

APPENDIX.

BRITISH PLANTS CULTIVATED FOR ORNAMENTAL PURPOSES.

1. *ALISMA Plantago*. I cannot pass over this beautiful aquatic without giving it a place amongst the ornamental plants with which our country abounds. In pieces of water this is of considerable interest both as to flowers and foliage, and no place of the kind should ever be destitute of such a beauty. It is of easy culture; the plant taken from its place of growth, and sunk into the water with a stone to keep it in its place, is a ready and easy mode of planting it, and there is no fear when once introduced but it will succeed.

2. *ANDROMEDA polifolia*. This is a beautiful little shrub, and grown in gardens for the sake of its flowers; it is also an evergreen. This plant will not succeed unless it is planted in bog earth,—for a description of which see page 152 of this volume.

3. *AQUILEGIA vulgaris*. COLUMBINE.—We have scarcely a plant affording more beauty or greater variety than this. It is commonly, when found wild, of a blue colour, but when the seeds are sown in the garden a variety of tints is produced. It is a perennial, but easily raised from seed, which should be sown in the spring.

4. *ANTHEMIS maritima*. A double-flowering variety of this plant used to be common in the gardens near London, but is now scarce: it is very beautiful, and constantly in bloom during summer. It is propagated by planting the roots in the spring and autumn.

5. *ANTIRRHINUM Linaria*, v. *Peloria*.—I cannot pass over this singular and beautiful flower without notice. There is a fine figure of it in the *Flora Londinensis*: it is very ornamental, and the structure of the bloom is truly interesting. It is easily propagated by planting the roots in the spring months, but it is not common.

6. *ANTIRRHINUM majus*. SNAPDRAGON.—This is also a plant deserving the attention of the lover of flowers: it is capable of culture into many very beautiful and interesting varieties.

7. *BELLIS perennis*. DAISY.—This plant affords us many very beautiful varieties for the flower garden. The large Red Daisy and all the other fine kinds are only this plant improved by culture.

8. *BUTOMUS umbellatus*. This is an aquatic, and well adapted to ornament pieces of water. Its beautiful flowers in the summer months are inferior to scarcely any plants growing in such places, and its foliage will form protection for any birds, &c. which are usually kept in such places. It is easily propagated by planting it in such places.

9. *CALTHA palustris*. MARSH MARIGOLD.—This fine yellow flower is also made double by culture, and finds a place in the flower garden.

10. *CHEIRANTHUS fruticulosus*. WALLFLOWER.—is a plant possessing great beauty, and very interesting on account of its fine scent. We have this plant also improved by culture, making many fine double varieties. It is a biennial, and easily raised from seeds, which should be sown in June. The double varieties are cultivated by cuttings of the branches.

11. *CYPRIPEDIUM Calceolus*. LADIES SLIPPER.—A flower of most uncommon beauty, but is now become scarce; it is a native of the woods near Skipton in Yorkshire, but has been so much sought for by the lovers of plants as to become almost extinct. It is difficult to propagate; but when the plants have been for some years growing, will admit of being parted, so that it may be increased in that way: it will not bear to be often removed, and should be left to grow in the same place for several years without being disturbed. It succeeds best in bog earth or rotten leaves.

12. *DELPHINIUM Ajacis*. LARKSPUR.—This is also an annual flower, affording a pleasing variety in the flower garden in the summer months. For its culture, see p. 188.

13. *DIANTHUS Caryophyllus*. THE CARNATION.—All our fine varieties of the Carnation are the produce of this plant.

The common single variety produces seed in great abundance, but the improved double varieties are sparing in produce: the fine kinds of this flower are reared by layers put down about the month of July; they may also be propagated by cuttings, but the other is the most eligible and certain mode.

14. *EPILOBIUM angustifolium*. A plant of singular ornament. There is also a white variety of this found in gardens.

15. *ERICA vulgaris*. There is now in cultivation in the gardens a double-flowering variety of this plant, which is highly interesting and of singular beauty. It grows readily in bog earth, and is raised by layers.

16. *ERICA Daboecia*. IRISH HEATH.—A plant of singular beauty and of easy culture; and being of small growth and almost constantly in bloom, has also obtained a place in the shrubbery.

17. *FRITILLARIA Meleagris*. A very ornamental bulbous plant, of which the Dutch gardeners have many improved varieties, varying in the colour and size of the blossoms: these are usually imported in August, and should be immediately planted, as the bulbs will not keep long when out of ground, unless they are covered with sand.

18. *GALANTHUS nivalis*. SNOWDROP.—The first of the productions

of Flora which reminds us of the return of spring after the dark and dreary days of winter. This plant is also made double by cultivation, but is not handsomer than the common wild one. The best time for planting the bulbs of Snowdrops is in the month of September.

19. *GENTIANA verna*. VERNAL GENTIAN.—A delightful little plant of the finest blue colour that Flora exhibits in all her glory: its scent is also delightful: it is somewhat scarce and difficult to procure; but if more generally known, few gardens would be destitute of such a treasure. It is of tolerably easy culture, and grows well in loam; it is small, and is best kept in a pot.

20. *GENTIANA Pneumonanthe*. MARSH GENTIAN.—Is also a beautiful plant, and grows well in any moist place. From its beautiful blue flowers it is well adapted to the flower garden; it delights in bog earth.

21. *GERANIUM Phæum*. BLACK-FLOWERED GERANIUM.—This is a perennial, and makes a fine ornamental plant for the shrubbery: it will grow in any soil and situation.

22. *GLAUCIUM Phœniceum*. PURPLE HORN POPPY.—An annual flower of singular beauty, and deserving a place in the flower garden.

23. *GNAPHALIUM margaritaceum*. AMERICAN CUDWEED.—This plant affords beautiful white flowers, which drying and keeping their colour, it is worth attention on that account, as it affords a pleasing variety with the different *Xeranthema*, and others of the like class in winter.

24. *HIERACIUM aurantiacum*. GRIM-HE-COLLIER.—This is an old inhabitant of our gardens, and affords a pleasing variety.

25. *HOTTONIA palustris*. WATER VIOLET.—This is a plant of singular beauty in spring; it is an aquatic, and makes a fine appearance in our ponds in the time of its bloom.

26. *IBERIS amara*. CANDYTUFT.—An annual flower of considerable beauty and interest. We have several varieties of this sold in the seed-shops.

27. *IMPATIENS NOLI ME TANGERE*.—A very curious flower which is grown as an annual. The construction of the seed-vessel causing the seeds to be discharged with an elastic force is a pleasing phenomenon, and has given rise to its name, *i. e.* *Touch-me-not*.

28. *LATHYRUS sylvestris*.—EVERLASTING PEA.—This is also a great ornament, and frequently found in gardens; it grows very readily from seeds sown in the spring of the year.

29. *LEUCOJUM æstivum*. SUMMER SNOW FLAKE.—This is a very noxious plant in the meadows where it grows wild. I have seen it in the neighbourhood of Woking in Surrey quite overpower the grass with its herbage in the spring, and no kind of animal that we know of will eat it.

cure some chalk and sift it through a fine sieve, and also some good tenacious loam; mix both in equal quantities in water; a large garden-pot should then be filled with some rubble of chalk, about one third deep, and then the above compost over it, placing the roots in the centre, at the usual depth they grew before. As the water drains away, the loam and chalk will become fixed closely round the bulbs, and they will remain alive and grow. By this method I have cultivated these plants for some years together.

In this way all those kinds growing in chalk may be made to grow; but such as the *Orchis morio*, *maculata*, and *pyramidalis*, may be grown in loam alone, planted in pots in the common way. Care should be taken that the pots in which they are planted are protected from wet and frost in the winter season.

37. *ORNITHOGALUM latifolium* and *umbellatum* are also ornamental, and are often cultivated for their beautiful flower. The season for planting the bulbs is about the month of September.

38. *PAPAVER somniferum*. GREATER POPPY. } These are made by
 Rhæas. CARNATION POPPY. } culture into numerous varieties, and are very beautiful; but the aroma, which is pregnant with opium, renders too many of them unpleasant for the garden.

39. *POLEMONIUM caruleum*. GREEK VALERIAN, or JACOB'S LADDER.—Is also a beautiful perennial, and claims the notice of the gardener. Its variety, with white flowers, is also ornamental. It is raised from seeds, which are sold in plenty in our seed-shops.

40. *PRIMULA officinalis*. COWSLIP. } All well known ornaments of
 vulgaris. PRIMROSE. } numerous varieties, double
 elatior. OXLIP. } and single. The third species is the parent of the
 farinosa. BIRD'S EYE. } celebrated Polyanthus. The last is also an interesting little plant with a purple flower. It grows best in bog earth.

41. *ROSA rubiginosa*. SWEET BRIAR.—This lovely and highly extolled shrub has long claimed a place in our gardens. We have several varieties with double flowers, which are highly prized by the amateurs of gardening.

42. *SAXIFRAGA umbrosa*. LONDON PRIDE.—A beautiful little plant for forming edgings to the flower garden, or for decorating rock-work.

43. *SAXIFRAGA oppositifolia*. PURPLE SAXIFRAGE.—Perhaps we have few flowers early in the spring that deserve more attention than this. It blooms in the months of February and March, and in that dreary season, in company with the Snow-drop, Crocus, and Hepaticas, will form a most delightful group of Flora's rich production. The Saxifrage is a native of high mountains, and it can only be propagated by being continually exposed to the open and bleakest part of the

garden: it succeeds best in pots. It should be parted every spring, and a small piece about the size of a shilling planted in the centre of a small pot, and it will fill the surface by the autumn. The soil best suited to it is loam.

44. *SEDUM* *acre*. STONE CROP. } All the species of *Sedums*
 rupestre. ROCK GINGER. } are very ornamental plants,
 and are useful for covering rocks or walls, where they will generally
 grow with little trouble. The easiest mode of propagating and getting
 them to grow on such places is first to make the place fit for their
 reception, by putting thereon a little loam made with a paste of cow-
 dung; then chopping the plants in small pieces, and strowing them
 on the place: if this is done in the spring, the places will be well covered
 in a short time.

45. *STATICE* *Armeria*. THRIFT.—This plant is valuable for making
 edgings to the flower garden. It should be parted, and planted for this
 purpose either in the months of August and September, or April and
 May.

46. *STIPA* *pinnata*. FEATHER GRASS.—We have few plants of more
 interest than this; its beautiful feathery bloom is but little inferior to
 the plumage of the celebrated Bird of Paradise. It is frequently worn
 in the head-dresses of ladies.

47. *SWERTIA* *perennis*. MARSH SWERTIA.—This is a beautiful little
 plant, and worth the attention of all persons who are fond of flowers
 that will grow in boggy land. It is a perennial, and of easy culture.

48. *TROLLIUS* *europæus*. GLOBE FLOWER.—This is also a fine
 plant: when cultivated in a moist soil its beautiful yellow flowers afford
 a pleasing accompaniment to the flower border and parterre in the
 spring of the year. It is easily raised by parting its roots.

49. *TULIPA* *sylvestris*.—This beautiful flower is also an inhabitant
 of our flower-gardens; it is called the Sweet-scented Florentine Tulip.
 It has a delightful scent when in bloom, and is highly worthy the atten-
 tion of amateurs of flower gardens. It should be planted in Septem-
 ber, and will grow in almost any soil or situation.

50. *TYPHA* *latifolia*, } These are all very fine aquatics, and
 angustifolia, } worth a place in all pieces of water; the
 minor. } foliage forms a fine shelter for water-fowl.

51. *VIOLA* *tricolor*. HEART'S-EASE.—Is an annual of singular beauty,
 and forms many pleasing and interesting varieties.

52. *VIOLA* *odorata* must not be passed over among our favourite na-
 tive flowers. This is of all other plants in its kind the most interesting.
 It forms also several varieties; as Double purple, Double white, and the
 Neapolitan violet. The latter one is double, of a beautiful light blue

colour, and flowers early; it is rather tender, and requires the protection of a hot-bed frame during winter. It is best cultivated in pots.

53. *VINCA minor*. LESSER PERIWINKLE.—This is also a beautiful little evergreen, of which the gardeners have several varieties in cultivation; some with double flowers, others with white and red-coloured corols, which form a pleasing diversity in summer.

54. *VINCA major*. GREAT PERIWINKLE.—I know of no plant of more beauty, when it is properly managed, than this. It is an evergreen of the most pleasing hue, and will cover any low fences or brick-work in a short space of time. The flowers, which are purple, form a pleasing variety in the spring months.

MISCELLANEOUS ARTICLES.

55. *BETA vulgaris*. I have noticed this plant before, both as to its culinary uses and for feeding cattle: but having received a communication from a friend of mine who resides in the interior of Russia, relative to his establishment for extracting sugar from this root, I cannot omit relating it here, as it appears to be an interesting part of agricultural economy.

"I have here two extensive fabrics for the purpose of making sugar from the Red Beet, and we find that it yields us that useful article in great abundance; *i. e.* from every quarter of the root (eight bushels Winchester measure) I obtain ten pounds weight of good brown sugar; and this when refined produces us four pounds of the finest clarified lump sugar, and the molasses yield good brandy on distillation. This is not all; for while we are now working the article the cows are stall-fed on the refuse from the vats after mashing; and those animals give us milk in abundance, and the butter we are making is equal to any that is made in the summer, when those animals are foraging our best meads."—*Dashkoff, in the government of Orel, 1500 miles from St. Petersburg, Jan. 7, 1816.*

The above account, which is so extremely flattering, may no doubt lead persons to imagine that the culture of the Beet for the same purpose in this country might be found to answer: and as it is our aim in this little work to give the best information on these subjects without prejudice, I shall beg leave to make use of the following observation, which is not my own, but one that was made on this subject by a Russian gentleman, whom I have long had the honour of enumerating among my best friends; and who is not less distinguished for his application both to the arts and economy, than he is for his professional duties, and his readiness at all times to communicate information for the general good.

"The land where the Beet is grown is of an excellent quality, very deep and fertile, and such as will grow any crop for a series of years without manure. Such soils are seldom found in this country but what may be cultivated to more advantage. In such land, and such

alone, will this vegetable imbibe a large quantity of the saccharine fluid; for it would be in vain to look for it in such Beet roots as have been grown on poor land made rich by dint of manure.

"It may also be a circumstance worth remarking, that although the sugar thus obtained is very good for common use, it by no means answers the purpose of the confectioner, as it is not fit for preserving; and for this purpose the cane sugar alone is used; so that although great merit may attach to the industry of a person who in times of scarcity can produce such an useful article as sugar from a vegetable so easily grown, yet when cane sugar can be imported at a moderate rate, it will always supersede the use of the other."

56. PYRUS *Malus*. THE APPLE.—This useful fruit, now going so much to decay in this country, which was once so celebrated for its produce, is grown in great perfection in all the northern provinces of France; and she supplied the London markets with apples this season, for which she was paid upwards of 50,000*l.*; and can most likely offer us good cyder on moderate terms.

The French people, ever alive to improvement and invention, having discovered a mode of extracting sugar in considerable quantity from this fruit, I shall transcribe the particulars of it.

On the Preparation of Liquid Sugar from Apples or Pears. By M. DUBUC. (Ann. de Chim. vol. lxxviii.)—"Several establishments have been made in the South of France for making sugar from grapes; it is therefore desired to communicate the same advantage to the North of France, as apples and pears will produce sugar whose taste is equally agreeable as that of grapes, and equally cheap.

"Eight quarts of the full ripe juice of the Orange Apple was boiled for a quarter of an hour, and forty grammes of powdered chalk added to it, and the boiling continued for ten minutes longer. The liquor was strained twice through flannel, and afterwards reduced by boiling to one half of its former bulk, and the operation finished by a slow heat until a thick pellicle rose on the surface, and a quart of the syrup weighed two pounds. By this method two pounds one ounce of liquid sugar was obtained, very agreeable in flavour, and which sweetened water very well, and even milk, without curdling it.

"Eightquarts of the juice of apples called *Doux levesque*, yielded by the same process two pounds twelve ounces of liquid sugar.

"Eight quarts of the juice of the sour apples called *Blanc mollet*, yielded two pounds ten ounces of good sugar.

"Eight quarts of the juice of the watery apples called *Girard*, yielded two pounds and a half.

"Twenty-five chilogrammes, or fifty-pounds of the above four apples, yielded nearly forty-two pounds of juice; which took three ounces of chalk and the white of six eggs, and produced more than six pounds of excellent liquid sugar.

"In order to do without the white of eggs, twenty pounds of the juice of the above apples were saturated with eleven drachms of chalk, and repeatedly strained through flannel, but it was still thick and disagree-

able to the taste; twelve drachms of charcoal powder were then added, and the whole boiled for about ten minutes, and then strained through flannel; it was then clear, but higher-coloured than usual; however, it produced very good sugar. Six quarts of apple-juice were also treated with seven drachms of chalk, and one ounce of bakers' small-coal previously washed until it no longer coloured the water, with the same effect.

"Eight quarts of apple juice, of several different kinds and in different stages of ripeness, of which one-third was still sour, were saturated with twelve drachms of chalk, and clarified with the whites of six eggs; some malate of lime was deposited in small crystals towards the end, and separated by passing the syrup very hot through the flannel. Very near two pounds of sugar were obtained.

"Ten pounds of bruised apples, similar to the last, were left to macerate for twenty-four hours, and four quarts of the juice were treated with five drachms of chalk and the white of an egg: it yielded one pound six ounces of liquid sugar; so that the maceration had been of service.

"Twenty-four pounds of the pear called *Pillage*, yielded nine quarts of juice, which required eighteen drachms of chalk and the whites of two eggs, and yielded about twenty-four ounces of sugar, which was less agreeable to the taste than that of ripe apples.

"Six quarts of juice from one part of the above pears, and two of ripe apples, (*orange* and *girard*), treated with eight drachms of chalk and the whites of two eggs, yielded twenty-six ounces of very fine-tasted sugar, superior to the preceding.

"Six quarts of juice, of an equal quantity of apples and pears, treated with ten drachms of chalk and thirteen of prepared charcoal, deposited some malate of lime, and yielded a sugar rather darker than the preceding, but very well tasted.

"Cadet de Vaux says, that apple juice does *not* curdle milk, and that a small quantity of chalk added to it destroys some part of the saccharine principle. But eight quarts of juice from ripe apples called *orange*, which was evidently acid, as it curdled milk and reddened infusion of turnsole and that of violet, were treated with four drachms of chalk and the white of an egg: it yielded twenty-two ounces of syrup, between thirty-two and thirty-three degrees of the hydrometer, which did not curdle milk. Another eight quarts of the same juice evaporated to three-fourths of its volume, and strained, yielded twenty-three ounces of clear syrup, which curdled milk, and was browner than that of the neutralized juice, and approached towards treacle in smell and taste. Perhaps the apple called *Jean-lure*, used by Mr. Cadet, possesses the valuable properties of furnishing good sugar by mere evaporation. It is necessary to observe, that unless the fire is slackened towards the end the syrup grows brown, and acquires the taste and smell of burnt sugar.

"A hundred weight of apples yield about eighty-four pounds of juice, which produce nearly twelve pounds of liquid sugar. Supposing, therefore, the average price of apples to be one franc twenty cents (ten-

pence) the hundred weight, and the charge amounts to forty cents (four-pence), good sugar may be prepared for three or four sols (two-pence) per pound *. The only extra apparatus necessary is a couple of copper evaporating pans."—*Retrospect*, vol. vi. p. 14.

The distressed state of our orchards in the Cider counties has lately much engaged the attention of all persons who are accustomed to travel through them; and no one can possibly view the miserable condition of the trees, without being forcibly struck with their bad appearance: the principal cause of which, I am sorry to say, has arisen from mismanagement †; and it certainly does in a great measure tarnish the laurels of our boasted agriculturists, when we find such great quantities of this useful fruit produced in France, that very country which we have been taught to believe so greatly behind us in the general oeconomy of life.

57. *SPERGULA arvensis*.—This plant has been recommended as a crop for feeding cattle, and is stated to be cultivated for that purpose in some parts of Germany and Flanders: but I believe we have many other plants better calculated for the purpose here.

58. *VIOLA odorata*.—This is a very useful plant in medicine, affording a syrup which has long been used in the practice. It is however discarded from the London Pharmacopœia.

59. *URTICA canadensis*. CANADIAN HEMP NETTLE.—During the late war, when, from unfortunate circumstances and misunderstandings amongst the potentates of Europe, the commercial intercourse was checked, great speculations were made among the people to discover substitutes for such articles as were of certain demand; and one of the principal was of course the article Hemp, which, although it can be partially cultivated in this country, is a plant of that nature that we should find the article at a most enormous price were we dependent on our own supply alone. The great growth that supplies all the markets in the world is in Russia, where land is not only cheap, but of better quality than here; but with which country we were once unhappily deprived of the advantage of trade. This caused persons to seek for substitutes: and I once saw one that was made from bean-stalks, not to be despised; but it is probable that none has reached so high in perfection as that produced from the plant above named. A person has grown and manufactured this article in Canada, and has exhibited some samples in London, which it is said have obtained the sanction of government, and that the same person is now engaged in growing in North America a considerable quantity of this article. As this, therefore, is a subject of great interest to us as a maritime nation, I shall insert the following account that

* A gramme, fifteen grains English.—A drachm, one-eighth of an ounce.

† Vide *Observations on Orchards*, lately published by the author of this work.

is given of this plant. I am, however, quite unacquainted with its culture or manufacture, and cannot pledge myself for the accuracy of the detail.

"**PERENNIAL HEMP. Cultivation.**—Affects wet mellow land, but may be cultivated with advantage on upland black mould or loam, if moist and of middling good quality. Manure will assist the produce. It may be planted from the beginning of October to the latter end of March, in drills about fifteen inches asunder and nine inches distance in the drills.

"**Propagation.**—Sow the seed in a bed in the month of March, and transplant the roots next autumn twelvemonth, as above directed; or divide the old roots, which is the quickest way of obtaining a crop.

"**Time of Harvesting.**—If a fine quality of Hemp is desired, mow the crop when it is in full bloom; but should a greater produce of inferior quality be more desirable, it should stand until the seeds are nearly ripe. It should remain in the field about a week after it is mown, and when sufficiently dry gathered in bundles and stacked as Hemp.

"**Separation of the Hemp from the Pulps.**—Rot it in water, as practised with Hemp.

"The Perennial Hemp grows to the height of from four to six feet.

"The root inclines horizontally with numerous fleshy fibres at the extremity.

"The buds many, and resembling the buds of the Lily of the Valley.

"It is the *Urtica canadensis* of Kalm, one of which was brought over and planted by the side of this plant, and we could not find any difference."

60. *LAPSANA communis*. NIPPLE-WORT.—This plant is considered by the country people as a sovereign remedy for the piles. The plant is immersed in boiling water, and the cure is effected by applying the steam arising therefrom to the seat of the disease; and this, with cooling medicine and proper regimen, is seldom known to fail in curing this troublesome disease.

61. *DAPHNE Laureola*. WOOD LAUREL.—The leaves of this plant have little or no smell but a very durable nauseous acrid taste. If taken internally in small doses, as ten or twelve grains, they are said to operate with violence by stool and sometimes by vomit, so as not to be ventured on with safety, unless their virulence be previously abated by long boiling, and even then they are much too precarious to be trusted to. The flowers are of a different nature, being in taste little other than mucilaginous and sweetish, and of a light pleasant smell. The pulpy part of the berries appears also to be harmless. The bark macerated in water has of late been much employed in France as a topical application to the skin for the purpose of excoriating and exciting a discharge.

62. *RUMEX acutus*. SHARP-POINTED DOCK.—The root of this plant has long been used in medicine, and considered as useful in habitual

costiveness, obstructions of the viscera, and in scorbutic and cutaneous maladies; in which case both external and internal applications have been made of it. A decoction of half or a whole drachm of the dry roots has been considered a dose.—*Lewis's Mat. Medica.*

63. *ELYMUS arenarius.* } LYME GRASS.—The foliage of these
 geniculatus. } grasses make excellent mats and baskets; and where they grow in quantity afford a livelihood to many industrious persons who manufacture these articles.

64. *SALSOLA Kali.* GLASS-WORT, or Kelp. Soda and Barilla are yielded by this plant. The ashes of this vegetable yield an alkaline salt, which is of considerable use for making glass, soap, &c. The small quantity grown in this country is by no means equal to the demand, and Spain has the advantage of trade in this article, where the plant grows wild in the greatest abundance. An impure alkali similar to these is obtained from the combustion of other marine plants, as the *Fuci*, &c. by the people in Scotland.

65. *BORAGO officinalis.* BORAGE.—A fine cooling beverage is made from this herb, called Cool Tankard. It is merely an infusion of the leaves and flowers put into water, with the addition of wine, nutmeg, &c. &c.

OBSERVATIONS on the BLEEDING TREES, and procuring the Sap for making Wine, and brewing Ale.

In the article BIRCH TREE, (p. 34, No. 107, of this volume,) we have mentioned the abstracting the sap for the purpose of making wine; and as this is practicable, and may be obtained in some places at little expense and trouble, I shall take the liberty of transcribing the following curious paper on this subject.

"To obtain the greatest store of sap in the shortest time from the body of a tree, bore it quite through the pith, and the very inner rind on the other side, leaving only the bark unpierced on the north-east side. This hole to be made sloping upwards with a large auger, and that under a large arm near the ground. This way the tree will in a short time afford liquor enough to brew with; and with some of these sweet saps, one bushel of malt will make as good ale as four bushels with ordinary water. The Sycamore yields the best brewing Sap.

"The change of weather has a great effect on the bleeding of plants. When the weather changes from warm to cold, Birch ceases to bleed, and upon the next warmth begins again: but the contrary obtains in the Walnut-tree, and frequently in the Sycamore, which upon a fit of cold will bleed plentifully, and, as that remits, stop. A morning sun after a frost will make the whole bleeding tribe bleed afresh.

"From the latter end of January to the middle of May trees will bleed. Those that run first, are the Poplar, Asp, Abele, Maple, Syca-

more. Some, as Willows and the Birch, are best to tap about the middle of the season, and the Walnut towards the latter end of March.

"When a large Walnut will bleed no longer in the body or branches, it will run at the root, and longer on the south or sunny side than on the north or shady side.

"A culinary fire will have the same or a greater effect than the sun, and immediately set trees a-bleeding in the severest weather. Branches of Maple or Willow cut off at both ends, will bleed and cease at pleasure again and again as you approach them to or withdraw them from the fire, provided you balance them in your hand, and often invert them to prevent the falling and expence of the sap; but at length they cease.

"A Birch will not bleed however deeply the bark only may be wounded: it is necessary to pierce into the substance of the wood."—*Dr. Tange in Phil. Trans. No. 43.*

As this work may probably fall into the hands of some persons who may be desirous of obtaining a knowledge of the plants of the particular sections, but who, from the locality of their situations, may not have opportunity of making themselves acquainted therewith, the author intends to form collections of dried specimens of the plants contained in each distinctly, which may be purchased by application made at his residence, or to the publishers of this work. The price of which, mounted on fine white paper, will be at the rate of *Two Guineas per hundred specimens.*

THE END.

Books published by the same Author.

HINTS ADDRESSED TO THE PROPRIETORS OF ORCHARDS AND THE GROWERS OF FRUIT IN GENERAL; comprising Observations on the present state of the Apple Trees in the Cider Counties, made in a Tour during the last Summer. Also the Natural History of the *Alphis lanata*, (or American Blight,) and other Insects destructive to Fruit Trees.

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