

On the Predisposition of Plants
to perpetuate their own Species

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No. 1

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The accompanying section of a stunted and partially decayed Elm tree to which I have the pleasure of calling the attention of "The Sutherland Field Club" was cut at the Ladies Walk Plantation at Dunrobin in December 1879. It presents to my mind a very good example as illustrating a law of nature, that all plants have inherent in them a predisposition to perpetuate their own species. Instances are not wanting to prove this, as may be witnessed in the case of old trees, which are invariably found, even in the last stages of decay to produce seed persistently, thus showing an innate determination to reproduce their own species. The specimen before me exhibits in another form a tendency to reproduction otherwise than by seed, as shown by the abnormal state of rooting which it presents. You will observe it is in a partial state of decay, and that some years ago it had been injured in the stem, as may be seen by the lacerated bark, but a sufficient amount of live bark remained to admit a certain circulation of sap to the stem and branches.

The returning sap being therefore checked at the injured part, coalesced, or healed over, - hence the roots emitted from it.

No doubt this phenomenon was, in a great measure, caused by the inactive state of the original roots, and from having been growing in a close moist atmosphere; but these circumstances alone do not appear to me to alter the fact that it thereby

Nature made a last effort to perpetuate its species, or, at any rate, to prolong its life, and therefore lead to a production of seed to that end.

Having endeavoured to deal with the physiological aspects of this, to me, very interesting case, I may be permitted, seeing my 10 minutes are not yet expired, to refer to the Botanical Classification of the Elm, - not that I have anything new to communicate, but only notice it with the view of directing the attention of any of the Members of our Club to Potbury, who may not yet have done so. The Elm is the representative or prototype of the natural order, family, or class, *Ulmaceae* (if ~~Linnaean~~ ^{Linnaean}) "*Ulmus Montana*"; Wyke, or Scotch Elm, or Elm, a name which is applied to all the trees of this genus, in all the dialects of the Celtic tongue. According to some authors there are only three genera in this family group, viz. *Ulmus*, *Platanus* and *Celtis*; but there is another genus, *Urtica* * differing but slightly from, and far more numerous than the *Ulmaceae*, and which, but for some technical difference, might be, and is by some authors, classed with this genus. In the Linnaean or as it is sometimes called the artificial arrangement, it is classed 5, order 2, *Pentandria Digynia*. But however much this system may be admired, - and it is justly so by many, - it presents to the student no adequate ideas of the properties and natural affinities of the plants he may be studying. When only the name, class, and order are described this system will be found most convenient; but to
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all those who may be practically engaged in Farming,
Gardening, or Forestry, the former system will be found
the most useful, bringing together, as it does, the very
plants necessary for them to know. However the study
of one of the systems will naturally lead to the study
of the other, and thus may be acquired a knowledge
of both.

Dunrobin
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* It is from one of this class of plants, "*Cannabis
Indica*" (hemp) from which the Turkish
"Bang" is distilled.