

he pit, and sometimes forms itself into strong pillars, which can with difficulty be broken. It is calcareous stalactite. The following report of Greenridge Colliery is from Mr Bald, engineer, who is well acquainted with a considerable part of the parish:—

“ 1st, The dip of the strata is to the north; their declination from the horizon is in general about one in twelve, but they are in some instances much flatter, and also steeper. The strata are occasionally cut by veins or slips, producing dislocations of the strata, and these are generally in the line of bearing from east to west. The effect of these is to throw the strata either up or down to the rise or crop.

“ 2d, The whole of the parish of Whitburn, as to its minerals, is of the independent coal formation, and consists of the following kinds of rocks:—

“ *Sandstone*, of various shades of yellow and brown, some of it in thick beds; flagstones, and thin slaty sandstone. Mica is found in all these, and generally very abundant in the latter. Hardness, from very soft to very hard.

“ *Argillaceous shistus*, of various shades, from dark blue to black, is found in beds of a few inches to several yards thick. This shistus, when mixed with sand, forms a clay slaty sandstone. Bands and balls of argillaceous ironstone are frequently found in this shistus. Some of this rock is of very fine particles, decomposes rapidly when exposed to the air and weather; when calcined, it is of a bright-red.

“ *Argillaceous rocks*, of various shades of brown and approaching to black. This is commonly found to be the bed upon which each coal rests; in it are found occasionally small balls of argillaceous ironstone, very much the shape of potatoes. This kind of rock is termed fire-clay, and from it, in different places, the best fire-bricks of Scotland are made, for resisting the action of intense furnace heat.

“ *Greenstone rock*, commonly termed blue whinstone, abounds very much in this parish. It is similar to the same kind of rock so abundant in Scotland, composed of red or white felspar and hornblende, and in whatever situation the bed of greenstone is, that is, whether in a vertical or horizontal position, the numerous fissures, which give it a columnar form, are always at right angles to the bed on which it rests. This rock is found in detached beds, generally several yards in thickness, forming small knolls, and at times the summit of hills, of from 150 to 200 feet high,

above the adjacent country. Many mineralogists, and mining engineers in particular, think these rocks of igneous origin, because when they come in contact with bituminous coal, the common coal of Scotland, they deprive it of its bitumen, converting it in some cases into glance coal (the blind coal of Scotland), having neither smoke nor flame, on which account it is used for drying malt, at other times it converts the coal into a black stone of no use whatever.

“*Limestone.*—None of this rock is found in the parish, but mineralogists are of opinion it is to be found in the lower series of the coal strata, and of that kind which is termed the mountain-limestone.

“*Ironstone.*—The ironstone found in this parish is of the common argillaceous kind, and is found in beds from one inch to several inches thick, or in balls or flat circular pieces. This ironstone is similar to that found in all the coal-fields of Scotland, and used for the making of pig-iron. It yields generally from twenty-seven to thirty-three per cent. of pig-iron.

“The same kind of organic remains are found in the strata here as are common in all the coal-fields of Scotland.

“The alluvial covers are, 1. the old alluvial cover, composed of clay, sand, and small stones, intimately blended together, and very impervious to water. In this, large greenstone boulders abound. 2. Quick sands. 3. Clay mixed with small rounded stones. 4. Peat-bog. This is of very considerable extent, and very full of water.

“The most valuable mineral which this parish contains, is what is called the Crofthead, or slaty black band ironstone, of which a very fine field has lately been discovered lying between Fauldhouse beyond the village of Longridge. The change which this discovery has made upon this district is very remarkable; what was, till within the last three years a solitary moorland scene, has now become one of enterprise and industry. Tall chimneys are seen in all directions, and clouds of smoke rolling along from huge burning masses, show the extensive nature of the operations which are now carried on.

“In regard to the position of this mineral, in relation to the strata of the neighbouring districts, it is undoubtedly connected with the Great Western Coal-field, or Glasgow Field, as it is usually termed, and lies at the bottom of the series to which it belongs. At the south-western extremity of the parish, the Shotts

minerals are found cropping out in the Fauld Burn, a little above the village of Fauldhouse. These minerals lie somewhat in the form of a basin, the next in order below which is the slaty band series, to which also belong several seams of coal, generally of trifling amount. One of these seams is at present worked at Crofthead. The slaty band ironstone lies eleven fathoms below this seam. It occurs in three layers or plies, averaging in all about fourteen inches thick, the lower layer having from half an inch to one inch of coal adhering to the bottom of it. The strata above the slaty band is composed of shale, which contains balls of ironstone, which are worked along with the slaty band in the "following," or part of the overlaying strata, which is taken down in order to make the workings the proper height. From twenty-three to twenty-five fathoms below the slaty band, there is a bed of ironstone balls, which contain a very high per centage of iron. These balls lie in a bed of clay, from four to four and a half feet thick. From forty-five to forty-eight fathoms below this bed, there is another bed of ironstone balls, from two to two and a-half feet thick, lying below a mixture of sandstone and clay, the floor being composed of bastard limestone, from one foot to sixteen inches thick. Sixteen fathoms below this, there is a bed of limestone, which probably belongs to the limestone series which occurs at Levenseat, in the county of Edinburgh, and which lies beneath it. Below this, the coals which are found at Wilsontown, Woodmuir, and Longford, in the counties of Lanark and Edinburgh, occur. The series to which the slaty band belongs lies between the Levenseat limestone and the west country coal, called the Drumgray coal. There appears to be a great mass of sandstone between the slaty band series and the Levenseat limestone. It is considered a doubtful point whether the slaty band field extends much beyond the district in which it is at present worked. It has been found at Langside, in the parish of Shotts, and was supposed to have been found about a mile and a-half south from Crofthead.

"Although now so highly prized, the real nature and valuable properties of this kind of ironstone was, until within these few years, almost unknown. It was worked about forty years ago by the Wilsontown Iron Company, on the lands of Wester Handaxwood, in the county of Edinburgh; but its valuable properties were then unknown, and it was supposed that it did not extend to the north side of Breich Water, whereas the greater part of

this ironstone has now been found to lie on the north side of this water. The whole of the slaty band as yet worked in this parish is in tack by the Shotts Iron Company, and Messrs Holdsworth of Coltness. A number of pits have been sunk, and a number of steam-engines are used for pumping and winding. There are upwards of 200 workmen employed, who receive from 2s. 6d. to 3s. per ton for working the ironstone. The minerals in this field dip to the north-west one foot in seven. The ironstone is worked in the Longwall or Shropshire manner, and a subsiding of about eighteen inches takes place. Great care is required in regulating the air-courses, and numerous air-pits are sometimes required in consequence of the great quantity of sulphurous vapour exhaled from the ironstone. When brought to the surface, the ironstone is removed on railways a short distance from the pits, where it is piled in large heaps for the purpose of being calcined. These heaps vary in size, according as it is found most convenient, from a few hundred up to 2000 tons. Previous to being set on fire, the mass is covered with ashes, in order to exclude the air, otherwise the ironstone becomes oxidated and of a reddish colour. 1000 tons of ironstone is, when calcined, reduced to 64 tons, and the quantity of iron got from the raw stone is estimated as high as forty-two per cent. When properly calcined, it has a very open texture, in consequence of the carbonaceous matter having been consumed, for which reason it is used for mixing with other kinds of iron when put in the furnace, in order to make them flow more easily. Whilst the process of calcining is carried on, the smoke has a very stifling effect, in consequence of the sulphurous vapour which is given out along with it, and sulphur is found deposited on the top of the heap. This vapour has a most devastating effect on the vegetation around, the ground in some places near the pits being totally devoid of vegetation; and on the lands of Crofthead, a young plantation has been totally destroyed. When the water was pumped out of the old workings of Wester Handaxwood in spring 1840, it was so much impregnated with sulphate of iron, that it killed the fish in the Breich and Almond waters, into which it flowed. There are a number of faults or dislocations in this field, which generally run in the direction of the dip and rise, and vary in depth from a few inches to about nineteen feet, but they are not of such extent or frequency of occurrence as materially to impede the working of the ironstone."

II.—CIVIL HISTORY.

Land-owners.—These are, Sir William Baillie of Polkemmet, patron; * Alexander Weir, Esq. of Boghead; George Napier, Esq. of Little Blackburn; James Waddle, Esq. of Crofthead, &c.

Antiquities.—In Cowhill, two gold pieces of Roman coin were dug up in a bog.

The late Samuel Muir, Rector of Perth Academy, who was said to have been master of the grammar of eighteen different languages, received the first elements of his education in this parish.

III.—POPULATION.

The number of inhabitants in this parish stood as follows at the different census :

Year 1755,	.	1121
1791,	.	1322
1801,	.	1537
1821,	.	1900
1831,	.	2075
1841,	.	2596

IV.—INDUSTRY.

Agriculture.—The parish contains 10,019 English acres.

The improvements of which husbandry is susceptible in this parish are considerable. The ground being clay, or till bottom, it much requires draining, which is not yet carried to that extent it might. In some few places, the soil is of such a stiff nature that draining proves of little benefit.

There is a great want of good enclosures and fences in some parts of this parish. Plantations are getting up.

Quarries.—Several stone quarries are open in the parish, one at Blackburnhaugh, and another at Longridge. Whinstone is to be found. There are some good sand quarries; one of a white siliceous nature, which makes excellent garden-walks. There is another of red sandstone.

V.—PAROCHIAL ECONOMY.

Ecclesiastical State.—The situation of the parish church is most convenient. When this parish was disjoined from Livingston, it was opened for public worship on the 21st October 1718; but there was preaching before from the year 1628. † The church was erected and partly endowed by public subscriptions.

* The progenitors of Sir William Baillie came originally from Lanarkshire. They purchased the property of Polkemmet in the sixteenth century from Mr Andrew Shaw, a brief account of whom will be found in Spottiswood's History.

† Cargill, it is said, preached there on the Sabbath prior to the excommunication at Torwood.

The extent of the glebe is between six and seven acres. The final decret of locality for the stipend, though many years before the court, is not yet determined, but over and above the stipend, L.100 arises to the minister from a mortification in the county of Lanark, and which entitles him to a vote for member of Parliament, besides the vote in Linlithgow county.

There are three Dissenting meeting-houses in the parish. Divine service in the Established Church is well attended, and the majority of the parishioners are attached to it. Secession originated here from the parishioners being frustrated in obtaining a vote for the minister, notwithstanding they had contributed to the erection of the church with that special end in view.

The amount of collections in the parish church used to be between L.46 and L.50 in the year; but it has been less of late.

Ministers.—The Rev. Alexander Wardrope, first minister of the church of Whitburn, was the descendant of a respectable family in this place. He was licensed to preach about 1722, and, some time after, was ordained at Muckhart. (Vide Sketch of him by the late Rev. John Brown.) We find Mr Wardrope mentioned in Erskine's Memoirs as one of his correspondents. Mr Wardrope took an active share in the discussion usually called "the Marrow Controversy." Mr Wardrope, however, excelled more as a preacher than a controversialist. People came in crowds from very great distances to hear him.

The individual who succeeded Mr Wardrope was Dr William Porteous. He was the son of the Rev. James Porteous of Monyvaird. He was born on the 10th of March (O. S.) 1735. From the Memoir of his life, it appears that he became one of the most able ministers of the Church of Scotland in his day. By him was planned the Glasgow Society of the Sons of the Clergy, which has endeared his memory to the Church. In the same spirit of humanity and zeal for the best interests of men, he promoted with all his public and private influence the noble and extensive views of the British and Foreign Bible Society. And it was upon his motion before the Church courts, there was appointed the first public collection which was ever made in Scotland for the objects of that institution. He was ordained minister of Whitburn on the 10th of June 1760, where he laboured for ten years. On the 28th June 1770, he was appointed minister of St George's, Glasgow, where he set agoing Sabbath schools, and devised plans for the benefit of the poor.

The next minister who succeeded Dr Porteous as minister of Whitburn was the Rev. Mr Baron, who afterwards became Professor of Moral Philosophy in the University of St Andrews. Professor Baron was born at Kershall, in the parish of Corstorphine, in 1735; he died in 1803. He received the greater part of his education at the University of Edinburgh. His first settlement took place at Wamfray. His reception in the parish was not very encouraging; but similar occurrences were not very unusual at that time. In 1774, he published an essay on the mechanical principles of the plough, and in 1777, a "History of the Colonization of the Free States of Antiquity, applied to the present Contest between Great Britain and her American Colonies." This work attracted much notice, in this country, and on the continent. It called forth several keen replies in England, and in the following year a French translation was published at Utrecht. When at Whitburn, he likewise wrote his history of the political connection between Great Britain and Ireland, which was published about 1780. Soon after he went to St Andrews.

It is proper to mention, that he wrote an account of the life of Thomson, which was prefixed to an edition of the "Seasons," published at Edinburgh. He also was a contributor to the Edinburgh Magazine. Among the distinguished men who then adorned the literature of Scotland, few were more conspicuous than the late Lord Kames. With him Mr Baron lived on terms of familiar intercourse. His Lordship, about this time, succeeded in reviving the Philosophical Society of Edinburgh, originally established by the celebrated Maclaurin. Of this Society Mr Baron was a member. In a few years, chiefly at the instigation of Principal Robertson, this Society merged in another on a more extended plan, and was incorporated by royal charter under the name of the Royal Society of Edinburgh. Of this Society Mr Baron was an original member. He was nominated Professor of Rhetoric and Logic in the University of St Andrews without his knowledge. This appointment compelled him to give up his benefice at Whitburn; but as a compensation for the loss of his living, the King was, many years afterwards, pleased to confer upon him a pension of L. 100 a-year. His Lectures on Rhetoric were published in 1806.

Mr Baron was succeeded in the charge by Dr James Somerville. He was born in Carnwath in the year 1747. He was appointed minister of Whitburn in 1779, in which charge he laboured about

ten years. (Vide account of Dr Sommerville in Dr Stevens's history, also prefixed to the volume of his published discourses.)

Dr Somerville was succeeded in the charge by the Rev. James Rhind, who was admitted minister of Whitburn in 1790. His successor was the Rev. James Watson, who was translated from the presbytery of Orkney.

The Rev. Archibald Bruce, minister of the Associate Congregation, and teacher of the theological class at Whitburn under the inspection of the (late) General Associate Synod, was a man of such eminent attainments in theology and literature, that his name deserves to be here recorded. In the year 1780, he published "Free Thoughts on the Toleration of Popery;" a work of most elaborate research, which has furnished subsequent writers upon the subject with a rich store of materials, and which procured Mr Bruce the friendship of Lord George Gordon, upon whom Mr Bruce waited when in London in the year 1782, and who, a year or two later, visited Mr Bruce at Whitburn. The following works, among many others, issued from his pen: "Introductory and Occasional Lectures," delivered in the Theological Academy at Whitburn; "A Dissertation on the Supremacy of Civil Powers in Matters of Religion;" translation from the French of "Discourses on the True and False Religion, by Pictet." Vide sketch of Mr Bruce in the Life of Dr M'Crie.

Education.—There are five schools; two are endowed from a sum of L.4250 left to the schools of this and Cambusnethan parishes. The salaries of the teachers of these two schools, independently of the school-fees, at present amount to less than L. 30, besides free house and garden. The parish schoolmaster's salary is the maximum, L.34, 4s. 4½d. He has also a glebe of about ten acres, Scotch measure. He has the legal accommodation. The amount of school-fees may be about L.20 per annum.

Libraries.—There are two libraries in the parish, one in the village and the other at Longridge.

April 1843.