

fications, and of the Carboniferous series, all of which have been much disturbed and extensively denuded.

The Cambrian rocks of Merionethshire, for example, marked 2 on the map, were once buried deep beneath more than 20,000 feet of Lower Silurian strata. Let anyone climb to the rugged centre of this Cambrian area, and stand on the summit of the great grit-formed cliffs of Rhinog-fawr or of Y-Graig-ddrwg (the bad cliff). From thence turning to the south and south-east, he will see the long ridgy peaks of the interstratified felstones and ashes of Cader Idris and Aran Mowddwy, further north-east the serrated edges of Moel Llyfnant and the Arenigs, and the circle is continued on the northern side of the Cambrian strata by the noble heights of the Manods and the Moelwyns near Ffestiniog and Portmadoc. On three sides the great anticlinal boss of Cambrian grits is set in a curved frame of Silurian slates and volcanic beds, and on the fourth it is bordered by the sea. All these rocks, and much more besides, once overlaid the Cambrian beds, in the form of a great anticlinal curve, and have since been removed by denudation; and thus it happens that between the estuary of the Mawddach below Dolgelli, and that of Traethbach at Portmadoc, we find this inner group of gritty hills, more than half enclosed by that somewhat distant ring of higher mountains, which are highest, as a rule, simply because of the hard quality of the great inclined beds of porphyries, of which they are so largely composed. (Fig. 62.)

In this brief account of a fragment of North Wales of about 1,200 square miles, lies the essence of the matter, for with differences of detail, the whole of the strata suffered an equal amount of disturbance and denudation, and the history simply comes to this. Much