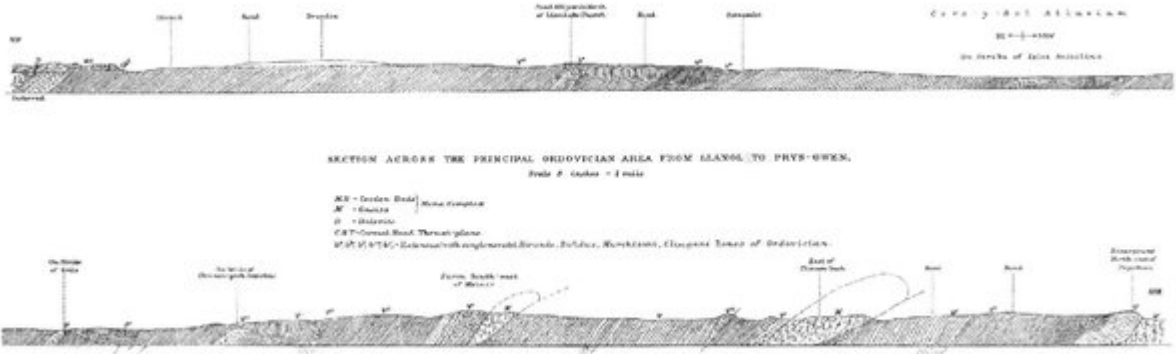
(Folding-Plate 13) The North-West corner of Anglesey. Reproduction of manuscript six-inch map.



(Plate 25) The Hwch lower thrust-plane. Porth-yr-hwch. Fydlyn Felsitic Tuff thrust over Gwana Green-schist.



(Plate 31) The Carmel Head thrust-plane at Carmel Head. Frontispiece to Vol 2.



(Folding-Plate 11) Section across the Principal Ordovician Area from Llanol to Prys-Owen. Scale 8 inches = 1 mile.

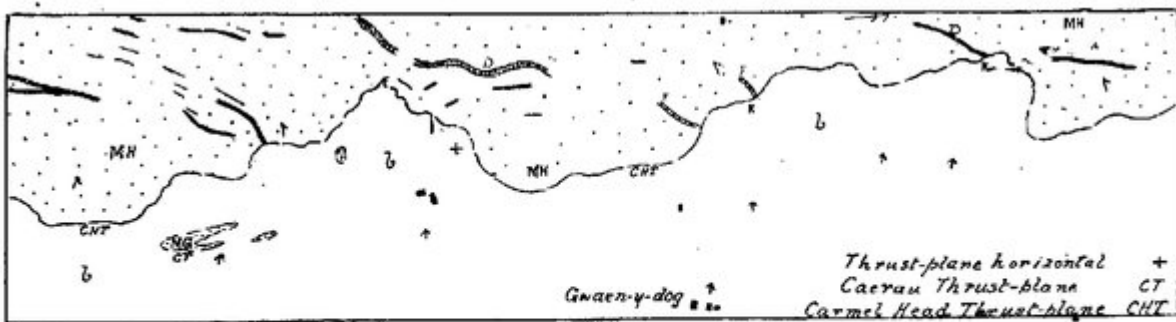
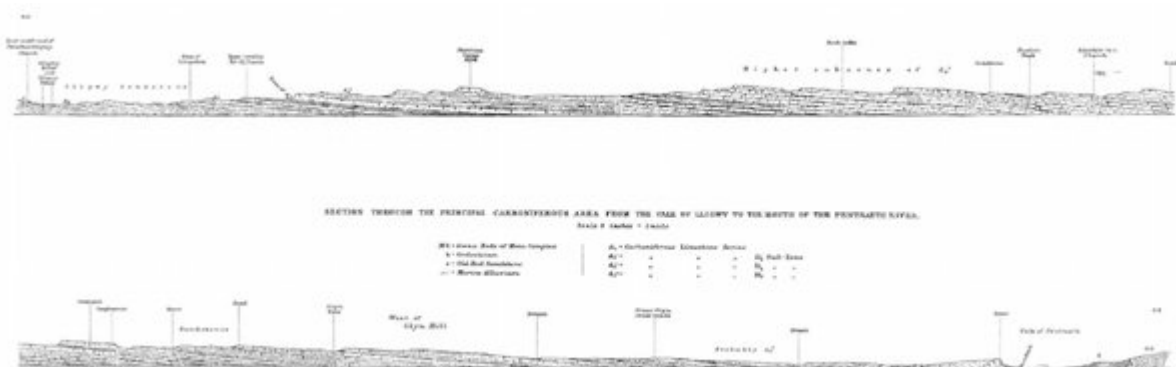


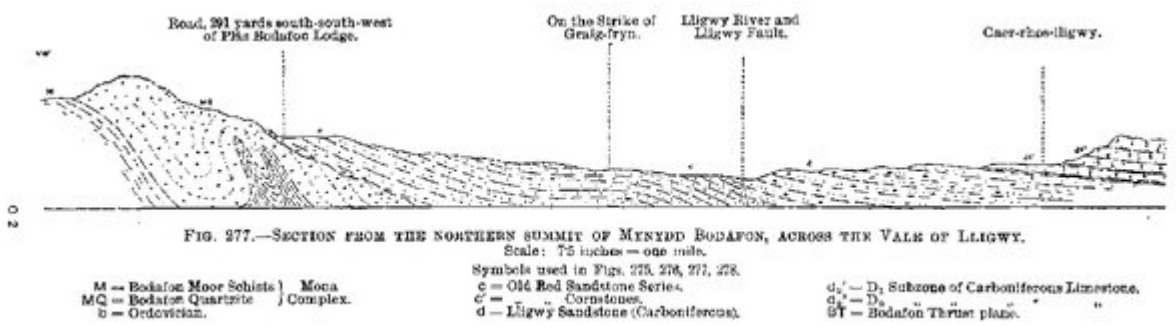
FIG. 269.—OUTCROP OF THE CARMEL HEAD THRUST-PLANE AT GWAEN-Y-DOG.

From the six-inch maps.
MH = Coeden Beds.
MG = Gwna Beds.
b = Arenig Beds.
F = Felsite Dykes.
D = Dolerite Dykes.
K = Crushed Dykes.

(Figure 269) Outcrop of the Carmel Head Thrust-plane at Gwaen-y-dog. From the six-inch maps. MH = Coeden beds. MG = Gwna Beds. b = Arenig Beds. F = Felsite Dykes. D = Dolerite Dykes. K = Crushed Dykes.



(Folding-Plate 12) Section through the Principal Carboniferous area from the Vale of Lligwy to the mouth of the Pentraeth River. Scale 8 inches = 1 mile.



(Figure 277) Section from the northern summit of Mynydd Bodafon, across the Vale of Lligwy. Scale: 7.5 inches = one mile. Symbols used M = Bodafon Moor Schists, Mona Complex, Mq = Bodafon Quartzite, Mona Complex. b = Ordovician. c = Old Red Sandstone Series. c = cornstones d = Lligwy Sandstone d2■ = D1 Subzone of Carboniferous Limestone. d2■ D2 Subzone of Carboniferous Limestone. BT = Bodafon Thrust-plane.

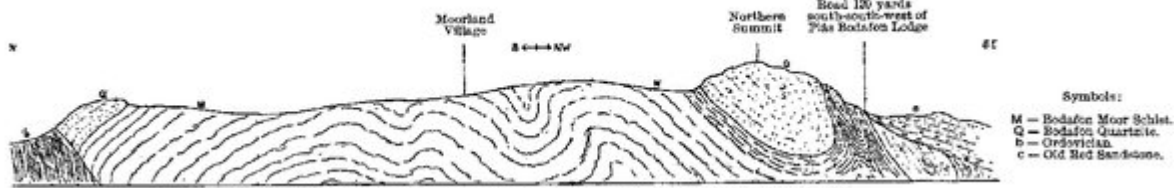


FIG. 155.—SECTION ACROSS BODAFON MOOR AND THE NORTHERN SUMMIT OF MYNYDD BODAFON.

(Figure 156) Section across Bodafon Moor and the northern summit of Mynydd Bodafon. Scale: Eight inches = one mile. Symbols: M = Bodafon Moor Schist. Q = Bodafon Quartzite. b = Ordovician Shale. c = Old Red Sandstone.

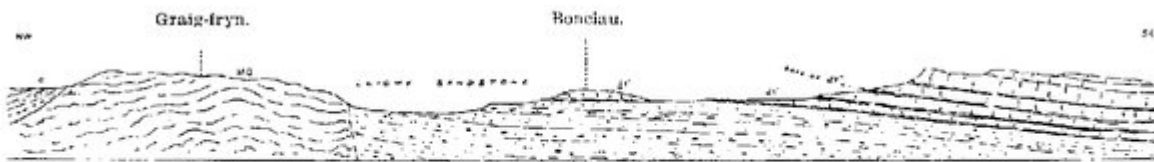


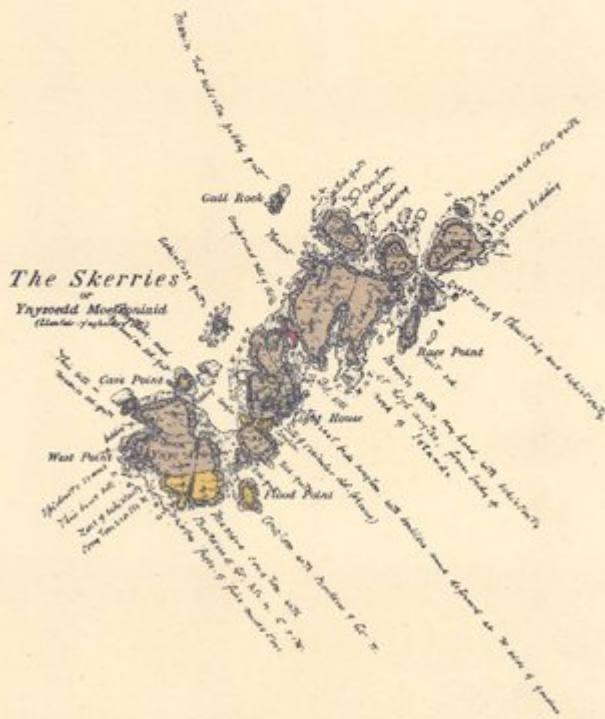
FIG. 296.—SECTION ACROSS THE GRAIG-FRYN INLIER AND THE VALE OF LLIGWY.

Scale—Eight inches = one mile.
MQ = Bodafon quartzite. C = Old Red Sandstone. d₁, d₂ = D₁ and D₂ sub-zones of Carboniferous Limestone

(Figure 296) Section across the Graig-fryn inlier and the vale of Lligwy. Scale eight inches = one mile. MQ = Bodafon Quartzite. C = Old Red Sandstone. d1, d2 = D1 and D2 sub-zones of Carboniferous Limestone

THE SKERRIES

- Palaesozoic Dolerite.*
- Skerries Conglomerate.*
- Skerries Grits.*

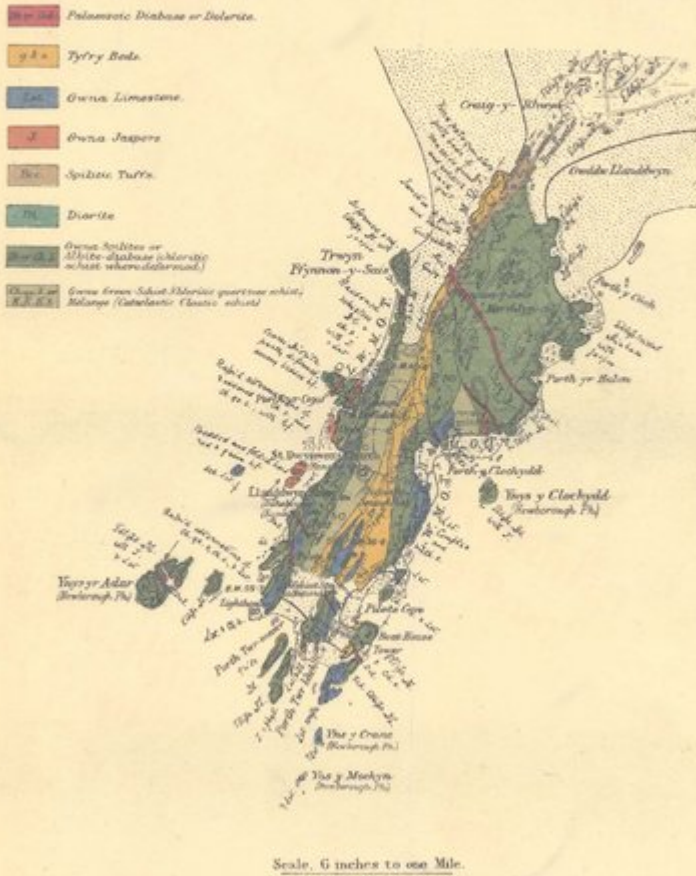


Scale, 6 inches to one Mile.

Melby & Sons, Lith.

(Folding-Plate 14) The Skerries. Reproduction of manuscript six-inch map.

LLANDDWYN ISLAND.



(Folding-Plate 15) Llanddwyn Island. Reproduction of manuscript six-inch map.



(Folding-Plate 16) Sketch-section across Anglesey from Torllwyn to Moel-y-don.



(Folding-Plate 17) Sketch-section across Anglesey from Amlwch to Garth Ferry.

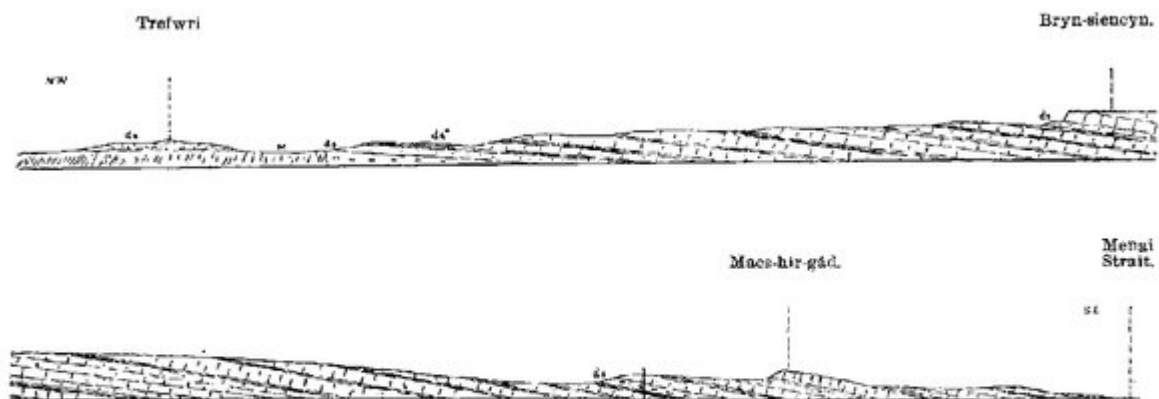


FIG. 299.—SECTION THROUGH THE STRAIT-SIDE CARBONIFEROUS AREA, FROM THE TREFWRI OUTLIER TO THE MENAI STRAIT.

Scale—Eight inches = one mile.

M = Mona Complex.

ds = Carboniferous Sandstone.

d₂ = Carboniferous Limestone.

(Figure 299) Section through the Strait-side Carboniferous area, from the Trefwri outlier to the Menai Strait. Scale eight inches = one mile. M = Mona Complex. ds = Carboniferous Sandstone. d₂ = Carboniferous Limestone.