

takes for granted that, with Wat o' Harden and his sons 'will Borthwick Water ride.' A 'cleugh' is a still narrower and steeper-sided valley, chiefly to be found in the higher parts of the uplands. A 'hope' is the upper end of such a narrow valley, encircled with smooth green slopes.

In no part of Scotland is the relation of the valleys to the streams that flow in them so strikingly shown as in these Southern Uplands. The uniformity of geological structure and monotony of feature allow us to trace out the valley systems without the conflicting impressions that great ruggedness and variety of surface can hardly fail to produce. There is a singularly apt proportion maintained between the size of each stream and that of its valley. The drainage lines wind across the table-land with all the sinuosity and tree-like ramification of channels cut by running water. Seen from a height, indeed, the whole region looks like a model of the drainage system of a country.

If we try to apply the classification of longitudinal and transverse valleys to those of the Southern Uplands, we find a still larger number of exceptional cases, where there is obviously no real relation between any central axis of upheaval and the lines adopted by the drainage. The largest number of valleys may be called transverse. Beginning at the east end, we find the valleys of the Monynut, Whiteadder, and Leader among the Lammermuir hills. Farther west are the Gala, Eddleston, and Lyne Waters, and beyond the wide basin of the Tweed lie the valleys of the Esk, Annan, Clyde, Nith, Dee, Doon, and Cree, with others of less note. As a rule, these streams rise close to the north-western edge of the table-land, and flow across to the low grounds on the south-east. The Whiteadder and Leader, for example, take their rise within about two miles from the northern base of the Lammermuirs, and run