In a previous snippet (Gorelick 2017), I commented on how important it is to scour old literature, in that instance, looking for records of ability to propagate plants via leaf cuttings. I mentioned records of rooting leaf cuttings of Sinningia (Gesneriaceae) from Kerner and Oliver (1902 [1895]), a book that I examined when writing a paper on why most successful leaf cuttings are taken from plants with succulent or semi-succulent leaves. My hypothesis was that pretty much any plant could be asexually propagated by leaf cuttings, so long as the leaf contained enough water to survive until the cutting could grow roots (Gorelick 2015). While seemingly straightforward, I had never before seen this hypothesis published. Well, old literature possesses lots of gems, and I just found this hypothesis buried as a ‘personal communication’ in a footnote from 1893, in George J. Romanes’ book An examination of Weismannism. Footnote 1 on pages 52–53 (this is footnote 12 in the online Project Gutenberg version) reads in its entirety, with the words in square brackets copied verbatim from the main body of text that was footnoted, and with italics in the original:

We have no means of estimating exactly the proportional number of cases in which this is possible [that germ-plasm need not be restricted to the specially sexual cells], either among the lower or the higher plants; but it is certainly greater that Weismann supposes. “How is it that all plants cannot be reproduced in this way?” he asks, and then adds, — “No one has ever grown a tree from the leaf of a lime or an oak, or a flowering plant from a leaf of the tulip or the convolvulus.” But I am told by botanists that the only reason why the phenomenon thus appears to be a rare one, is because it is not worth anybody’s while to grow plants in this way at a necessarily unsuitable season of the year. Thus, the Rev. George Henslow writes me: — “The fact is that any plant will reproduce itself by its leaves, provided that the cells be ‘embryonic,’ (i.e., the leaf not too near its complete development), and that it be not too thin, so as to provide enough nutriment for the bud to form till it has roots.”

The last sentence of the footnote, that one can grow any plant from a leaf cutting so long as the leaf is “not too thin, so as to provide enough nutriment for the bud to form till it has roots” perfectly presages my 2015 paper on this subject, possibly even alluding to possible differences between monocots and eudicots in comparing tulips with morning glories.

The botanist George Henslow was a son of Charles Darwin’s mentor, John Stevens Henslow, who was the botanist that arranged for Darwin’s voyage on the Beagle (Barlow 1967). George Romanes was Darwin’s closest disciple, the only person who we could say in modern parlance acted like a post-doc of Darwin’s (Forsdyke 2001). Unlike Romanes and August Weismann, George Henslow was very much Lamarckian, but that did not seem to inhibit their correspondence. The above quoted footnote references Weismann’s Essays upon Heredity, the first volume of which was published in 1889 and the second volume in 1891.

REFERENCES


