the Duke of Roxburghe, President of the ; Lord Polwarth and the Master of Pol-Mr. Grent Suttle, Mr. Prescott, Mr. worth, of Cowdenknowes, &c., &c. men who officiated on this occasion as were-for Leicesters, Mr. F. P. Lynn, um Mill; Mr. Thomas Cockburn, of Men-; and Mr. Melvin, Bonnington. For Che-Mr. Clay Winfield; Mr. John Douglas, and Mr. Andrew Douglas, Swinside Hall. Leicester by the state of the s : For the best shearling tup of the pure ter breed, Mr. Simpson, Courthill, £5; for scond best, Lord Polwarth, £3; Mr. Tor-Sis erpath, commended. For the best hear, Mr. Simson, Courthill £3; for the d best ditto, Mr. Roddam, of Roddam, £2 Parves, Linton Burnfoot, commended. For est tup of any age not exceeding four shear, Simpson, Courthill, £3. For the best pen *Leicester gimmers or shearling ewes, Mr. m, Haymount, £3. Cheviot Sheep: For ket two tups of the pure Cheviot breed, not once shorn, £5; and for the best tup of ane breed, not above thrice shorn, £3, Mr. at, Handhope; for the second best ditto, Clarke, Ilderton, £2; for the best pen gimof the same breed, Mr. Elliot, Hindhope,

horticultural.

Light in Plants.

his light may be classified into two kinds at, continuous, mostly phosphorescent;

ad, in the form of lightning.

aying wood belongs to the first. A is (Bynus phosphore, L.) has till lately the credit for it; but Betzius Von Humit and Bishop Argadh (another Swede) in ascribing to the wood itself the faculfshining.

get phosphorescent under certain condiinter 46° to 53°, sufficient dampness and expherical air. We find it, however, mostwith alder, beech, white pine, and willow d. They shine before actual decay, but isture rules the intensity of the light—the moisture the less light; no moisture, no d. Where the shining has ceased it can restored by a little water thrown on the d, and by enveloping it with paper or

Emperature, we believe, is of no account so thermometer does not exceed either the ling or the freezing point, as in either case water would disappear.

But not decaying wood alone has this phosresence; other parts of plants have it when decaying. Thus Meyer tells us that, wandering by night through a forest he found decaying mushrooms in a phosphorescent state, and that he took up the shining matter with his stick and rubbed it against trunks of trees.

Tulasne has given us a very interesting treatise about the shining of dead oak leaves. Moisture is in every instance a necessary condition. Of all things, however, it is the diptam which is best known for its remarkable and beautiful light circling round the whole upper part of the plant, when, after warm and calm cays, a match is brought near it. It is the ethereal oil evaporated by the plant which burns, and makes it appear as if the atmosphere round the plant was in a mild blaze. The beauty of this phenomenon is worth trying it, and enduring the failures which an unfit condition of the atmosphere will often bring.

Less strong than the diptam, but stronger than decaying wood, shines the milky sap of Euphorbia phosphorea. Martins, during his travels in Brazil, found it to shine mostly when a storm was coming on. He also relates that he was told by the natives of an Euphorbia growing in impenetrable thickets of several thousand square feet, which often spontaneously ignite, emit a column of smoke for a while, and ultimately blaze in a clear flame.

But not dead matter alone has this phosphorescent quality. We find it in living plants—for instance, Rhizomorpha subterranea, a fungus found on decaying trunks or on timber used in moist mines, emitting light from the tops of its branches so strong that, according to DeCandolle, you can see to read by it; or Agarneus olearius, a fungus growing on the olive tree, which shines best when vegetation goes most forward, and which fact Tulasne therefore calls "une manifestation de l'activite

de sa vegetation."

The cause or causes of the phosphorescence of these plants has not been found. long range of experiments under all temperatures and at the various stages of vegetation This explains also why would be required. the statements of botanists differ so muchwhy one has never found that such and such plant has emitted light; why the other asserts that only the lamelle of different fungi had it, We must, however, here mention a no less interesting phenomenon than either of tuose already stated. It is offered to us by Shistostega osmundacea, a moss growing in caverns and grottoes, which in day-time is in a state of lucidity similar to the Smaragd. In this instance the structure of the plant, as the rays of the sun refracted on it, seems to be the cause, though we would not like to youch for it.

We would rather speak now of the second class of light in plants—namely, where that