STIRLING, a midland county of Scotland, is bounded N. by Perthshire, N.E. by Clackmannan and the Firth of Forth, S.E. by Linlithgowshire, S. by Lanarkshire and a detached portion of Dumbartonshire, and S.W. and W. by Dumbartonshire. In the north-east there are two isol­ated portions,—one forming the parish of Alva, bounded partly by Clackmannan and partly by Perthshire, and the other forming part of the parish of Logie and bounded by Perthshire. The outlines of the main portion are ex­tremely irregular, the boundary on the north following for the most part the windings of the Forth, while on the west it passes through the middle of Loch Lomond, and on the south coincides to a considerable extent with various streams. The extreme length of the county from north-west to south-east is about 45 miles, and the great­est breadth from north to south about 18 miles. The land area is 286,338 acres, and the total area 298,579 acres, or about 466 square miles. Apart from the district round Loch Lomond, the principal charm of the scenery of Stirlingshire is in the views of the valley of the Forth with the winding river, and for background the distant peaks of the Grampians, or the nearer ranges of the Ochils, which encroach on the north-eastern corner and detached sections of the county. The valley of the Forth runs along nearly the whole of the northern border, widening towards the east. The centre of the county from north-east to south-west is occupied by the broad irregular ranges of the Lennox Hills, which are known under four different names, according to the parishes in which they are principally situated,—the Gargunnock Hills (attaining a height of 1591 feet), the Fintry Hills (1676), the Kilsyth Hills (1393), and the Campsie Fells (1894). Nearly the whole of the county to the north-east of Loch Lomond is occu­pied by a spur of the Grampians, reaching in Ben Lomond a height of 3192 feet. Besides Loch Lomond, situated partly in Dumbartonshire, and Loch Katrine, which bounds the county at its north-western corner, the prin­cipal lakes are Loch Arklet to the south of Loch Katrine, Loch Coulter, in the south of St Ninians parish, Loch Ellrig in Falkirk parish, and Black Loch partly in Lanark­shire. The river Forth, from its junction with the Kelty near Gartmore, forms the northern boundary of the county, except where it bounds on the north the part of Kippen parish which is in Perthshire and separates a portion of Lecropt parish from that of St Ninians and a portion of Logie from that of St Ninians and Stirling. It receives from the north the Teith, which touches the county at Lecropt parish, and the Allan, which separates the parishes of Lecropt and Logie, and from the south the Boquhan burn, the Touch burn, and the Bannock burn. The Carron water flows eastwards from the Fintry Hills to the Firth of Forth at Grangemouth. On the south there are a number of streams which form at various places the boundary of the county,—the Endrick water flowing west­wards from the Fintry Hills to Loch Lomond, the Kelvin from near Kilsyth flowing south-westwards to the Clyde, and the Avon from Lanarkshire flowing north-eastwards to the Firth of Forth. The Forth and Clyde Canal crosses the south-eastern corner of the county from Castlecary to Grangemouth.

The whole of the district to the north of Loch Lomond is occupied by the crystalline schists of the Highlands, which, by the existence of a great fault, are connected on the east with the Old Red Sandstone, which occupies the broad valley between the base of the Highland hills and the chain of the Ochils. These latter heights, portions of which are included in detached areas of the county, con­sist of volcanic rocks associated with the Old Red Sand­stone (see vol. x. p. 343). The Lennox Hills in the centre of the county are formed by volcanic rocks of Carbonifer­

ous age resting on strata of red and white sandstone (see vol. x. p. 346). The lower grounds are deeply buried under glacial drifts, and conspicuously marked by broad terraces that represent former sea-margins. On one of these, at a height of 50 feet above the present sea-level, lies the Carse of Falkirk. Another stands at an elevation of about 100 feet. There are saline mineral springs at Bridge of Allan.

The coalfield runs obliquely along the south-east of the county, the principal seams being in Denny, Kilsyth, Larbert, Falkirk, and Slamannan parishes. Ironstone, fire­clay, and oil-shale are also found. Limestone is extensively wrought in the Campsie district, and there are a number of sandstone quarries in various parts of the county. The total output of coal in 1884 was 1,182,891 tons, of iron­stone 75,351 tons, of fireclay 15,872, and of oil-shale 4535.

*Agriculture.—*According to the landowners return of 1872-73 the land was held by 4257 proprietors, possessing 284,751 acres, at an an­nual valuation of £521,407, an average value all over of £1,16s. 33/4d. Of the proprietors 3409 possessed less than one acre. The follow­ing possessed over 5000 acres each:—Duke of Montrose, 68,878 ; William Forbes, 13,041; Rear-admiral Sir William Edmonstone, 9778; Hon. Mrs. Margaret Lennox, 7606; Alex. Graham Speirs, 7172 ; W. C. G. Bontine, 6931 ; Lieutenant-Col. John Murray, 6813 ; Sir Alex. C. R. Gibson-Maitland, 6023 ; Henry Fletcher Campbell, 5679; and James Johnstone, 5340. The two arable soils of Stirling­shire are distinguished locally as carse and dryfield, the remainder of the county being occupied by mountain pasture land, moor, and moss. The Carse of Stirling extends along the banks of the Forth from Buchlyvie to the eastern extremity of the county,— a length of about 28 miles, with a breadth varying from 1 to 4 miles, the total area being about 30,000 acres. The carse soil consists of the finest clays, without stones, but interspersed with strata of marine shells. It has been partly reclaimed from superincumbent peat moss, of which there are still considerable areas adjoining it. It requires a great deal of labour, but, by means of draining, subsoil ploughing, and the use of lime, has been rendered one of the most fertile soils in Scotland, being specially well adapted for wheat and beans. The dryfield occupies the slopes of the hills above the carse and the valleys in the interior of the county, which constitute the more fertile portions, the crops for which it is best suited being potatoes and turnips. A great part of the dryfield has been re­claimed from moor within the present century. The Lennox Hills, occupying about a fourth of the total area of the county, form one of the most valuable tracts of pasture land in Scotland. The follow­ing table gives a classification of the holdings in 1875 and 1885 :—

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | 50 acres and under. | | 50 to 100 acres. | | 100 to 300 acres. | | 300 to 500 acres. | | 500 to 1000 ac. | | Above 1000 ac. | | Total. | |
| No. | Acres. | No. | Acres. | No. | Acres. | No. | Acres. | No. | Ac. | Xo. | Ac. | No. | Acres. |
| 1875 | 789 | 13,130 | 382 | 28,493 | 329 | 52,080 | 29 | 10,411 | 7 | 4299 | 1 | 1418 | 1537 | 109,831 |
| 1885 | 725 | 12,550 | 363 | 27,S7G | 370 | 59,418 | 28 | 10,325 | 5 | 3489 | 1 | 1418 | 1492 | 115,076 |

According to the agricultural returns for 1886, out of a total of 295,285 acres 115,477, or nearly 39 per cent., were arable land, the area under corn crops amounting to 29,306 acres, under green crops to 8752, rotation grasses 30,664, permanent pasture 45,232, flax 15 and fallow 1508. Oats, the principal corn crop, occupied 19,662 acres, wheat 2065 acres (a decrease of about one half within twenty years), barley 4297 acres, rye 30, beans 3221, and pease 31. Of green crops the principal are potatoes (3500 acres) and turnips (4623 acres). Considerably more than half of the arable area is occu­pied by rotation grasses and permanent pasture, and their acreage is constantly increasing, which is sufficiently accounted for by the steady increase in the numbers of sheep and cattle. The number of horses in 1886 was 4616, of which 3176 were used solely for purposes of agriculture, and 1440 were unbroken horses and mares kept solely for purposes of breeding. The Clydesdale breed are in general use on the larger farms. Cattle in 1886 numbered 29,422, of which 10,745 were cows and heifers in milk or in calf, and 8684 were other cattle two years old and above. Butter-making is largely prac­tised on the dryfield farms, the Ayrshire being the principal breed of cows, but cattle-feeding is also an important industry, for which Irish cattle and cross breeds are frequently bought, a considerable number of shorthorns being also reared. Sheep, chiefly blackfaced, for which there is extensive pasturage on the Lennox Hills and the slopes of the Grampians, numbered 109,897 in 1886, and pigs 1775.

Though, as is evident from the remains of trees in the mosses, an extensive district of the county was at one time occupied by forest, it is now comparatively devoid of timber, the area under woods in 1881 being only 12,483 acres. There is a natural tendency to the growth of birch on the lower slopes of the mountains in the parishes