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IV. Notes on the Healing of Wounds in *Acer Pseudo-platanus*

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Arctium minus.	Eleocharis uniglumis.
Centaurea nigra.	acicularis.
Carduus lanceolatus.	Scirpus fluitans.
arvensis.	setaceus.
Apargia autumnalis.	Carex vulpina.
Leontodon Taraxacum.	arenaria.
Sonchus oleraceus.	Agrostis canina
arvensis.	vulgaris.
Mertensia maritima.	Holcus lanatus.
Myosotis versicolor.	Aira præcox.
Hyoscyamus niger.	Poa annua.
Lamium amplexicaule.	trivialis.
purpureum.	Sclerochloa maritima.
Glaux maritima.	Festuca ovina.
Armeria maritima.	Lolium perenne
Plantago Coronopus.	italicum.
lanceolata.	Asplenium marinum.
major.	Schistidium maritimum.
Chenopodium album.	Lecanora atra.
Atriplex littoralis	parella.
erecta.	Parmelia saxatilis.
Babingtonii.	aquila.
Rumex obtusifolius.	parietina.
Acetosella	Ramalina scopulorum.
Polygonum aviculare.	Cornicularia aculeata.
var. littoralis.	Scyphophorus alaicornis.
Callitriche verna.	pyxidatus.
Urtica urens.	Bovista sp.
dioica.	Agaricus campestris.
Triglochin maritimum.	Besides several species of Algæ.

IV. Notes on the Healing of Wounds in *Acer Pseudo-platanus*. By JOHN SADLER, F.R.Ph.S.

The author detailed a number of experiments which he had made on *Acer Pseudo-platanus*, to ascertain the mode in which wounds were healed. The following examples will show the results. During the last week of March 1871, a branch was cut with an ordinary pocket-knife round its entire circumference. The buds of the branch were at this time small and firm. The part removed was half an inch in width, and one-sixteenth of an inch deep, which included the bark and part of the wood. The wound was

rubbed perfectly dry. Fourteen days after the cut was made, a slight swelling was visible under the bark on the upper margin of the cut. This was the beginning of the formation of new wood to heal the wound, which formation gradually increased, and by the end of September of the same year it had reached the lower edge of the cut, and turned the bark outwards. The wound never, at any time, showed the slightest tendency to bleed. All the healing process took place from above. The buds on the branch were fully five days later in bursting than the other buds on the tree, and its leaves fell off eight or nine days earlier. On 13th April this year (1872), the buds of the branch burst, and by the 18th the leaves were fully expanded, and every bud produced a raceme of flowers, which was not the case with the other buds of the tree. The fruit did not arrive at maturity, and fell off early. The branch was cut from the tree to-day (11th July), when it was found that the wood below the cut had been gradually decaying, and more than one-half of it was dead and dry. In all probability the branch would have died completely before next spring.

On 19th April 1872, the bark and part of the wood was removed for fully an inch round the entire circumference of a vigorous branch. In twelve days a marked thickening was observed on the upper side of the cut, and in ten days more, what resembled a ring of adventitious roots made its appearance. No development was visible on the lower side of the cut. In another branch a deep cut was made about one-half of the circumference, and the wood removed so as to leave a groove reaching almost to the pith. This was longer in showing signs of healing, which it ultimately did on the upper side only. The foliage of the branch assumed a yellowish tint by the end of June, and the leaves had begun to fall on 9th July, when the branch was cut off. The author detailed other experiments, and exhibited the specimens referred to. The specimens were presented to the Museum at the Royal Botanic Garden. In conclusion, he noticed a series of similar experiments made on *Salix alba*, by Professor Hoffman, of Giessen. The results of these experiments are given in the "Gardeners' Chronicle" of 4th May 1872.