Floating Whin.—The sheets of floating whin which come from the direction of Aikenhead and are thick at Cathcart, thin gradually out towards the S. and W., and do not reach so far as Eastwood burial ground, or Orchard. They do not appear to penetrate above the Cowglen limestone, but lie at various distances below it.

Section along the red diagonal line marked A. B. on Map (Plate V.)—A section along the line A. B., which I have drawn on the map from near Whitecraigs quarry to Clincart Brick and Tile works, through New Cathcart Bridge, will show how, I believe, the strata lie between these points. [This section not having been reproduced, it will be found with the MS. of the paper, which, with the map and bore sections, is now in the Society's Library.]

NO. XVIII.—NOTES ON A CARBONIFEROUS SELACHIAN FISH
FROM THE CEMENT-LIMESTONE SERIES OF EAST KILBRIDE.
BY JAMES COUTTS.

[Read 8th December, 1881.]

THE genus *Cochliodus* was established by Professor Agassiz, in 1838, for some peculiar shell-like palatal teeth found in the Carboniferous limestone series, five species being named by him—*Cochliodus acutus*, *C. contortus*, *C. magnus*, *C. oblongus*, and *C. striatus*; but it has since been doubted whether some of these do not rather belong to some closely allied genus. Thus Prof. M'Coy, speaking of *C. magnus*, at page 623 of his "Palæozoic Fossils," says, "This species varies considerably in the outline of the different specimens, and I think it is very doubtful whether it is truly of the genus, on account of the flatness and slight inrollment of the teeth, and the little definition of the characteristic oblique ridges; the strong crenulation of the margin is also a character which I do not recollect to have seen in *Cochliodus*, but recalls the observation of Capt. Jones, (in Portk. Geol. Rep.) that the *Cochliodus magnus*, he thinks, pass into the *Helodus planus*, which may be borne out by a large suite of specimens, although I have not yet myself seen the passage."

I am glad to be able to exhibit to the Society a specimen of this fish, which seems to confirm in a measure the truth of Captain Jones' conjecture, as stated by M'Coy. This fine, I might almost

say unique, specimen was discovered this autumn by my friend Mr. Andrew Paton, of East Kilbride, in the cement-limestone series, and he has kindly placed it in my hands for exhibition. The specimen consists of the head and cartilaginous jaws, with, apparently, a portion of the shagreen-like skin attached to the head, and there are 32 palatal or crushing teeth visible. The teeth are apparently in position, but are distorted out of their proper places by the oblique pressure to which the skull has been subjected during fossilization, so that it is now impossible to say what may have been its true form, or whether we have now all the teeth possessed by the fish before it was entombed in the sediment in which it now lies. Be this as it may, my object at present is to point out to the members that we have in this specimen several forms of teeth, which formerly were allocated to distinct genera of Selachian fishes. The two largest teeth evidently belong to *Cochliodus magnus*, or, as it is now given in the "Catalogue of Western Scottish Fossils," *Tomodus convexus*, Agassiz. Others of the teeth agree closely in form with *Helodus planus*, now *Psephodus magnus*, Agassiz, thus confirming Captain Jones' opinion that the teeth of *Cochliodus magnus* and *Helodus planus* belong in all probability to the same fish. Some of the teeth in this specimen agree very closely with *H. mammilaris*, Agassiz, while others differ in form from any of the species indicated; indeed it is very doubtful if there are any two teeth exactly alike, but this is a character common to the group of fishes to which the specimen belongs. On close inspection it will be seen that the rounded upper surfaces of the teeth are perforated by minute tubulæ or pores, as in the genus *Psammodus*, and that the outer borders of the teeth are ornamented with vertical plications, presenting a crenulated structure. In this feature these teeth, according to M'Coy, agree more with *Helodus* than with *Cochliodus*. I, however, leave the genus to which this specimen belongs an open question, my object in this paper being to point out that here we have, in one specimen, teeth of various forms, apparently lying not far from their normal position, which formerly have been allocated to distinct genera and species of fish.

Perhaps the above short notes upon this interesting specimen, if followed up by abler hands than mine, may help to throw new light upon this group of Carboniferous fishes. I may also be allowed to remark that it is to be hoped Mr. Paton will continue

his researches amongst the cement-limestone group of strata, for within the last ten or twelve years he has collected from it numerous interesting specimens of ancient fish life, many of which from time to time I have brought under the notice of the Society.

No. XIX.—A GEOLOGICAL EXCURSION TO CATHKIN QUARRIES.

BY D. C. GLEN, F.G.S.; AND JOHN YOUNG, F.G.S., V.P.

[Read 18th May, 1882].

THE quarries in the Cathkin district, although visited at intervals by individual members, have never, so far as we are aware, been selected as the scene of one of the Society's excursions until this season, the omission probably arising from their nearness to the city, and consequent accessibility to any one with an hour's leisure. The late discovery, however, of certain interesting magnesian minerals, afterwards to be noted, in fissures and cavities of the dolerite rock of Cathkin, created a fresh interest in the locality, and the first excursion of this season was therefore arranged to visit the workings on Saturday, 15th April last. Leaving the train at Rutherglen the party proceeded along the Stonelaw Road. The air was cold and the atmosphere clear, so that a splendid view was obtained from the higher grounds across the valley of the Clyde to the distant hills beyond. Ben Lomond and the mountain ranges to the west, as well as the Campsie fells and the Ochils, were covered with snow nearly half way down their slopes—the effects of a recent storm—which gave the country lying to the north a truly alpine character.

On the Stonelaw Road were passed one or two old pits which had been put down into strata belonging to the upper coal measures, and from the shales on their spoil-heaps, shells belonging to the genus *Anthracosia*, with ferns and other plant-remains, are still to be obtained. The Rev. David Ure, writing in 1793, in his "History of Rutherglen and East Kilbride" (p. 120), says that "there is no account when coals were at first wrought in this place. But from the number of old wastes the period must be very remote." He states that a cart-load of three hutches, weighing about 13 cwt., was laid down in the streets of Glasgow for 3s. 6d., the carriage being 4d. Also that a considerable quantity of ironstone was turned out along with the coal at Stonelaw,