

with these there are some which I have not as yet been able to refer to any known form of fruit. Coniferous fruits are comparatively scarce, although the remains of Coniferous branches are by no means uncommon. A similar discrepancy exists as regards the Palms, stems of palmaceous structure being rarely found, although the species of fruits of that order are numerous. The principal bulk of fossilized woods found in the London Clay are decidedly Dicotyledonous, and the great bulk of fossil fruits likewise. The internal structure of both fruits and woods is preserved in a most perfect and beautiful manner."

P. 552. At the meeting of the British Association at Bristol, in August, 1836, Mr. R. W. Fox submitted to the Geological Section an experiment, showing that the native yellow copper, or *bi-sulphuret*, is convertible into the *sulphuret* of that metal by weak voltaic action. His apparatus consisted of a trough divided into two compartments or cells, by the intervention of a mass or wall of moistened clay. In one of these cells he put a solution of sulphate of copper, and a piece of the yellow bi-sulphuret of copper; and in the other cell, some water with a little sulphuric acid in it, or water only, without acid, together with a piece of Zinc which was connected with the copper pyrites in the other cell, by means of a copper wire.

This simple voltaic arrangement quickly changed the surface of the copper ore from a yellow to a beautiful iridescent colour, afterwards to purple copper, and finally, in the course of a few days, to the sulphuret, on which metallic copper was copiously deposited in brilliant crystals. When this process was continued for some weeks, and sulphate of copper added from time to time, the sulphuret of copper formed rather a thick crust immediately under the metallic crystals, and appeared almost black and somewhat friable. He considered that the oxide of copper in the solution parted with its oxygen to a portion of the sulphur of the bi-sulphuret, thus forming sulphuric acid, which was transmitted through the clay to the Zinc in the other cell, whilst the de-oxydized copper was deposited on the electro-negative copper ore. These results seemed to explain the reason why metallic copper is found in the mines in contact with the sulphuret and black copper ore, and not with the yellow bi-sulphuret of that metal; and likewise