

## NOTE ON TIMBER FOUND BENEATH ALLUVIAL DRIFT AT SWANSEA.

BY COL. W. V. LEGGE, R.A., F.Z.S., M.B.O.U.

(*Read August 10th, 1895.*)

On the pleasant drive from Bicheno to Swansea the traveller, after crossing over the spurs of the range called "Lyne's Sugar Loaf" by the so-called "cut," comes suddenly in view of the large level tract of country lying south of the hills he is descending, and stretching from the hamlet of Cranbrook inwards towards the foot of the ranges which bound the St. Paul's Valley on the east. This tract is mainly formed by the coast range, which fringes the shore from St. Patrick's Head to Bicheno, suddenly swerving inland at the latter place, and joining the above-mentioned highlands east of the St. Paul's which lie at some distance from the East Coast. At the latitude of Swansea the ranges approach the coast again, and then follow the shore southwards. The level tract of country hemmed in by these features is alluvial, and forms what may be generally styled the basin of the Swan River, and its smaller companion streams, the "Cygnet" and the "Wye." Unfortunately the topography of this island is so poorly delineated on existing maps that the mountain features I have touched upon scarcely appear upon them, and unless one visits the district one would have no idea that there is so large a tract of level country on the Swan River.

The surface of this "basin" is mostly level, with here and there gentle rises of about 100 feet in altitude. The soil is chiefly dark chocolate, being apparently the result of denudation and drift from the extensive valleys on the highlands at the back. On the estate of Cambria, which lies mainly at the foot of the hill, locally called the "Lookout," the soil is rich and of great depth; and on that part of it lying between the main road and the shores of Oyster Bay there is a lagoon of considerable extent, which seems in former times to have had egress to the Meredith River by a watercourse now extinct, but visible in the form of an ordinary sinuous depression in the paddocks. Following the course of this depression a deep dyke has recently been cut by Mr. Meredith to drain the lagoon. In the shallowest part of the old watercourse this ditch attains a maximum depth of about 12 feet, and it was at the bottom of it that the men employed in the work came upon the log, lying transversely to the direction of the drain. It was so hard that they had considerable difficulty in cutting it asunder with an axe, a fact which may



easily be realised on inspecting the sample of wood which accompanies this note. It will be observed that the wood is almost black, like the Irish "bog oak," and exactly resembles in texture a solid piece of ebony. When cutting it with the saw, the dust was exceedingly fine, somewhat like that obtained when sawing through a piece of bone. Judging from the appearance of the outer surface of the portions of the log examined by me, the wood is probably that of one of the *Eucalypti*, and if so, it throws an interesting light on the antiquity of this genus of trees, as this example must have been buried many thousands of years. At the spot where the log was met with, the first three or four feet consisted of chocolate soil, which merged into a yellowish clay loam, darkening again at the depth of about 10 feet into a peaty substance. Further up the dyke, however, a thick bed of shingle, intermingled with stones of rounded form about as large as a man's head took the place of this clay; this was probably the bed of the stream, while the bottom of it, where the log became embedded, was no doubt muddy. Higher up, towards the lagoon, and where the depression caused by the old watercourse deepens, and the dyke is consequently shallower, the material excavated is dark peaty soil, which is continued to the edge of the morass. From the whole appearance of the surrounding land the alluvial deposit in question is one of great age, and renders the discovery of this timber at such a depth, and in such a hardened form, of great interest, not only on account of its antiquity, but in connection with the capability of the particular species of tree to withstand decay throughout such a lengthened period.

I append an ideal section of the land lying between the hill called the "Lookout" and the shore of Oyster Bay, showing the position of the dyke, and likewise a section of the dyke itself.