early fishes are remarkable from a combination of diverse characteristics, which subsequently become the distinguishing peculiarities of distinct Families and of a higher Order, we have further evidence that the ancient Ganoids formed the parent stock from which the succeeding fishes, amphibians, and reptiles have diverged. In some sauroid Devonian fishes the position and structure of the teeth foreshadow those of the Labyrinthodont reptiles; in others, the throat is protected by gular plates—a fashion retained in the Carboniferous Amphibia. Again, in some species the scales are surface pitted, like the scutes of Crocodiles. While in the notochordal weak-limbed amphibians of the Coal Measures, with minute body scales, and partly osseous skulls, we cannot fail to recognise structural peculiarities now found in the swamp-dwelling mud-fishes. Thus in the anomalous “scaled sirens” we have the persistent type of an ancient group of fishes in which now, as in the old time, the piscine and amphibian characters are so united as to completely efface the line of demarcation between the Orders, and effectually link the Fishes to the Reptiles.

2. ON ELLIPSOIDAL NODULES OF IRONSTONE.

By Lieut.-Col. J. D. SHAKESPEARE, F.G.S., Assoc.Inst.C.E.

(Abstract.)

The specimens now exhibited consist of an ellipsoid of ironstone, 18in. $\times$ 16in. and 9in. in thickness, and pieces broken from similar nodules. The spiral formation of the large specimen, which seems to have about two-and-a-half coils in its construction, is so remarkable that, when it and others were first seen by the author at a little distance they were thought by him to be old ship's fenders, so greatly did they resemble short lengths of thick rope tightly coiled. In the fractured specimen is a crystal of quartz as large as the Koh-i-noor and almost as bright, and small crystals of nickel, sulphur, lime, iron, &c. These ellipsoids lie in the shale composing the roof of most coal-seams in the Aberdare District; those exhibited were from the six-foot vein of the Rhondda Valley. Sometimes their lower surface is in actual contact with the coal beneath, but generally they are several inches, and occasionally feet, above it, according to the nature of the coal-seams, but they are never found as if sunk into the coal. Wherever they

are found, they are in layers parallel with the strata, and invariably have the major axis in its direction. Where they are of small size they are not numerous, but when large they frequently lie so close together as to form a continuous course. They are never found in roofs of rock or hard shale, but in the softer shale called "Blue Metal."

It is remarkable that coal fossils are rarely ever amongst these ellipsoids, though fossil ferns and *Sigillaria* are sometimes found a few feet from them, but, as a rule, where the one is plentiful the other is scarce; they are always found above the coal and never below it.

These "Ball Mine," as they are locally called in South Wales, do not exist in every seam of that coal-field, but I believe they are in greater quantities and larger in that district than elsewhere. The proportion is about 5 tons to every 400 tons of coal; from twenty to fifty weigh a ton. Similar nodules are found in some seams in Yorkshire and Lancashire, where they are known by the name of "Doggers" and "Bullions;" occasionally, too, they are met with in North Wales; in fact, they are characteristic of certain seams in certain districts. They are not in every coal district, nor when they are found in one seam of a district does it follow that they are in another of the same district; and they are more numerous in connection with steam than with house coal.

In conclusion, the author thought the occurrence of these ferruginous bodies deserved careful attention, and he promised to give all the information he could obtain on the subject.

VISIT TO THE BRITISH MUSEUM.

(SOUTH AFRICAN REPTILIAN REMAINS.)

APRIL 14TH, 1877.

Director—PROFESSOR OWEN, C.B., LL.D., F.R.S., &c.

(*Report by* DR. J. FOULERTON, F.G.S.)

Professor Owen having met the party in the North Gallery, led the Members to the cases containing the Reptilian Remains from South Africa, which the learned Director then described.

During the Liassic, the Triassic, and, perhaps, also the Permian periods, lakes or estuaries, much larger than the lakes at present known in Central Africa, occupied a tract of the southern portion