served a black carbonaceous mass below it; and when a transverse section is made of an entire sporangium *in situ*, the cavity between the valves is often evidently seen. At one part of the sporangium a stalk-like process is sometimes observed. These sporangia seem to resemble much those organs of fructification in Lycopodiaceæ which contain the small spores, commonly known as vegetable sulphur or Lycopode powder, and it seems probable that the dark contents of the Fordel sporangia may be the altered spores.

Large spore-like bodies are also met with in coal, which may perhaps be similar to the larger spores of Lycopods. It is by no means improbable, the author thought, that the sporangia in the Fordel and other coals may be the fructification of Sigillaria,—a genus which occupies an intermediate position between Cycadaceæ and Lycopodiaceæ. The Fordel coal also contains abundance of the inflammable resinous organic matter called Middletonite, which, according to the author, may perhaps be in some way connected with the sporangia just noticed.

Specimens were shown of Fordel coal formed by Sigillariæ and Stigmariæ, and of the same coal containing sporangia and Middletonite, while the communication was illustrated by magnified drawings of structure.

The following Gentleman was elected an Ordinary Fellow :—

Dr JOHN ADDINGTON SYMONDS, of Clifton, Bristol.

Monday, 6th March 1854.

SIR T. M. BRISBANE, Bart., President, in the Chair.

The following Communications were read :—

1. On the Impregnation of the Ova of the Salmonidæ. By John Davy, M.D., F.R.S. Lond. & Edin., Inspector-General of Army Hospitals.

The author has been induced, he states, to make inquiry on this subject, in consequence of a recent averment, founded on a reported experiment, that the ova of the trout taken from the abdomen of the parent fish, and not afterwards mixed with the milt, have proved prolific.

He first gives an account of many trials made to test the accuracy

of the conclusion that the ova of the Salmonidæ may be impregnated *ab externo*, the results of all which have been negative, and remarkably contrasted with those in which, after exclusion, the milt and roe have been mixed,—impregnation having been effected and the eggs rendered prolific.

Secondly, he notices the generative organs of these fishes, and points out how, anatomically, they are clearly unfit for performing the reproductive function according to the hypothesis of impregnation *ab externo*, though perfectly adapted for it in accordance with the received doctrine.

Thirdly, he adverts to the manner in which, during the spawning season, the male and female fish approach each other, as being also in accordance with the same doctrine, and opposed to the inference of internal impregnation.

In conclusion, he observes, that even admitting the accuracy of the detail of the experiment adduced to prove such a mode of impregnation, the conclusion drawn is not a necessary one,—inasmuch as the ova included in a perforated box and placed in a stream, may have been impregnated by milt shed in the adjoining water, and by it in its flow conveyed to them.

2. Account of a remarkable Meteor seen on 30th September 1853. By William Swan, Esq.

On the 30th September 1853, I was with my friend Mr David Wallace, in a field near his house, Balgrummo, in the neighbourhood of Leven, in Fifeshire. The atmosphere was very clear, and the sun was shining brightly. The sky was covered in some quarters with thin cirrous clouds, and we had been watching the changes in the appearance of the clouds nearly overhead, when Mr Wallace, who was still observing the sky, pointed suddenly upwards, and called on me to look. I did so, and instantly saw a round body, apparently as large as a star of the first magnitude, moving rapidly upwards,—roughly speaking, towards the zenith, or more accurately, towards the sun. This, as I immediately afterwards ascertained, was about 11^h 15^m Greenwich mean time.

The region of the sky which the meteor traversed was cloudless and serene, so that I had an extremely favourable opportunity of observing it, and I continued to see it for about a second of time.