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IN GREAT BRITAIN.

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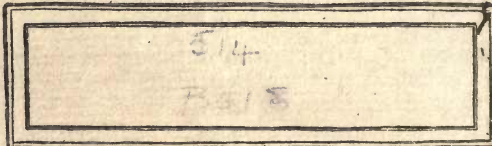
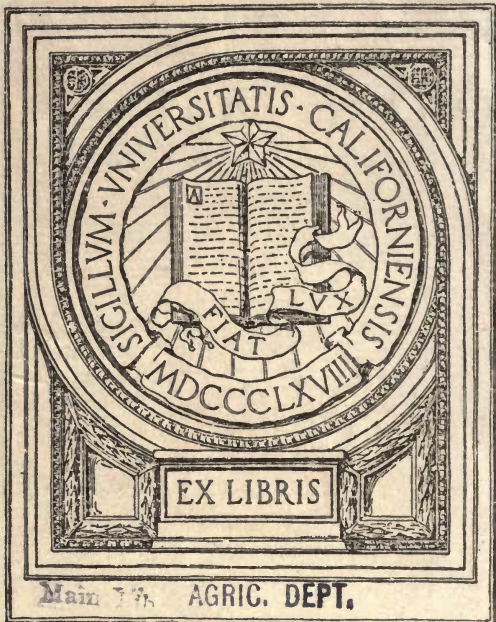
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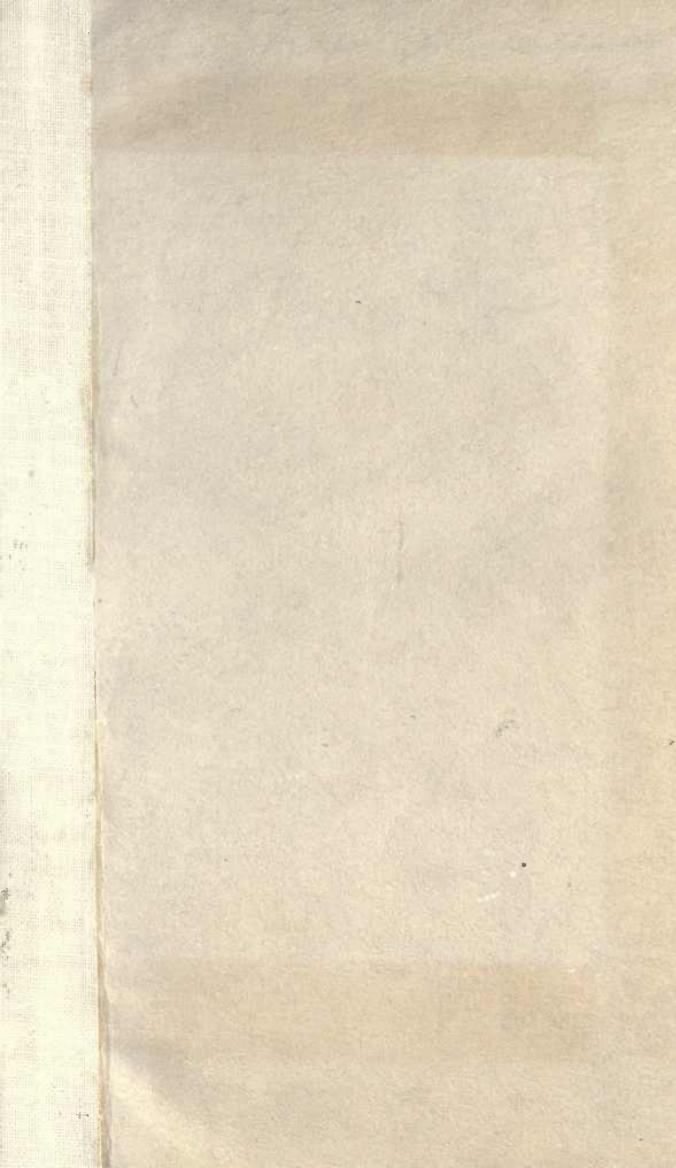
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H. E. Van Dusen

1891





1, 2. Mulberry Blossom and Fruit.
 3. Anther-bearing, or Male Fig—
 (Ficus Carica.)
 4. Stigma-bearing, or Female Fig—
 (Ficus Carica.)

5. Banyan Leaf—(Ficus Indica)
 6. Caoutchouc—(Ficus Elastica)
 7. Sacred Fig—(Ficus Religiosa)

OUR
COMMON FRUITS.

A DESCRIPTIVE ACCOUNT

OF THOSE

ORDINARILY CULTIVATED OR CONSUMED IN
GREAT BRITAIN.

Mrs. Bayle Bernard
BY MRS. BAYLE BERNARD.

WITH ILLUSTRATIONS.

“Fruit of all kinds, in coat
Rough, or smooth rind, or bearded husk, or shell.”

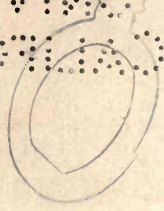
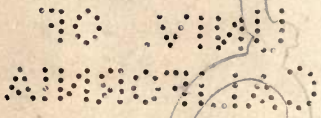
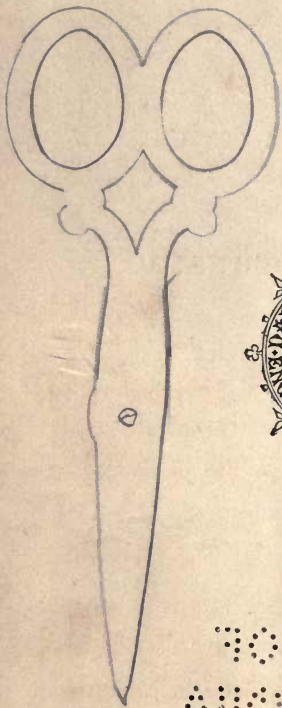
Milton.



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1866.

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ADVERTISEMENT.

THIS book, while it can hardly fail to possess some interest for the botanist and the gardener, is yet intended less for them than for the general public; for that large class who neither grow plants nor scientifically study them, but who yet may be glad to learn something of the nature and history of objects daily brought before them to please their eyes and delight their palates. While, therefore, a plain description of the structure and mode of growth of the various fruits which appear at our tables has been added to the account of their origin or introduction to us, technical language has been studiously avoided, and the primary aim has been to convey in simple and intelligible terms all the information on the subject which would be likely to possess any general interest.

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INTRODUCTORY CHAPTER.



WHEN the Goddess of Wisdom competed with the other divinities as to which should produce the most perfect work, she is said to have triumphed over her rivals by calling into existence a fruit-tree. And well did the ancient Greek in estimating so highly, as this legend shows him to have done, the gifts with which his soil had been enriched, for there can be little question of the truth that, as an American author remarks, "Fruit is the most perfect union of the useful and the beautiful that the earth knows." Yet in these days, when our cornucopia overflows with treasures more lovely and delicious than Greek imagination ever even conceived, appreciation of them, except at the very moment when they are before

us, seems rather to have declined than otherwise, for of the multitudes who enjoy the banquet thus spread for them, how few ever make any effort to acquaint themselves with the structure or history of the objects which afford them so much pleasure! It has happened occasionally to the writer to hear some more inquiring disposition express at the dessert-table a wonder how dates grew, or what sort of fruit it was from which French plums were prepared; but although when once such questions were raised a general interest has mostly become excited, rarely indeed has any information been elicited on even the simplest points, while persons who were thoroughly well informed on most subjects of every-day life have been found utterly at a loss when asked from what plant Brazil nuts were gathered, or what kind of blossom preceded the fig or the pine-apple. It is true that facilities for acquiring such knowledge have been but limited, for the only work on the subject written in a popular style, viz., Phillip's *Pomarium Britannicum*, published in 1821, has not only been long since out of print, but much of the brief information it afforded has since then become quite

obsolete; so that only from works chiefly filled with either the repelling technicalities of professed botanists, or dull details intended for the guidance of the cultivator, could the general reader hope to glean what he required, and such therefore might well feel deterred from wading through voluminous treatises only to gather, amid many pages of uninteresting matter, here and there a fact which he might wish to know and remember. Objects possessing far less claim to attention—shells and seaweeds, ferns and fungi — have all been repeatedly the theme of the popular writer, while Nature's favourite children, fruits, with all their rich endowments of beauty and utility, have been passed by and neglected. The writer desires that what has long since been done for Common Objects of the Country and Common Objects of the Sea Shore, should in the present volume be effected for the Common Objects of our daily Dessert; and this not only with a view to show that there is something to be told respecting them which may interest all, but, by indicating how much yet remains to be discovered, to, perhaps, lead a few to direct their attention to them for

the future, and by closer observation and deeper study enlarge our hitherto very limited knowledge of Pomology.

One great *desideratum* yet to be supplied is a satisfactory classification of fruits. The great German pomologist, Dochnahl, remarks, "Minerals, insects, flowers, are all described and classed, but Pomology remains a class without order or aid to gain a knowledge of it. As Botany was before the days of Linnæus, so now stands Pomology." The lack of more harmonious relations between the theorist and the man of practice seems to be one grand cause of this, for he continues, "its parent, Botany, has been to it but a step-mother; and what the cultivator looks on as constant and prizes as a valuable variety, the botanist calls a mere accident." Now, however, that gardeners more and more cultivate themselves as well as their soil, and the same hand which plants the tree can write all that is to be learnt about it, they are likely to form more correct opinions, while the professedly scientific are on the other hand likely to allow more weight to their opinions, and thus a better agreement may be arrived at. In our own

country various attempts have been made, the latest and best being those of Mr. Hogg, to reduce the classification of some fruits at least to something like a system; but the difficulties are enormous, varieties being so numerous, while the differences between them is so trifling; and while the present general ignorance on the subject prevails, the evil is likely not only to continue but to increase, because worthless varieties are needlessly multiplied, and fresh names continually given by persons unacquainted with those already bestowed. Some judgment on this point may be formed from the fact that the catalogue of the Horticultural Society recorded some years ago as many as 897 varieties of apples, many of them with numerous synonyms (the Golden Pippin alone bears sixteen different titles), yet, says Glennie, "a good judge will discriminate each, and recognize the new varieties which are continually arising." Still it is much to be desired that, without burdening the memory with such a load as this, some broad marks of distinction could be discovered in every fruit, which would enable any one who chose to devote a little attention to the subject to assign at once any

which he might see for the first time to at least some general and well-defined division of the family. It is encouraging to find that in one fruit-tree, where marks of this kind were detected, they were first observed by an amateur who only gave his leisure to such observations.* It is possible that the dissection of fruits might lend some aid in leading to the establishment of means of classifying them; it is certain that they would no more be found to consist of "nothing but skin and squash" than the caterpillar with the anatomy of which the Rev. J. G. Wood so astonished the old gentleman referred to in the "Common Objects of the Country."

A great practical benefit arising from a more extended knowledge of Pomology would probably be the gradual disappearance and eventual extirpation of inferior kinds of fruits, and the exclusive cultivation of superior sorts, when, as is often the case, the latter can just as readily be raised as the former. A first-rate strawberry is a delicate nursling, which none need attempt to rear who cannot devote time and

* *Vide* "The Peach," page 80.

thought to its culture, but a fine pear or apple is as easily obtained as a poor one, takes no more room, and needs no more attention. Well, therefore, may Downing exclaim, "He who owns a rood of proper land in this country, and, in the face of all the pomonal riches of the day, only raises crabs and choke-pears, deserves to lose the respect of all sensible men;" and what he thus says concerning America is certainly at least as applicable in our more limited territory, where we have not even quantity to atone in some degree for any deficiencies in point of quality.

TABLE OF FRUITS.

	<i>Botanical Name.</i>	<i>Linn. System.</i>	<i>Nat. System.</i>	<i>Originally grown.</i>	<i>When introduced into England.</i>
POMES, OR PIP-FRUIT.					
Pulp (generally firm) surrounding a capsule or core which contains seeds.					
APPLE	Malus.	Icosandria.	Rosaceæ.	N. Europe.	Indig.
PEAR	Pyrus.	"	"	"	"
QUINCE	Cydonia.	"	"	Cret.	1573.
MEDLAR	Mespilus.	"	"	N. Europe.	Indig.
DRUPES, OR STONE-FRUIT.					
Pulp (generally fleshy) surrounding a woody shell which contains a kernel or seed.					
PLUM AND APRICOT	Prunus.	Icos. monog.	Rosaceæ.	Plum, S. Europe and Asia; Apricot, Armenia.	Uncertain. 1518.
CHERRY	Cerasus.	"	"	Asia Minor.	Wild sort indig.
PEACH AND NECTARINE	Persica.	"	"	Persia.	About middle of 16th century.
DATE	Phoenix.	Dicecia triandria.	Palmæ.	Arabia.	Uncertain, but before 1580.
BERRY FRUIT.					
Pulp (generally juicy) in which numerous seeds are imbedded.					
GRAPE	Vitis.	Pentandria monogynia.	Vitaceæ.	India.	Probably by the Romans.
CURRENT AND GOOSEBERRY	Ribes.	Hexand. monog.	Grossulariaceæ.	N. Europe.	Indig.
BARBERRY	Berberis.	Octand. monog.	Berberidæ.	"	Indig.
CRANBERRY	Oxycoccus.	"	Ericææ.	"	Indig.
WHORTLEBERRY AND BILBERRY	Vaccinium.	"	"	"	Indig.
BERRIES WITH OUTER LEATHERY RIND.					
ORANGE, LEMON, CITRON, AND SHADDOCK	Citrus.	Polyadelphina	Aurantiacææ.	India.	O. 1395. L. 1648.

COLLECTIVE BERRIES.

Each seed surrounded separately by pulp and skin, but all proceeding from one blossom.

RASPBERRY, BLACKBERRY, DEWBERRY, AND CLOUDBERRY
 STRAWBERRY
 MELON

Rubus.
 Fragaria.
 Cucumis.

Icosandria polyginia.
 Icos. polys.
 Monœcia monadelphica.

Rosaceæ.
 Cucurbitaceæ.

England and N. Europe.
 N. Europe.
 Asia Minor.

Indig.
 Not known.

AGGREGATE FRUIT.

Each fruit formed by the cohesion of many blossoms.

MULBERRY
 FIG
 PINE-APPLE

Morus.
 Ficus.
 Bromelia.

Monœcia tetras.
 Polygamia dioœcia.
 Hexandria monogynia.

Urticaceæ.
 "
 Bromeliacæ.

Persia. 1548.
 Syria. 1548.
 S. America. 1690.

NUTS, OR SHELL-FRUIT.

Woody or leathery shell, enclosing a kernel.

HAZEL AND FILBERT
 WALNUT
 CHESTNUT
 CASHEW

Corylus.
 Juglans.
 Fagus.
 Anacardium.

Amentaceæ.
 Juglandaceæ.
 Amentaceæ.
 Anacardiaceæ.

N. Europe. Indig.
 Persia. 1562.
 Asia Minor and Europe. Indig.
 India. 1699.

REALLY DRUPES.

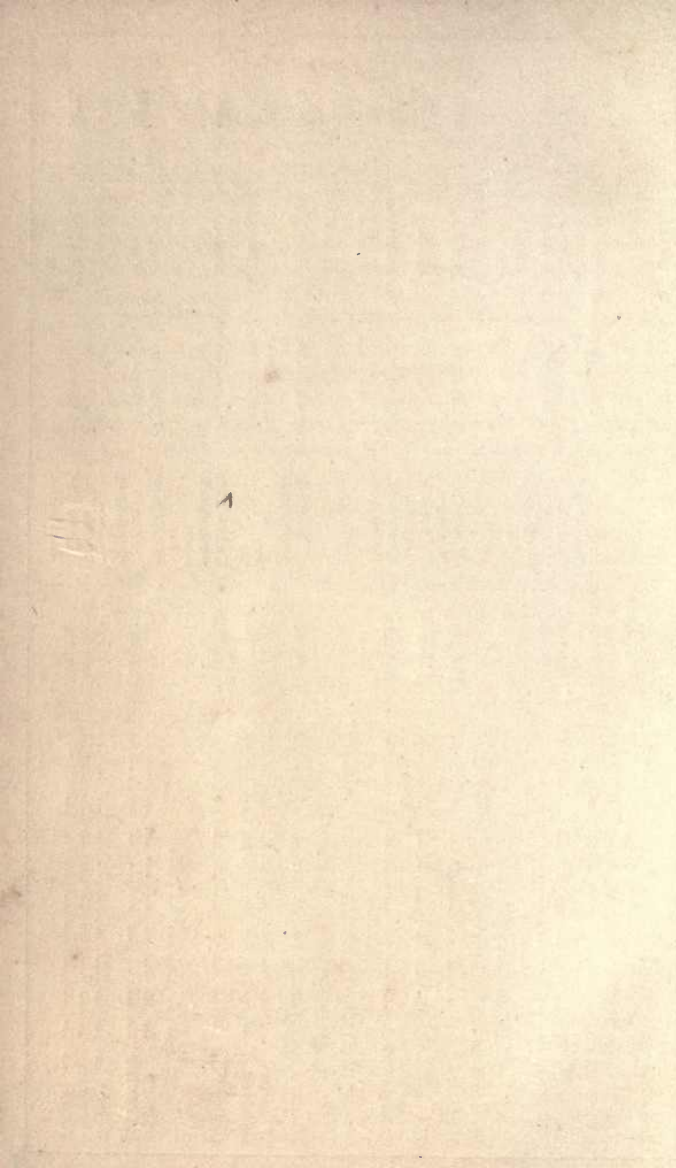
ALMOND
 PISTACHIO
 BRAZIL
 SAPUCAI
 COCOA


Amygdalus.
 Terebinthus.
 Juvia.
 Lecythis.
 Cocos.

Rosaceæ.
 Terebinthaceæ.
 Myrtacæ, or Lecythidaceæ.
 Palmæ.

...
 Levant.
 S. America.
 E. Indies.

1570.
 1690.





OUR COMMON FRUITS.

CHAPTER I.

THE APPLE.

FIRST mentioned of fruits in the most ancient of all records, and holding, too, as the Apple does, so prominent a place in the earliest history of our race, the very sound of its name seems an echo of Eden and the first age; and even in this nineteenth century, Art at least still links that name to the old familiar form, and presents us in pictorial allegory with the lineaments of common orchard produce, rather than with citron, or shaddock, or pommeloe, however literary criticism may insist on rather seeking among these to find "forbidden fruit." And however its right may be disputed to personate the subjects of Eastern or classical story, yet when we come to the cold Norse regions, far from "the land where the citron blows," we can have no doubts as to the real pippinism of those apples of immortality kept by the fair Iduna, by regaling on which the gods of the Edda were wont to renew their youth, until the wicked Loke stole and hid away both the maiden and her fruit, leaving the bereaved divinities to pine away, losing their vigour both of mind and body and neglecting the affairs of heaven and earth, until mortals, deprived of celestial supervision, fell into all manner of evil, and it almost happened that for "want of an apple the world was lost." Well was it that at last, summoning all that remained of their expiring energies, they succeeded in forcing the robber to restore those precious *pomes* on which the welfare of both realms depended.

The tree, connected with so many legends of remote

antiquity; belongs to the genus *Pomeæ* of the great natural order *Rosaceæ*, of which the rose is the type or head of the family, and the chief characteristic of which is, that the ovary, or part which contains the future seed—the hip of the rose or apple of the apple-tree—is situated below the flower, seeming like an enlargement of the stalk where it meets the calyx. In most flowers of this order the numerous stamens remain for a time after the five petals have fallen, and the traces of the five-cleft calyx are still to be seen upon the summit of the fruit even when it has reached maturity. The family likeness to the plant from which the order is named is most apparent in the loveliest blossom of the apple tribe, the Chinese Crab, which may rival in beauty the very queen of flowers, when, in early spring, it puts forth its deep red buds and large semi-double flowers of tenderest texture, and flushed with a tint of pure though pale carmine, the charm of its rosy clusters all enhanced by their setting of freshest vernal green. And even the ordinary apple-blossom is of no mean beauty. The pear may boast of nobler form and loftier growth as a tree, but its white and scentless bloom cannot compare with that which glorifies the crooked stem and irregularly jutting branches of its orchard neighbour with such delicate fragrance and tender hue, “less than that of roses, and more than that of violets,” as Dante describes it, and which won from the keenest living observer of Nature’s varying beauties (Mr. Ruskin) the testimony, that “of all the lovely things which grace the spring-time in this our fair temperate zone, I am not sure but this blossoming of the apple-tree is the fairest.”

Nearly related as is the blossom to the loveliest of flowers, that which succeeds it is undoubtedly one of the most useful of fruits; for as the earliest sorts ripen about the end of June, and the latest can be kept until that period, the apple may almost be said to be in season “all the year round;” while, scarcely beyond reach of the poorest, it is a universal luxury in the favoured regions where it thrives; and though the noble’s dessert were incomplete without it, yet moistening, too, the dry bread

of poverty, it forms no uncommon part of the peasant's dinner. This *pome*, as it is called by botanists, consists of a succulent fleshy pulp, enclosed in a thin outer skin, and surrounding the cells in which, protected by inner walls of cartilage, the seeds of future trees lie ensconced. It is well that they are thus strongly entrenched, for "somehow or other," writes an author in the *Entomological Magazine*, "the pips of an apple are connected with its growth, as the heart of an animal with its life: injure the heart, an animal dies; injure the pips, an apple falls;" and thus, whenever any of its insect foes do succeed in piercing through all these strongholds and storming the kernels in their inmost citadel, the poor fruit, a living thing no longer, drops down at once to seek a grave in the earth. An unimportant event, truly! and yet, once at least in the world's history, the fall of an apple proved of greater import than the fall of a kingdom, when in the quiet garden at Woolsthorpe, a busily devouring grub penetrated to the centre of the codlin he was consuming, snapped its connexion with the parent branch, and brought it to the feet of the sage, whose resulting speculations on "why an apple falls" resolved the question of how worlds are sustained. But this was an accident in apple life, and it was doubtless for humbler purposes and more direct uses than to furnish philosophers with food for reflection, that the *pomeæ* are scattered over the world.

Growing spontaneously almost throughout Europe, and in most other temperate climes, just where that warmth ceases which enables the vine to bring forth good fruit, there, by a kind provision of Providence, begins the climate most suitable to the apple; and the celebrated traveller Von Buch has remarked that it will grow in the open air wherever the oak thrives, thus extending its range to 60° N. latitude, beyond which it is scarcely known. Linnæus, indeed, was told in Lapland that one apple-tree at least was growing there—a fruitless one, it was admitted, but its barrenness only due to its having been cursed by a beggar woman to whom the owner had refused a taste of its produce; but on asking to be shown

this marvellous growth, he found it to be an elm, a tree rare in those high latitudes, and which the ignorance of the inhabitants, unfamiliar with the real aspect of either, had invested with the name of the apple, superstition stepping in afterwards with a myth to account for all discrepancies. Of the two extremes which it can endure, the apple seems to prefer warmth to cold, for the Apples of Astrachan, if transplanted southwards, improve, while the *Malo di Carlo* of Italy, when removed farther north, deteriorates; and though few apples are grown south of Paris, yet the Departments of France which lie north of that city form a district more favorable to them than even England can afford.

The tree is likewise found in some parts of India, and an attempt was made some years ago to introduce its culture into the northern part of that continent, when a single tree, in consequence of being the only one which survived, cost upwards of £70 before it was planted. In S. America, too, Humboldt found excellent apples abundant in the markets at Caracas in Venezuela, and was assured that they were the growth of trees which had never been grafted.

The apple-tree asks for little depth of earth, for, having no tap root, a single foot of soil will suffice it, and twice this quantity gives it ample scope; but it is necessary that this little should be of a certain quality, so that its appearance may always be looked on as a mark of at least a tolerably good soil. Like most fruit-trees, it prefers calcareous earth, and geologists have noticed that the orchard counties of England follow the track of the red sandstone. Its shade is so kindly that, in the Surrey nurseries, tender evergreens which would be injured by spring frosts are always planted under its protecting branches, and in the spaces between the trees in American orchards, maize and every other kind of corn is grown, except rye, a grain so very injurious to the apple-tree, especially in its youth, that an eminent cultivator has stated it to be his opinion that three successive crops of it would quite destroy any orchard of younger growth than twenty years.

Cultivation not only improves the fruit, changing the Crab into the apple in all its numerous varieties, but also causes the leaves to become larger, thicker, and more downy; indeed, it is a common practice among those who raise seedlings, to select, in the second or third year of their growth, those plants which have large broad roundish leaves, throwing all the rest away; experience having shown that these are much more likely to yield better, or at least larger, fruit than trees with small narrow pointed leaves; for Mr. Knight affirms that the width of the leaf generally indicates the size of the future fruit, but admits that it does not convey a very correct idea of its merit, since it may prove to be large and insipid. In its wild state, too, the tree is seldom more than 20 ft. high, besides being very crooked and distorted in its growth; but domesticated by man, it assumes a somewhat more regular form and attains a loftier height. In Scotland, however, 25 ft. is still considered high, but near London 30 ft. is a fair standard. In Herefordshire 40 ft. is attained, and in N. America, where it reaches its greatest perfection, a famous Pearmain, in Romney in Virginia, is described as being 45 ft. high, and the trunk upwards of 3 ft. in diameter, while the produce in one year amounted to no less than 200 bushels, whereas the greatest amount on record in England as having been gathered from one tree is but 100 pecks. This American giant was a seedling, and, though 40 years old, was still continuing to grow larger; and others in that country are specially mentioned by Downing, which, spending their energies in expanding rather than aspiring, had attained enormous bulk, the girth of one growing in Rhode Island exceeding 13 ft., the tree, too, having attained the remarkable age of 130 years; for though the wild plant is very long-lived, fine garden sorts usually live but from 50 to 80 years. With care, however, they may be maintained in health and productiveness for very long periods, and at Horton in Buckinghamshire, where Milton spent some of his earlier years, an apple-tree was still growing quite recently, which tradition asserted the poet had often been accustomed to sit under. Among our Transatlantic

brethren, too, the individual fruits sometimes attain immense size, the "Beauty of Kent," it is said, being found there frequently measuring 16 or 18 in. in circumference; and Ernest Seyd, in his *California and its Resources*, mentions an apple measuring $15\frac{1}{8}$ in. each way, and weighing 23 ozs., having been grown in an orchard in that country. In Siberia it reaches its opposite limit of smallness, and though the wild apple, indigenous to milder Europe, cannot endure the keen blasts of that region of frost, the diminutive cherry-like Crab, named after its native land, and which is so common in our gardens, is found widely distributed, holding the place, too, of a "triton among minnows," when compared with its compatriot the Currant Crab, the tiny red mealy-fleshed fruits of which are not more than $\frac{1}{4}$ in. in diameter, or about the size of currants, and are borne like them in clusters.

— Leaving out of question the fruits of doubtful nature, figuring in ancient history or fable under the name of apple, once indiscriminately bestowed on almost every large solid roundish fruit, it is held to be proved that the *Pyrus mala* of botany, which in modern days exclusively owns that title, was known to very remote ages. Among the Thebans it was offered to Hercules, a custom derived from the circumstance of a river having once so overflowed its ordinary limits as to prevent a sheep being carried across it for a sacrifice to the labour-loving god, when some youths, on the strength of the Greek word *melon* signifying both a sheep and an apple, stuck four wooden pegs into the fruit to represent legs, and brought the vegetable quadruped thus extemporized as a substitute for the usual offering, after which the apple was always looked on as specially devoted to Hercules. The same fruit is said to have been the favourite dessert of Philip of Macedon, and also of his son Alexander, at all of whose meals it was served; and it was so common a close to Roman repasts as to have given rise to the proverbial expression, "from the egg to the apple," implying the whole course of a meal, eggs being usually the first dish brought to table. It is, of course, descanted upon by Pliny. "Of apples," says he, "that is to say, of fruits

that have tender skins to be pared off, there are many sorts ;” and many indeed we might expect, if so liberal a definition of the name were accepted ; yet, in giving a list of the fruits known in his day, he describes only about 20 different varieties of apples, adding, nevertheless, in the pride of a little knowledge,—“So as in this point verily the world is grown already to the highest pitch, insomuch as there is not a fruit but men have made trial and many experiments with, for even in Virgil’s days the device of grafting strange fruits was very rife, considering that he speaks of the arbuté-tree grafted on nut-trees, the plane upon apple-trees, and the elm upon cherry stocks, in such sort as I see not how men can devise to proceed further. And certainly for this long time there hath not been a new kind of apple or of other fruit heard of.” In spite of the philosopher’s inability to conceive such a thing, Pomology has somewhat progressed since those Plinian days of “highest pitch,” seeing that more than 1,400 varieties of apples are now enumerated in the catalogue of the London Horticultural Society.

As the tree grows wild throughout almost the whole of Britain, and as the name, Apple (in Celtic *Abhal*), is considered by the best authorities to be derived from the pure Celtic *ball*, signifying a round body, it is more probable that it is indigenous to this country than that it was introduced, as some have thought, by the Romans. From time immemorial it has been the badge of the Highland clan Lamont, and in the earliest times a branch of apple was the mark of distinction conferred on the Welsh bards who most excelled in minstrelsy.

In Saxon times we find William of Malmesbury distinguishing that it was under a *wild* apple-tree that King Edgar once, in the year 973, lay down to sleep, which would seem to imply the existence of a domesticated kind also ; and after the Conquest, traces of its culture soon appear ; for a bull of Pope Alexander, bearing the date 1175, confirms to the monastery of Winchcombe, in Gloucestershire, their claims on the town of Twining, “with all its lands and *orchards*.” In the course of time

varieties were probably introduced from Normandy and other parts of the Continent, though little information on the subject is to be gathered from early writers on fruit cultivation; but the oldest existing variety on record in England is that which Phillips apostrophizes as

“the fair Pearmaine,
Tempered, like comeliest nymph, with white and red.”

a tenure in the county of Norfolk, dated A.D. 1200, having been held by the yearly payments of “two hundred Pear-maines and four hogsheads of Pear-maine cyder.” The derivation of this name, according to Hogg, is similar to that of Charlemagne (sometimes written Charlemaine), meaning, therefore, *Pyrus magnus*, or the great pear-apple, the shape bearing some resemblance to that of a pear. By the time of Henry III., Worcester had become famous for its fruit-trees, and cyder orchards in Herefordshire date from the days of Henry VIII.; when also, as Fuller informs us, one Leonard Maschal brought “pippins” from over sea, and planted them at Plumstead in Sussex; while so important had their culture become, that in the 37th year of the same king the barking of apple-trees was declared to be felony.

It was not, however, till the time of Charles I. that “orcharding,” as it was called, became general throughout this country, and the 17th century may be looked on as the Golden Age of apples. Evelyn published an appendix to his *Sylva*, under the title of “Pomona,” which did much to bring the subject under public attention; and by the exertions of the first Lord Scudamore, Herefordshire in particular became, as it has been expressed, “one entire orchard.” This gentleman, being in the company of the Duke of Buckingham when he was assassinated by Felton, received such a shock from witnessing this catastrophe, that he retired into private life and devoted all his energies to the culture of fruit. That kind to which he gave most attention was a variety believed to have originated during the 17th century, and which was at first called the “Scudamore Crab,” but afterwards the “Redstreak.” It was Evelyn’s favourite also; and, indeed,

so much was said and written about it during that century, that a modern author, leaving out of view evidently the fatal gift of Paris and all that grew therefrom, ventures the bold remark concerning it, that "perhaps there is no apple which at any period created such a sensation." Phillips, of *Splendid Shilling* celebrity, who wrote an entire poem in Virgilian measure upon "Cyder," which had also the honour of being translated into Italian, in this very apotheosis of apples thus exalts this idol of the day:

"Let every tree in every garden own
 The Redstreak as supreme, whose pulpous fruit
 With gold irradiate and vermilion shines,
 Tempting, not fatal, as the birth of that
 Primeval interdicted plant that won
 Fond Eve in hapless hour to taste and die.
 This, of more bounteous influence, inspires
 Poetic raptures, and the lowly muse
 Kindles to loftier strains: even I perceive
 Her sacred virtue. See! the numbers flow
 Easy, whilst cheered with her nectareous juice,
 Hers and my country's praises I exalt."

Alas for the power of fashion, even in the matter of apples! The Redstreak is now held but in slight esteem.

After this period Pomology declined, until some years ago a new impetus was given to it by the first President of the London Horticultural Society, T. A. Knight, Esq., who first practically and systematically applied the discovery of the sexes of plants, and by hybridization, or transferring the pollen of one kind of blossom to the stigmas of another, succeeded in producing many new and valuable varieties. It is a singular fact, however, that all efforts have failed to fecundate an apple by a pear-tree, it being found that they will not produce a hybrid.

Many attempts have been made by pomologists to establish a regular classification of apples, the method-loving and labour-despising Germans, in particular, having devoted very great attention to the subject. The system of Diel, usually considered the best, has been almost universally adopted by his countrymen; but in 1847 Dochnahl, another eminent pomologist, published a modification of it, superior in some respects, as being easier of application. The fruits are mostly classed according to shape, whether globular, oval, cylindric, conical, oblate, angular

(i.e. having the circumference flattened into distinct faces); ribbed, or having ridges with hollows between; or oblique, a term applied when the stalk and the *eye*, or blossom end, are not exactly opposite; and are again subdivided according to colour, though Diel makes a primary class of "striped" apples. The first American writer on these fruits merely divides them, according to quality, into the ranks of good, better, or best. Our own Loudon distinguishes them into Pearmaines, or somewhat pear-shaped fruit; Rennets, or Queen's; Colvilles, or white-skinned fruit; Russet, or brown fruit; speckled fruits; Pippins, or such as are grown from seed; and Burknots, which can be readily propagated by cuttings; while Hogg, the latest, but by no means least, English authority on such subjects, classes them into summer, autumn, and winter apples; dividing them again into sections according to their form, and sub-sections founded upon their colour, a classification quite sufficient for ordinary purposes, but which does not satisfy the author himself, who remarks, that "a system of classification for apples, founded on characters at once permanent and well defined, is still a great desideratum." Perhaps it may not long remain so, for since expressing the above opinion, the same gentleman has announced, in a communication to a horticultural periodical, that he is himself engaged in elaborating a system which will reduce apples to a more natural arrangement.

Beauty of form and colour are qualities certainly not to be despised in choosing apples for the dessert, where the eye has to be catered for as well as the palate; but it must by no means be expected that the fruit which adds most to the decoration of the table shall always be the one also best calculated to gratify gustativeness. These virtues are, however, sometimes to be found combined, for no pomological Lavater has arisen to lay down very certain laws for determining from outward appearance what may be the inward characteristics of an apple; but M'Intosh, in his *Book of the Garden*, has given one general rule which may be of some use in furnishing a criterion, viz., that in yellowish-fleshed apples, or those with

brownish russety skins, marked with dull yellow and red, the desirable properties of being crisp, juicy, and well flavoured are always more likely to be met with than in fruit displaying one uniform colour of pale yellow, light green, or bright red.

The earliest apple to grace Pomona's annual wreath is the small, roundish, pale yellow Joanneting, termed in old Latin writings the *Joannina*, because it became ripe about St. John's Day (June 24th). Opinions, however, have been by no means unanimous as to either the orthography or the etymology of the Joanneting, Dr. Johnson having written it "Gineting," considering that it must have been named after some French *Janet*; while some gardeners, giving neither to sanctity nor to gallantry the credit of having prompted its title, derive the name from the nature, and write it "Juneating," or "June-eating." This fruit lasts but for a short time, and is best eaten fresh gathered, as it very soon becomes dry and mealy.

The Codlin, a large pale fruit, having the property of "falling" into a pulp when cooked, even when quite unripe, is another very early apple, and an old variety, deriving its name from "coddle," to parboil—codlins and cream having once been one of the principal dishes of English cookery. Unlike most other varieties, the Codlin can be propagated by seeds, its pips almost always growing into plants exactly similar to the parent, whereas in other sorts this very rarely occurs.

The Costard, too, now not very often met with, is one of our oldest English apples, being found mentioned, under the name of "Poma Costard," in the fruiterers' bills of Edward I., in 1292, when it was sold for 1s. per 100. It is believed to have been very extensively grown; and, indeed, it would seem that the "costard-mongers," who hawked the fruit about ancient London, must have outnumbered their congeners who retailed in like manner other articles, or they would hardly have left their name, as they have done, to characterize in modern times the whole tribe of street sellers, or costermongers. It has been confounded by some with

“The Catshead’s ponderous orb,
Enormous in its growth,”

but which is really a distinct variety, always highly esteemed on account of its great size, in which, however, it is rivalled by the “Beauty of Kent,” a kitchen apple, which has only become common since 1820, but which is so excellent in every respect, that Hogg describes it as being “perhaps the most magnificent apple in cultivation.”

The Norfolk Beau-fin has a local celebrity from its being specially fitted for making the well-known “biffins,” which are prepared by baking the fruit in a very slow oven, pressing them from time to time with the hand to reduce them to flatness; but dearest of all culinary apples to the housewife is the old Russet or “Leathercote,” known since 1597, and in use throughout the winter, from November to May, for every purpose of cooking. One of the oldest and most highly esteemed of our dessert fruits is the little yellow Golden Pippin, which all agree is undoubtedly English, though the date of its origin is not known; for the diminutive auriferous pippin of to-day is evidently not the same which bore that name in the time of Parkinson, since that is described by him as being “the *greatest* and best of all pippins.” It was first noted as a cyder apple, a use to which it is still applied, but in later days has become very popular for dessert purposes. Mr. Knight, who had formed an idea that no variety of apple could last longer than two centuries, mourned specially over the approaching extinction of this little golden favourite, believing that he could trace already unmistakeable symptoms of its decline; but this view was strongly opposed by his contemporary, George Lindley; and that eminent authority, Professor De Candolle, gave it as his opinion that “varieties will endure and remain permanent so long as man chooses to take care of them.” Experience, that best authority of all, has happily disproved Mr. Knight’s theory; and though the old diseased trees he had seen in Herefordshire, and from the observation of which he deduced his melancholy forebodings, are probably by this time all dead, they have but yielded their place to younger and healthier plants of the

same family, and however individuals may have perished, the race survives, fine and flourishing as ever.

But perhaps the best known of all our apples at the present day is the much esteemed Ribstone Pippin, so easily recognized in its suit of dull green and red patched with russet, and the genealogy of which has been a subject of much discussion. In an interesting statement furnished to the Horticultural Society by Sir H. Goodriche, on whose estate at Ribstone in Yorkshire the original tree was discovered growing, he states that traditional accounts are all we have to guide us in the history of this tree. It is said that some apple-pips were brought from Rouen in Normandy, towards the close of the 17th century; that they were sown at Ribstone; that five of the pips grew, two of them producing crabs and the other three apples, one of these latter being the now famous Ribstone Pippin. It had been suspected that the fruits might after all have been produced by grafting (though the name would then have been a misnomer, the word "pippin" implying that the tree has grown from a seed or pip); and to determine this, some suckers were taken from the old root and planted in the gardens at Chiswick, when all doubts were dissipated by their growing and producing fruits exactly similar to that of the parent tree. That nothing like it has ever been discovered among all the foreign specimens of apples received by the society, also tends to prove that the variety is of native growth. The original tree, supposed to have been planted in 1688, stood till 1810, when it was blown down by a violent gale of wind, but being supported by stakes in a horizontal position, continued to produce fruits until 1835, when it lingered and died. But "e'en in its ashes lives its wonted fire," for "since then," says Mr. Hogg, writing in 1851, "a young shoot has been produced about four inches below the surface of the ground, which with proper care may become a tree, and thereby preserve the original of this favourite dessert apple."

"The Ribstone Pippin," says an American writer, "stands as high in Great Britain as the Bank of England, and to say that an apple has a Ribstone flavour is

there the highest praise that can be bestowed ;” but in his country it ranks among but second or third-rate fruits, owing perhaps to that climate being less suited for it,* or to the existence there of other sorts naturally superior to any of ours. Even here, however, it did not “find itself famous in a single night,” for until the end of the last century it was but little known, an indication of the gradual growth of its popularity being afforded by the fact that in 1785, and for some years after, no more than 25 plants per annum of this tree were grown at the celebrated Brompton Park Nursery, whereas, in 1851, about 2,500 plants were annually sent out thence. It has been called a universal apple for these kingdoms, since it thrives in any part of England or Ireland, and, with the protection of a wall, will flourish even in Scotland. The fruit is in its greatest perfection in November and December, but if well managed can be kept until March.

Among our more curious apples may be named the Siberian Bitter-sweet, a variety raised by Knight from the seeds of a Siberian Crab, the blossom of which had been impregnated with the pollen of the Golden Harvey. The fruit, which is about twice the size of that of the parent tree, differs from all others of its species in being always and entirely sweet, no acid being perceptible even when it is but half grown. When evaporated at a low temperature, the juice of this fruit becomes a jelly of intense sweetness, which, when filtered, is quite transparent, and applicable to similar purposes to which the inspissated juice of the grape is applied in France. It is believed that it might be kept long unchanged in any climate, the mucilage being preserved by the antiseptic powers of the saccharine matter, which is also incapable of acquiring, as sugar does, a state of crystallization.

As has been already remarked, it is only in their northern districts that our French neighbours possess an apple

* Some Ribstone Pippins grown in Canada were, however, exhibited here in 1862, and found to be finer than any of our own, their measurement being 1 ft. in circumference.

country, and, indeed, the editors of the *Nouveau du Hamel*, published in 1835, remark that before travelling in Normandy they knew of but one sort of sweet apple, the *Fenouillet*, but in the north they found many kinds equally sweet, which were quite unknown in the neighbourhood of Paris. Of course, the increased facilities of communication in these days has done much to extend the distribution of provincial growths (though the production, being dependent in a great measure upon climate, would be less apt to vary), and therefore a tolerable number of apple varieties may now be met with in the markets of the French capital, though the list is still far less complete than ours. At the beginning of the present century much good was effected by the Empress Josephine's encouragement of horticulture, and its flourishing state during the time that she was on the throne, compared with the neglect into which it fell afterwards, has caused a very general feeling of respect and regret for her to be entertained by French horticulturists; one very large and fine apple, of American origin, having been once called the Josephine Apple, though it had been known also by other names, this alone by general consent is now retained; and Poiteau, in thus dedicating it to this honoured memory, only wishes, in order that the memorial might be more appropriate, "that this were the best of apples, as she was the best of women." This Josephine Apple has the peculiarity of approaching in internal structure to the special characteristic of the quince, the cells of the core containing each three or four pips, instead of only one or two, as is usually the case in apples.*

Another peculiar French kind, the *Cœur du Pigeon*, are sometimes called Jerusalem Apples, because the core usually consists of but four cells instead of five, thus forming a cross when cut horizontally; while in yet another, the *Belle-fleur*, the smaller fruits offer nothing remarkable, but in those which grow to large size the partitions of the cells break down and disappear altogether,

* See Plate II., fig. 4.

and all the force of the nutritive power being employed in developing flesh, no seeds are formed, a great empty pentagonal cavity being thus left in the centre of the fruits, occupying nearly a third of its diameter. But the most curious of French apples is the *Malus apetala*, or *Pomme Figue*, so named from the blossoms being so little apparent that it was thought formerly that the fruit grew, as that of the fig seems to do, directly out of the branch, the flowers, growing in little clusters, being without distinct petals or stamens, no rose-tinted corolla expanding above the ovary, but only a miniature calyx divided into five small sepals alternating with five still smaller, but all of one dull green, and enclosing five central styles with 10 others forming a circle around them, the whole blossom no larger than that of a gooseberry.* But poor and plain as it is compared with the ordinary apple-bloom, this unlovely little abortion yet fulfils the main purpose of nature as well as the largest and most regularly formed of its charming kindred, the succeeding fruit proving a very fair ordinary apple. The apple-tree is believed to be indigenous to France; but its fruit was little esteemed there before the 13th century, and so late as the 17th La Quintinye, after diligent search, could find no more than 25 varieties, of which only seven were thought of much value. Even now, although many different sorts are grown in that country, but very few are considered to be really excellent.

In Germany the fruit holds a far higher position, Pomology having of late years attracted a great deal of attention among the Germans, and a vast number of varieties being cultivated by their growers and described by their authors. Some idea may be formed of the assiduity and perseverance with which those indefatigable methodizers have sought to distinguish and classify the vast variety of apples grown in their country, from the fact of one of their latest writers on the subject, Dochnahl, having published a volume in 1855 containing a detailed description of no less than 1,263 different sorts, all

* See Plate II., fig. 2.

duly assigned to their respective places in his system; lamenting even then that though for many years past he had been trying to gain a knowledge of *all* apples, and though his collection of examples was now immense, yet he feared he had still fallen short of the aim he had proposed to himself, viz., to describe *every* apple, and with unerring certainty; since he felt it was probable several kinds might now be found incorrectly classed, and even some not included at all in the list. He consoles himself, however, with the maxim, "*Veritas temporis filia.*" All agree that the finest apple of Fatherland, known and admired throughout the country, is the noble Winter *Borsdorffer*, called by Dochnahl the "Pride of Germany," and marked in his catalogue with three notes of admiration, as of super-excellent quality. Though one of the earliest varieties on record in Germany, it only became known here about the close of the last century, probably on account of its having been a special favourite with the late Queen Charlotte, who had quantities of this fruit annually imported from Germany for her own use, whence, too, it is here sometimes known by the name of the "Queen," or "George the Third." It is a dessert apple of rich vinous flavour and pleasant perfume, about 3 in. broad and $2\frac{1}{4}$ high, having a short calyx set in a shallow basin, and in colour most usually a golden yellow with a blood-red cheek, but is sometimes pale yellow, sometimes brownish or greyish, the appearance varying in some measure with the soils and situation.

Another notable German apple, which does not seem yet to have attracted the attention of English growers, is the *Mutter Apfel*, a yellow, carmine-cheeked dessert apple, of fine wine-sour flavour and very juicy, which has the remarkable peculiarity of keeping in good preservation for the unwonted period of three years. The tree is healthy and very fruitful, and inclined too to grow tall, especially when planted by road-sides.

The prevalence of that mode of planting on the Continent greatly extends the culture of fruit-trees, vast numbers being thus grown on ground which would otherwise be left quite unoccupied and useless, to the great

benefit of the proprietor and the community, while the traveller has the pleasure of journeying along a shady avenue, charming in due season to every sense, instead of a bare unsightly highway, exposed to the full power of sun and wind, and offering nothing of any kind to solace or refresh. Pity that when legions of English tourists annually enjoy and admire, none have yet been found to import here a custom so worthy of imitation. Even there, though, in some places, the abundance is greatly wasted and the usefulness of the fruit limited from ignorance of its capabilities; for the present writer, struck on one occasion with the quantities of large fine fruit blown down in a breezy August, and left to rot under the road-side trees near Frankfort, asked an inhabitant of the district why they were not turned to account in some form of cookery, and whether no use were ever made of them. A look of astonishment greeted the inquiry. "Cook them? why, they are not ripe!" was the reply, evidently looked on as an all-sufficient one. "If a pound of sugar were used to each apple," added the answerer, "it would not make them fit for food; and what use could be made of them when the very pigs would not eat them? indeed, they would be poisoned if they did." Thinking it possible there might be some peculiarity in the fruit to account for this prejudice, the experiment was tried of consigning some of these identical fruits to an English cook, when, made use of in the ordinary way, they proved most excellent. But of course the range of culinary application is limited in a land where "A" never yet "was an apple," and where fruit puddings are an unintelligible mystery.

The White Spanish Rennet, a beautiful red-and-yellow-skinned dessert apple (though its gigantic size rivals the largest kitchen fruit grown), and a near approach in flavour to the famous Newtown Pippin, is said to be, under the name of *Camuesar*, the national apple of Spain, where it has been known from the earliest antiquity, but, though greatly esteemed there, has been little cultivated in England since its introduction here. The Italians too have their favourite *Malo di Carlo*, the most celebrated of

all apples in the South of Europe; while, returning northwards, we find several varieties peculiar to Russia, the most curious being the White Astrachan, which is distinguished not only by becoming transparent when ripe, but by being covered with a copious and delicate bloom, exactly similar to that waxy secretion which clouds the plum or grape with its beautiful azure mist, only that in this case it is a white veil which is thrown over the pale yellow skin of the fruit. Grown here, the flesh is only semi-transparent, showing here and there gelatinous blotches; but a traveller in Russia, in 1845, describes having seen them at Revel quite transparent throughout, so that, when held to the light, the pips could be seen from every part; adding, that they were as large as a fine peach and quite as juicy, the flavour too being very good. This fruit, he was informed, was grown in a soil consisting half of pure sand and the other half of manure.

But nowhere in its native Europe does the apple flourish better than it does in the land of its adoption, the United States of America. There are, indeed, some diminutive kinds of Crabs indigenous to that country; but these have remained still unameliorated by culture, and it is from the seeds of European kinds, taken over at different times by colonists, that the fine fruits now growing in American orchards have been raised. So perfectly, however, has the fruit become naturalized, that new and fine kinds often appear quite spontaneously, almost every district having one or more variety which has originated there, and is found to be peculiarly adapted to it; so that, though the same sort will grow with more or less success in other parts, it is nowhere else quite so fine in flavour or the tree so productive, unless the soil and climate should happen to be exactly similar to those of its native spot. Thus Pennsylvania has its "*Belle-fleur*," Massachusetts its "*Baldwin*," Connecticut its "*Seek-no-Farther*," &c., &c. The apple, however, which, say the Americans, stands at the head of all apples, native or foreign, and which certainly fetches a higher price at Covent Garden than any other, is that which has its special *habitat* in New York, the world-famous Newtown

Pippin. The tree, which originated at Newtown in Long Island, is rather slender and of slow growth, being always remarkable, even while quite young, for its peculiarly rough bark; it is rarely grown largely or successfully in New England, but is very much cultivated in the States of New York and New Jersey, thousands of barrels being annually produced on the banks of the Hudson. The fruit is of medium size, about 3 in. in diameter, and $2\frac{1}{2}$ deep, roundish, but a little irregular in outline, owing to two or three obscure ribs on the sides, and broadest at the base, with a stalk $\frac{1}{2}$ in. long, deeply sunk in a wide cavity, and a small calyx set in a shallow basin; the skin of a dull olive green, with faint brownish blush on one side, dotted with small grey specks, and with delicate russet rays diverging round the stalk. The flesh is of a greenish-white tint, very juicy and crisp, of fine aroma and delicious flavour. The yellow variety, which is handsomer and has a higher perfume, but is less juicy, has a smooth skin and livelier red cheek, without spots, but with the same russet marks at the stalk, the flavour being equally good with the other, so that it is not easy to give pre-eminence to either. The fruit is in perfection in March, but is eaten from December till May, and has been preserved even till the American day of days, the 4th July, as it will keep very long without the least shrivelling. The Newtown Pippin is grown in England, but the flavour is considered inferior to that of the imported fruit. Other sorts, however, are not unfrequently palmed off upon us in its stead. Another variety which has been very popular of late years is the pretty little Lady Apple, or Api, which is usually seen in Covent Garden tricked out in a gay vestment of coloured tissue paper. Of very ancient family are these little "Ladies," though now generally known as American Apples, and therefore here described under this head, for it is said that they were brought from Peloponnesus to Rome by Appius Claudius, and they are mentioned by the oldest writers on such subjects as well-known fruits. Worlidge, in 1676, notices "the *Pomme appease*, a curious apple lately propagated: the fruit is small and pleasant, which

the Madams of France carry in their pockets, by reason they yield no unpleasant scent;" and Lister, in 1698, speaking of its being served up in a dessert at Paris, describes the fruit as being "very beautiful, and very red on one side, and pale or white on the other, and may serve the ladies at their toilets as a pattern to paint by;" a remark worthy to have been inspired by a Parisian atmosphere. The susceptibility to light and shade shown by this contrasted complexion, may be taken advantage of to form devices on the fruit before it has attained its full depth of rosiness, by affixing pieces of paper, cut in the form required, to the side exposed to the sun, when the parts thus covered will remain of a pale tint. It is grown now to a large extent in the United States, and imported here thence, as well as in a smaller proportion from France, with much profit to those concerned, as it always bears a higher price than almost any other fancy apple in the market, justifying the title bestowed on it by De Quintinye, of the "*Pomme des Demoiselles et de bonne Compagnie.*" It should be eaten without paring, as it is in the skin that the perfume resides.

In common culture the apple-tree in America, as in England, bears only in alternate years, producing excessive crops one season and none or scarcely any the next, the plant so exhausting itself in bringing forth the utmost possible amount of produce, that a year's repose becomes necessary in order to recruit its strength before making fresh efforts; but if it be preferred to gather a moderate crop annually, this may be effected by thinning out half the fruit when young, in the spring of the prolific year. Should it be desired to combine yearly crops with large production, even this is not unattainable, if the trees be furnished with a supply of nutriment proportionate to the demands made upon them, as has been proved by the American cultivators; for in one of the finest orchards in the New World, situated on the Hudson, and containing about 2,000 bearing Newtown Pippin trees, the owner, finding the alternate barren year rather unprofitable, yet unwilling to diminish his crops, tried the plan of artificially recruiting the powers of his trees by feeding

their roots every year, one season with lime and the next with stable manure, when he found that the trees thus treated, after furnishing him one autumn with 1,700 barrels of apples, part of which sold in New York for four dollars, and the rest in London for nine dollars the barrel, were yet the next year again bending to the earth with a rich and ample burthen, while the plants around them, less generously fostered, remained quite barren each alternate season. The Newtown Pippin, too, more than any other apple, requires time and high culture, and where this is denied it is already degenerating rapidly in some parts of America. This is the more to be regretted, as the special suitability of that country to its development, when coupled with due attention to the fruit, seems calculated to bring the apple to the greatest possible degree of perfection; for Downing, alluding to the fresh varieties which are still being produced there, says that some of the Southern winter apples are of surpassing quality, owing to the complete elaboration of their juices during the lengthened warm season of that climate. So plentiful too is the produce in many parts, that the orchards have overflowed beyond human requirements, and it has recently become a practice to employ the surplus sweet apples in fattening hogs, horses, and other animals; and so excellent has the saccharine matter of the apple been found for this purpose, that whole orchards are now frequently planted for the purpose of fattening swine and cattle, which are therefore turned loose to range them at will.

Nutritive and pleasant as is the apple in its natural state, the field of its usefulness becomes greatly enlarged when it is subjected to the processes of cookery. Ellis, in the *Modern Husbandman*, particularizes the Catshead as "a very useful apple to the farmer, because one of them pared and wrapped up in dough serves with little trouble for making an apple dumpling, so much in request with the Kentish farmer, for being part of a ready meal that in the cheapest manner satiates the keen appetite of the hungry ploughman, both in the field and at home, and therefore has now got into such reputation in Hert-

fordshire and some other counties that it has become the most common food, with a piece of bacon or pickled pork, for families." Dr. Johnson mentions having known a clergyman of small income who brought up a family very respectably, which he chiefly fed upon apple dumplings; and it is to be hoped that they yet kept some relish for the fare in after days, if there be any truth in the dictum of Coleridge, that "no man has lost all simplicity of character who retains a fondness for apple dumplings." Our forefathers, however, believed that the fruit was good for something more than either to fill hungry stomachs or to please the palate, for "being roasted and eaten with rose-water and sugar," saith an old English writer in 1657, "those of the pleasanter kinds, as Pippins and Pearmaines, are helpful to dissolve melancholy humours, and to expel heaviness and promote mirth." Truly, those fruits of the olden time had marvellous properties! We can better understand the following remark, that "the distilled water of good sound apples is of special good use to expel melancholy," since distillation is a process very apt to educe potency of this kind.

While the dumpling is the staple form of cookery in this land of solids, on the other side of the Channel our lighter neighbours delight in a peculiar preparation called *Raisiné*, consisting of apples stewed down in grape juice or new wine, which is much used by all classes, and is, indeed, in France what marmalade is in Scotland. *Pommée*, too, a pleasant and most inexpensive preserve, worthy of introduction here, is made in France about the end of November, by taking all sorts of apples not fit for other purposes, even including the worm-eaten ones, which, peeled, cored, and cut in halves or quarters, are put over a gentle fire with two or three glasses of water. When the mass begins to melt it is poured out and left till next day, when the process is repeated, and again on the third day, after which it is put into pots, placed in ovens after the withdrawal of the bread, until a crust is formed, which tends to keep it; and this preserve is found to be as sweet as any that is prepared with sugar, while additional flavour may be imparted if agreeable by adding lemon, cinnamon,

or quince. When made in quantities, time is economized by simply cutting the fruit in pieces and passing the pulp, after cooking, through a sieve, to separate the skins and cores. The fruit is also dried whole, in the form so familiar to us under the name of Normandy Pippins, while in America it is yet more used in the dried state, after having been first pared and cut into quarters; a wholesale "apple-paring," at which all the neighbours are invited to assist, being one of the regularly looked-forward-to "frolics" of American rural life. The famous Yankee apple-sauce, too, or "apple-butter," as it is often called, so common in farmers' families at every meal, and often manufactured by the barrel in Connecticut, is made by stewing pared and sliced sweet apples in new cyder until they form a soft pulp, while in some parts the unfermented juice of the apples is boiled down to make molasses.

But there is a still more important use for apples than any that has yet been alluded to, for

"A various spirit, fresh, delicious, keen,
Dwells in their gelid pores, and active points
The piercing cyder for the thirsty tongue."

And it is when it appears as a drink that the fruit reaches its climax of celebrity, and is perhaps more largely consumed too than even as food, at least in England; for though cyder was made in Normandy before it was known in our own country, that is the only part of the Continent where it is now a staple article of commerce. It is mentioned by Virgil in the *Georgics*, and is thought to have been made in Africa, and introduced by the Carthaginians into Biscay, which was long celebrated for its production. It was thence received by the Normans, who in turn taught the manufacture to the English, with whom in the course of time it has found such acceptance, that throughout a large tract of this country it is the ordinary beverage of the whole population; and the manufacture, though almost entirely in the hands of farmers, unaided by the refinements of machinery, has reached such perfection that whereas the inferior sort of French cyder requires to be drunk as soon as it is made, and the strongest keeps good but for five or six years, the best Herefordshire

may be kept for 20 or 30 years, and a single glass of it will almost suffice to intoxicate. This quality is mainly derived from the source from which it might least have been expected, for an experiment having been made in order to ascertain which part of the fruit contributed most to the goodness of cyder, one hogshead being manufactured entirely from the cores and parings of apples, and another entirely from the pulp, "the first was found of extraordinary strength and flavour, while the latter was sweet and insipid." This being the case, small apples are of course preferable to large ones for pressing. In Ireland, where much cyder is drunk, the popular taste approves of an unusual degree of acidity, and Crabs are therefore largely intermixed with the fruits of which it is made.

In Normandy the principal art in making good cyder is considered to lie in the choosing and mixing of sorts, one kind of apple alone, whether good or bad in itself, making only inferior cyder, which will not keep, and is too sweet or too sour, or turns black; but there are no fixed rules for the combination, the Normans only knowing that one sort gives sweetness, another acidity, and so on, while of the influence of some kinds they are quite uncertain. In parts where good varieties are not grown, or little knowledge of their qualities has been attained, of course the beverage proves very inferior. Though in general the apples which are best fitted for making cyder are little fitted for any other use, the rule is by no means invariable, and the Golden Pippin and other dessert varieties are equally valued for pressing. The strength of this liquor is a quality easily experimented upon, since it can be very correctly estimated beforehand by testing the specific gravity of the recently expressed apple-juice. The Newtown Pippin also adds to its other virtues the property of being an excellent cyder apple, and in New Jersey many thousands of barrels of cyder are annually manufactured, in sparkling delicacy so similar to champagne that many find it difficult to distinguish it from that wine. Chemically considered, the chief characteristic in which cyder differs from the juice of the grape is in

the total absence in the former of tartaric acid, the peculiar flavour and sharpness of the apple being due to another constituent, which, though present in some other fruits also, yet so specially preponderates in the *malus* tribe as to have thence taken the name of *malic* acid. In Normandy sometimes the different properties of the fruits are in some measure combined by making the cyder in vintage-time, and then pouring it on the refuse grapes, suffering the whole to ferment again, when the resulting liquor becomes of the colour of wine, and is considered more wholesome than pure cyder, while the flavour is not disagreeable, to some at least, for in few things are tastes found to vary more than in respect to different sorts of cyder; and while the sweet beverage approved in London or Paris would find little favour in Devonshire or Normandy, the keen and somewhat harsh draught which gratifies the rural consumer would be utterly detestable to a metropolitan palate. The price, too, varies considerably, for while a hogshead of cyder is generally valued at from £2 to £5, Rhind asserts that a first-rate quality has sometimes been sold as high as £20 per hogshead direct from the press, a cost equal to that of many good wines. There is little chance, however, of the juice of the apple ever becoming a general substitute for the juice of the grape; and in these days of revised tariffs and abolished duties, when even a "French invasion" is welcomed while the invaders take the form of bottles of claret, and so much benefit to our population is hoped for from the introduction of the produce of foreign vineyards to replace native drinks, it is curious to read how 17th-century enthusiasm once prognosticated that

"Where'er the British spread
Triumphant banners, or their fame has reached
Diffusive to the utmost bounds of this
Wide universe, Silurian cyder, borne,
Shall please all tastes and triumph o'er the vine."

The apple being at once so common and so important a fruit, it is not surprising that it should have occupied a place both in the sports and the superstitions of our forefathers. It was once a not uncommon pastime in Eng-

land, and also in Ireland, to fasten the fruit at one end of a suspended beam, a lighted candle being fixed at the other, while the players, with hands tied, amused themselves by attempting with their mouths to

“Catch the illusive apple with a bound,
As with its taper it flew whizzing round.”

While in Scotland the game was varied by the apples being put into a tub of water, and thus “bobbed” for with the mouth. At the festival of Allhallow Even this fruit occupied a very prominent position, apples in various forms affording, in conjunction with nuts, the chief part of the entertainment, and “lamb’s-wool,” consisting of apples roasted on a string until they dropped off into a bowl of spiced and sugared ale, being the especial drink for the occasion—not unhaunted by fairy influences, if, as we have the authority of Shakespeare for affirming, one of the most potent of elves was wont sometimes to

“Lurk in a gossip’s bowl
In very likeness of a roasted crab.”

The name of this beverage is said to be a corruption of *La mas abhal* (pronounced *lamasool*), *i. e.* the day of apple fruit, the 1st of November having been, it is supposed, dedicated to the heathen goddess Pomona, and in later days reconsecrated to the angel presiding over fruits and seeds. The apple, too, afforded one of the numerous methods resorted to at that season, in order to gain for the unmarried a revelation concerning their future partners, the youths or maidens retiring alone with a candle to eat an apple before a looking-glass, looking intently meanwhile for the reflection of a bride or bridegroom to appear peeping over their shoulder. Burns, in his poem on “Hallowe’en,” alludes to this ceremony in the words,

“Wee Jenny to her grannie says,
‘Will ye go wi’ me, grannie?
I’ll eat the apple at the glass
I gat from uncle Johnnie.’”

But it was not on this sacred night alone that the apple lent its kindly aid to lovers’ rites; and Gray, in his “Spell,” describes two kinds of pomaceous divination, in one of which the paring was thrown over the shoulder,

fancy detecting in the form it then assumed a likeness to some initial:

“I pare this pippin round and round again,
My shepherd’s name to flourish on the plain;
I fling the unbroken paring o’er my head,
Upon the grass a perfect L is read.”

In the other magical test an apple-pip was stuck upon each cheek, and the pair appropriated respectively to rival suitors, when the one which first fell off indicated that he whose name it bore would prove a faithless swain. Thus Gay continues:

“This pippin shall another trial make;
See from the core two kernels brown I take:
This on my cheek for Lubberkin is worn,
And Booby Clod on t’other side is borne.
But Booby Clod soon drops upon the ground,
A certain token that his love’s unsound,
While Lubberkin sticks firmly to the last;
Oh, were his lips to mine but joined as fast!”

In the West of England, too, maidens would sometimes gather Crab Apples in the autumn, and arrange them in the left into the initials of their suitors’ names, coming again to examine the letters on Old Michaelmas Day, when those which were found most perfect or least affected by decay were thought to indicate who would prove the most fitting mates.

On Twelfth Night the Devonshire people were formerly wont to perform a ceremony, supposed to be a relic of heathenism, first instituted as a sacrifice to Pomona. Carrying a pan of cyder, with roasted apples in it, to the orchard after supper, the farmer’s family and his men each in turn took one of the apples and a cup of the liquor, of which he drank a part, then threw the rest at one of the trees, chanting

“Health to thee, good apple-tree,
Well to bear, pockets full, hats full,
Pecks full, bushel-bags full.”

But it was only the good bearers that were thus honoured, the less fruitful trees being passed by. In some counties a similar custom was observed at New Year or Christmas; and in the apple districts of England it is still a common thing for boys on New Year’s Eve to go “apple

howling," *i. e.* gathering in a circle round the trees to shout in chorus, to the tune of a cow-horn,

"Stand fast, roots; bear well, top;
Pray God send us a good howling crop!
Every twig, apples big;
Every bough, apples enow;
Hats full, caps full, full quarter-sacks full."

Perhaps there is not the faith there once may have been in the efficacy of this process to secure good crops in the next season, but, at least, it avails to gain an immediate harvest of halfpence for the "howlers" from the owners of the orchards, in whose behalf they have been performing so innocent an incantation.

CHAPTER II.

THE PEAR.

SOFT sister of the firmer apple, the Pear displays so marked a resemblance to its relative that the most unobservant could scarcely fail to detect their kinship; yet is the difference between them sufficiently apparent on very slight inspection, and sufficiently great to justify Loudon in his wish that they may not always continue to be classed together in the same genus, as they are now by botanists too eminent for their decision to be disputed, even when it does not give perfect satisfaction. To this genus the pear has the honour of giving the name, being termed the *Pyrus communis*, while the apple bears the title of *Pyrus malus*. Albeit alike in some respects, the trees may be distinguished in a moment by their leaves, those of the apple being broader, very slightly serrated, of a yellow-green colour, and hairy underneath, while the dark green foliage of the pear is illiptical, more serrated, and smooth on both sides, the upper surface being abso-

lutely shining; and when both are full grown, the low and spreading apple, often uncouthly irregular in form, seldom attains more than half the height of the tall, upright, shapely pear, always inclining to the pyramidal form. In spring-time the large, rosy, fragrant blossoms of the former far outshine the scentless and colourless bloom of its modest rival, though differing scarcely at all botanically, the only distinction being that the five central styles are in the one case united at the base, in the other distinct; while as regards the fruit, though the tender melting consistency of the best dessert pears is different indeed from the crisp solidity of the apple, yet in some varieties the one species could quite compete with the other in hardness, and the characteristic distinction is therefore to be sought rather in the fact that the former is generally convex at the base, while the latter is always concave. Both fruits have woody threads passing from the stalk through the midst of the flesh, but in the pear these are less distinct, on account of the gritty concretions commonly found at the core, and which is caused by the woody matter becoming disseminated near the centre in small masses. The cells of the core, too, are pointed at both ends in the apple and only at one end in the pear, and the latter fruit is more astringent, less acid, and lighter than the former.

The pear does not come into bearing so soon as the apple, seedlings seldom producing any fruit before the seventh or eighth year after planting; but, though attacked by the same insects and liable to the same diseases, it is usually found to retain its health and vigour far better, at least in Britain (for in France and America this is said not to be the case), and reaches a much greater age, the longevity of pear trees being often reckoned by centuries. Usually the largest of our orchard trees, it sometimes attains extraordinary dimensions, one being recorded to have been 50 ft. high, to have had a trunk 18 ft. in circumference, and to have borne in good years $1\frac{1}{2}$ tons of fruit. Another noted pear-tree, seeming to "take a leaf" from the Banyan of the East, increased to an enormous size by sending down its branches to the

ground, where they took root, and each became a new tree, in turn similarly producing others.

In Europe, Western Asia, and China the pear is found growing wild throughout as wide a range as the apple; but as the Crab will never grow except on tolerably good soil, and its humbler sister is content with far poorer accommodation, they are not often found in association. The latter, too, displays a far greater power of adapting itself to peculiarities of situation, a remarkable example of which is afforded by the Notched-leaved Pear, which grows on the mountains of Upper Nepaul. "Nature seems," says Dr. Lindley, in describing this plant, "to have intended it to brave the utmost inclemency of climate, for in its own country in the earliest spring the leaves, while still delicate and tender, are clothed with a thick white coating of wool, and the flowers themselves are so immersed in an ample covering of the same material as to bid defiance to even Tartarean cold. But in proportion as the extent of the distribution of the plant descends towards the plains, or as the season of warm weather advances, it throws off its fleecy coat, and at length becomes as naked and as glittering with green as the trees which have never had such rigour to endure." In England, where it is grown for ornament, this tree displays scarcely any woolliness, while, on the other hand, in the woods of Poland and on the steppes of Russia the leaves of the ordinary pear are mostly white and downy.

The great orchardist, Rivers, remarks that the pear seems to require a warm, moist climate, and that many parts of France being too hot, and most parts of England not hot enough, the island of Jersey, where a happy medium is found, is probably the most favourable situation for pears in all Europe; while it may perhaps be some surprise to the many who look on vicinity to the metropolis as incompatible with flourishing vegetation, to hear that next in suitability to this sea-girt pyral Paradise are the low, moist situations immediately around London, particularly near Rotherhithe, where, he says, the Jargonelle and other fine pears may be said to attain the highest possible perfection.

In what points soever the two principal members of the *Pyrus* family may resemble each other, most unlike are they as regards the place they have held in the estimation of man; for while poetic fancy in different ages and far-severed climes has everywhere invested the apple with so many mystic charms, no extraneous associations diffuse a halo of borrowed glory around the neglected pear—no graceful legend plants it in celestial gardens, gives it to the guardianship of god or goddess, or links its name with the adventures of the daring heroes or loving nymphs of antiquity. There are few fruits, indeed, of whose history so little is known, though it appears to have been common from time immemorial in Syria, Egypt, and Greece, passing probably from the latter country into Italy. Homer names it as forming part of the orchard of Laertes, and Virgil alludes to having received some pears from Cato: indeed, 36 varieties were known to the Romans, including the singularly-named “Proud Pears,” so called because they ripened early and would not keep long; “*Libralia*,” or pound-weight pears, &c., &c.; but we may imagine that none could have been fruit of very fine quality, or they could hardly have merited Pliny’s conclusive assertion that “all pears whatsoever are but heavy meat unless they be well boiled or baked.” But little mention is made of the fruit in our own history, and as pear-trees are often found growing wild throughout the country, it is by some thought to be indigenous, while others believe it to be only native to more genial climes, and to have been first brought here by the Romans. There is no doubt that pears of some sort were eaten by our remote ancestors, though probably they were of no very excellent quality, for a very old English writer pronounces upon them a similar verdict to that of Pliny; but in the days of Henry VIII. some at least were admitted to even the royal table, since an item is found in his accounts of “2*d.* to an old woman who gaff the kyng peres,” and another of 3*s.* 4*d.* for “wardens and medlars;” the “warden,” a baking pear, so named, it is said, from its *keeping* property, being one of our oldest known varieties, once extensively cultivated by “the monks of

old." An ancient medical authority affirms that "the red warden is of great virtue conserved, roasted, or baked to quench choler;" but as it would be libellous to suppose that cloistered serenity could itself require the fruit on this account, imagination is free to picture the benevolent recluses sending round a basket of pears to any notedly fiery spirits in the neighbourhood, as modern good people might distribute a bundle of tracts.

In the time of Gerard, that which stood at the head of his list as the best of all the "tame pears" then known, and which he calls the *Pyrus superba sive Katherina*, was no other than the little brilliant-coloured but ill-flavoured fruit which furnished one of our old poets with so charming an illustration of his mistress's beauty, when he says that

"Her cheek was like the Catherine pear,
The side that's next the sun;"

but which, though it still holds a place on London street stalls on account of being so early ripe, has long since sunk below the appetite of any but children. It might almost be said that it is only during the last 60 or 70 years that the pear has actually been known in Europe, so great is the change that has taken place in it from what it was before that time, when it had hardly begun to manifest the perfection of which it is capable. It was in Belgium, which has therefore been prettily termed the "Eden of the pear-tree," that attention was first attracted to it, and to a native of that country, M. Van Mons, who actually devoted his life to pears and their improvement, we chiefly owe it that the poor varieties which gave a modicum of enjoyment to our forefathers have disappeared from all good gardens, and resigned their place to aristocratic races of rich and varied flavour, intensified to a degree hitherto unimagined. This gentleman was no mere empiric lighting accidentally on lucky expedients in fruit growing, but a scientific philosopher, who, having conceived a theory, set resolutely to work to test it by years of patient experimentalizing; for believing that originally there were but few, perhaps but one, species of any genus of plants, and that while in a wild state Nature only

aimed at preserving these in a healthy condition, and perfecting seed which should exactly reproduce the parent from which it sprung, he considered that it must be the object of cultivation to refine even by enervating the fruit-tree, to subdue its coarse exuberance of vegetation, and while probably lessening the quantity of the foliage, as well as the size and vigour of the seeds, to improve the quality of the pulp or flesh surrounding the latter. Finding that wild trees transplanted into gardens altered but little, or, though their leaves and fruit might grow larger, that the latter did not become better in quality, and that suckers, buds, or grafts taken from them did but reproduce similar plants, he sought in the seed for means of improvement, and found that the pips of wild fruit sown in good soil produced plants which differed somewhat from the parent (mostly for the better) and from each other; their seeds replanted advanced another step, and so on, until a certain ultimate point of perfection was reached, when a retrograde movement began, and if the sowing process were still persevered in the descendants of the good plants became worse and worse, until they ended, finally, as worthless wildings, much where the original ancestor began. The coincidence of Dr. Lindley, in at least the latter part of this theory, seems apparent from a remark in his works that—"There can be no doubt that if the arts of cultivation were abandoned for only a few years, all the annual varieties of plants in our gardens would disappear and be replaced by original wild forms." The retrograde tendency seems to be most strong in old trees, and Van Mons therefore gathered his first seeds from young trees of common kinds, yet not absolutely Crabs, and as soon as the trees produced from them bore fruit, which usually proved to be of very middling quality, but at least differing from the parent, and mostly a little in advance of it, he chose out the best, and again planted their seeds. The next generation was found to come more quickly into bearing, while their quality was still more promising; their offspring showed yet greater amelioration; and each succeeding family bringing forth fruit sooner, and producing a greater number

of valuable varieties, when the fifth generation was reached the trees began to bear in the third year after planting, and nearly all had attained great excellence. To use Van Mon's own words, "I have found," says he, "this art to consist in regenerating in a direct line of descent and as rapidly as possible an improving variety, taking care that there be no interval between the generations. To sow, to resow, to sow again, to sow perpetually, in short to do nothing but sow, is the practice to be pursued, and which cannot be departed from; and this is the whole secret of the art I have employed."

The constant springing up of fine new varieties of fruits in the American States is, as the author of *The Fruits of America* admits, a confirmation of the Van Mons theory, for while the colonists, who had taken pains to bring with them seeds of the very best English fruits, were doomed to see a grievous falling off in the degenerate produce resulting from their planting, the seedlings proving little better than wild trees, in the course of years this ebbing tide has turned again, and borne transatlantic growths with onward flow to heights of excellence beyond what had ever been attained by the British trees from which they are descended; and had the process of continually rearing new generations of seedlings been uninterruptedly followed, the good result might perhaps have been much sooner arrived at. Assuredly the Belgian's theory was founded on an observance of natural laws, and in practice his system proved a great success, for having himself raised no less than 80,000 seedlings, from these, and many thousands of others reared by his disciples in Belgium and elsewhere, an immense number of new varieties of great excellence have been obtained, among which the palm is usually given to the *Buerré Diel*. The method, however, is attended with several disadvantages; for being avowedly an enfeebling process, the trees so grown are usually of weak habit, and apt very soon to decay or become unhealthy; and being, too, almost absolutely artificial products, they often require an uninterrupted care and culture never needed by the hardy children of Nature, so that some of the Flemish pears

latest introduced into America have already begun to show symptoms of decay or disease. Whether it be that our climate suits them better, or that our cultivators pay them more attention, the pears of Belgium succeed better in England, and are found much hardier than those of either France or Jersey, which seldom thrive here, or at least are very precarious. Yet though both England and America have gladly availed themselves of the result of Van Mons' labours, the process which he pursued has never found much favour with us, and still less with our more impatient and "go-a-head" cousins, so long a time being required before any result can be expected. Some have tried raising seedlings without observing any method, but as a proof of the capriciousness of fortune in such matters, a celebrated French horticulturist has recorded that for fifty years he had been in the habit of planting pear-pips without ever having thus produced a good variety; while, on the other hand, Major Esperen, of Belgium, who simply sowed seeds indiscriminately and trusted to chance, originated five or six sorts so fine as to be unsurpassed by any in the Van Mons collection. In our country, however, the method introduced by Mr. Knight of obtaining new kinds by means of hybridization or cross-breeding, which is far less tedious, and in which, too, the result can be prognosticated with some degree of accuracy, has been attended with so much success that there has been little temptation to resort to any other. Of course, when fine kinds are once obtained, by whatever means they may have been produced, nothing more is needed to perpetuate them than to continue their propagation to any extent by grafting; and as with regard to the hardier kinds at least Loudon assures us that the best pears can be grown with no more trouble and expense than inferior ones, it is to be hoped that eventually the former will quite supersede the latter, and what is still too exclusively a luxury for the wealthy at length be freely open to all classes.

So much attention having been directed to the multiplication of varieties, it is not surprising that they should now be very numerous, and though there are still not

above 20 or 30 pears which are reckoned really first-class, Dochnahl's recent work describes above 1,050, and the *Bon Jardinier*, the chief French horticultural periodical, says that the catalogue in that country now comprises 3,000 varieties, each of which, too, has about six synonyms. Attempts have been made to classify these multitudinous races into families, but no very satisfactory arrangement has yet been achieved, and the only classification in use in England is that which divides them into summer, autumn, and winter pears, with the further distinction into the very soft or melting pears (in French *beurrées*), the crisper or breaking pears (*crevers*), and the perry (*poirée*) and baking fruits. According to their forms they are described as pyriform, like the old Windsor; oblate, like the Bergamot; obovate, like the Swan's Egg; or pyramidal, when the lines extend upwards nearly uncurved from the broad base.

Many of our old sorts are extinct, and others are doomed to the same fate, for even the popular Swan's Egg is pronounced by eminent horticulturists to be not worth cultivating in comparison with the more modern sorts; but a few are still welcome to our palates as ever they were to preceding generations, for far from superseded is our common Bergamot, long as great a favourite among English pears as the Ribstone Pippin among apples. Nothing authentic is known of its origin, but its antiquity is undoubted, and according to Manger the name is not derived from Bergamo in Italy, as many have supposed, but from the Turkish word *beg* or *bey*, a prince, and *armoud*, a pear, and was formerly written Begarmoud, the natural inference being that it originated in a warmer climate than that of Europe, and was introduced here from Turkey. It is to the French that we have owed most of our good older kinds, for they seem to have had the start of us in pear culture, since good sorts were known in France as early as in the 13th century. Foremost among our old fruits thence derived stands the Jargonelle, long since pronounced to be the queen of autumn pears, and which, still scarcely surpassed in flavour and quite unequalled in productiveness by any of her contemporaries of that

season, seems hardly likely to be called on to abdicate her throne in favour of upstart modern rivals. This fruit consists literally of little more than *eau sucrée* enclosed in a rind, the analysis of De Candolle showing that when ripe it contains 83·88 per cent. of water and 11·52 per cent. of sugar. Though we owe both the fruit and its title to France, by some strange *contretemps* the name is there given to a quite different kind, while our Jargonelle is called by the extraordinary appellation of *Grosse Cuisse Madame*, or Great Ladies' Thighs. The German name, *Frauen Schenkel*, has the same meaning.

The *Bon Chrétien* is another ancient variety still as highly in repute as ever, both here and in its native France. It has many sub-varieties, one of the commonest in England being the William's *Bon Chrétien*, often called merely the William Pear. Of the Flemish pears more lately introduced into this country, one of the chief in beauty and flavour, scarcely owning a superior, is the Marie Louise, the tree of which is, too, so hardy that it affords an almost certain crop under the most unfavourable circumstances. Other noted Flemish pears are the *Beurré Rance*, a misnomer for *Ranz*, its name being borrowed from the district in Flanders where it first grew; and the *Glou morceau*, so called from a Walloon word equivalent to the French *friand*, the title meaning therefore *delicious morsel* or *bit*.

Among the Germans the pear is more prized at the dessert than almost any other fruit, but the one which ranks highest there, and which may indeed be called their national fruit, as it originated in Germany, is the pretty *Forelle Truite*, or Trout Pear, so named from a fancied resemblance between its speckled skin and that of the fish.

In America many of the pears of Europe are grown, but are rated at a much lower standard than on this continent, the Jargonelle, though very common, being looked on as a poor fruit, and even the Marie Louise and *Bon Chrétien* as but second-rate; for, as in the case of the apple, the seeds of most European fruits sown in America have in the course of time originated new varieties pe-

cularly adapted to that country, and far more highly esteemed there than the sorts from which they were produced. The prince of American pears, a variety exhibiting a rare combination of virtues, the richest and most exquisitely flavoured of fruits being borne on the healthiest and hardiest of trees, is the Seckel Pear, so general a favourite that no garden is considered complete without it. Small sized, dumpy in shape, and dull in colour, it has been called the ugliest of fruits, but if we may so far adapt the old saying as to admit that "handsome is that handsome *tastes*," no deficiencies in beauty will be perceived when once the palate revels in the honied spicy richness of the Seckel Pear, its flavour, quite peculiar to itself, being generally pronounced to be unequalled by any of its European kindred.

The pear is peculiar in one respect, for, unlike nearly all other fruits, its being fresh gathered is by no means a recommendation, most varieties being much finer in flavour if plucked early in the season and ripened in the house than if suffered to mature on the tree; and many which appear very dry and second-rate when ripened in the open air, not only keep good much longer but attain first-rate quality when gathered while unripe and shut up for weeks in-doors. They, however, require warmth, for a pear which is of melting consistency after having been exposed for some time to a temperature of 60° or 70° would prove quite tough if left until wanted in a cold apartment. A German writer recommends packing pears between feather beds as a good mode of ripening them, but this would hardly suit English notions, and the Guernsey method of exposing them to the sunshine on the shelves of a greenhouse commends itself as seeming the most natural and pleasant way of bringing the fruit to healthy maturity. The chief use of pears is as a desert fruit, but they are also stewed or baked, many of the hard kinds being appropriated exclusively to this use; but most keeping pears, such as the Swan's Egg, &c., are also excellent for baking, for when simply heaped into a dish and put in the oven, their own juice forms a rich syrup, as sweet as though much sugar had been used, and

even windfalls and damaged fruit may thus be turned to good account with little trouble and no expense. In Germany, Russia, and yet more in France, pears are also dried; the common sort, sold about the streets in Paris, being merely slowly baked on boards in ovens after the bread has been withdrawn, but their juice being thus lost, they are far inferior to the more carefully prepared best sort, which are first boiled until a little soft, then peeled and put on a dish till the syrup drains from them, afterwards placed on wicker mats in an oven for twelve hours, then soaked in this syrup, to which a little sugar and brandy has been added, till their own juice is thus reabsorbed, after which they are replaced in the oven twice or thrice until they become quite firm and of a rich transparent chestnut colour, when they are packed in paper-lined boxes for home use or exportation. In hotter countries fires and ovens are not needed for this purpose, for the traveller Burchell mentions having, when in the interior of South Africa, stocked himself before crossing the desert with dried pears, "the manner of preserving which consisted in merely drying them whole and unpeeled in the sun, and afterwards pressing them flat, by which simple process they keep in perfection for more than a twelvemonth, as I afterwards learnt by experience, and therefore can recommend them as a valuable addition to the stores of a traveller."

As the apple yields its cyder, so too does the pear afford a special beverage, less wholesome than the former, but even more agreeable, and therefore scarcely less esteemed, especially as it is made in far less quantities and has therefore more claim to the merit of rarity, its manufacture being now chiefly limited to the cyder districts of England and France. Pears for the press may be either large or small, but the more austere the taste the better the liquor; wild pears are found not unsuitable, and the fruit which is esteemed best for this use is so unfit for any other that not only are they quite uneatable by man, but it is said that even hungry swine will hardly so much as smell to them; and it is a curious fact, though not without its parallel in the annals of vegetable peculiarities,

that the unexpressed juice of the perry pear is so harsh and acrid as to cause great heat and long-continued irritation of the throat if an attempt be made to eat it, yet no sooner is it separated from the pulp by simple pressure than it at once becomes rich and sweet, with no more roughness than is agreeable to most palates. As pears were deemed by the Romans an antidote against poisonous fungi, so perry is still reckoned the best thing to be taken after a surfeit of mushrooms. Though it will not keep nearly so long as cyder, it yet contains more alcohol, and also makes better vinegar, while the residue left after pressure serves very well for fuel, for which purpose that of cyder is useless. The bark of the pear-tree yields a yellow dye, and its wood is eminently serviceable to Art, being much employed not only for making parts of musical instruments, but also to furnish blocks for wood engraving. The wood of the wild pear is extremely hard, that of the cultivated kind much lighter and soft.



CHAPTER III.

THE QUINCE.

WHAT'S in a name?" said Shakespeare, and in answering himself he found among the flowers an illustration of its nothingness, yet do researches among fruits tend rather to induce the opposite conclusion; for while the accumulated glory of traditionary ages has gathered round one of our orchard fruits, which yet has very limited pretensions thereto, simply because we call it by the venerable name of apple, another, which has far greater claims to be honoured for the place it holds in the lore of antiquity, is yet commonly passed by, unnoticed and neglected, owing to the disguise of a modern appellation disconnecting it from the classical reminiscences with which it was once associated. Were Venus still surviving, to

find herself wholly neglected and all her graces attributed to some commonplace "pretty girl of England"—were Hercules still lingering upon earth, to see himself shut out from the "ring" and all his labours popularly supposed to have been achieved by some puny Ben Caunt or Benicia Boy—then might the once renowned Quince find sympathizing fellow-sufferers in the doom that has fallen upon it, degraded as it is from its former proud position as the "golden apple" for which even divinities contested, to be now the least known and least esteemed of all the pomal tribe. It does not profess to be the Scriptural "apple of gold," that being identified with a more peculiarly Syrian product; it may not be the Hesperidean fruit of the earliest age of Greece, though in spite of opposing theories some have even attributed to it this honour; but there seems every reason to connect it with some at least of the numerous Greek legends in which golden apples so prominently figure, for no other fruit then known answers so well to the description, and we can scarcely account otherwise for what is known to be a fact, viz., that among the ancients it was dedicated to Venus and looked on as the emblem of happiness and love; the temples of Cyprus and Paphos were decorated with it; it was the special ornament of the statues of Hymen; the figure of Hercules now in the Tuileries garden is represented with this fruit in his hand; and according to Plutarch, Solon made a law that it should form the invariable feast of the bridegroom (and some say of the bride too) before retiring to the nuptial couch. A native of Greece, it grew most abundantly in the neighbourhood of Cydon in Crete (now Candia), deriving thence the name *Cydonia*, which is still continued as its botanical cognomen, and was thence taken to Rome, where also, under the name of *Cotonea* (a reminiscence of which was preserved in its old English title of Melicotone); it was looked on as a sacred fruit, though, as regards mere secular uses, it seems to have been more prized for its scent than its savour, the climate perhaps not bringing it to such perfection as it had attained in Greece, though Columella particularly mentions that "Quinces not only

yield pleasure, but health," alluding perhaps to their use in medicine. Pliny says that the varieties were numerous, and particularizes four sorts, adding that all these "are kept shut up in the ante-chambers of great men, where they receive the visits of their courtiers; they are hung too upon the statues that pass the night with us in our chambers." How sad a decline from honours like these, when a modern writer derives its French name *coignassier* from the circumstance that its "disagreeable odour" usually causes it to be banished to a corner (*coin*) of the garden! It is not everywhere, however, that taste has thus changed, for Professor Targioni, an Italian writer on horticulture, says that at the present day it is much prized by the peasantry in some parts of the South of Europe for perfuming their stores of linen, and in yet warmer lands it is still found as gratifying to the palate as to the nostrils, for a recent traveller states that the quince of Persia ripens on the tree or after gathering, and losing all its austerity and becoming like a soft ripe pear, is eaten at the dessert as a much prized delicacy, and yearly forwarded as presents to Bagdad; the highly perfumed odour being so powerful that it is said, with perhaps a tinge of Oriental exaggeration, that if there be but a single quince in a caravan, no one who accompanies it can remain unconscious of its presence.

Spreading from Italy almost throughout Europe, it now grows spontaneously in most countries of mild temperature, and, as Gerard informs us, was common in his time in the hedges of England; but never ripening here sufficiently to be eaten raw, and having lost, perhaps undeservedly, much of the repute which it enjoyed two or three centuries ago on account of its medicinal properties, it is now very seldom met with, and many persons are to be found, even among those who have been born and brought up in the country, who have never tasted or perhaps so much as seen a quince. More generally cultivated, wherever it does still claim the cultivator's attention, as a stock whereon to graft the pear in order to dwarf the growth of that tree or to hasten the ripening of its fruit, than for the sake of its own produce, the latter is yet

capable of being turned to better account than merely to be made into preserve or used in minute quantities to add a flavour to apple pies, for Phillips has left on record that when he wrote quinces grew so abundantly in some parts of the Weald of Sussex as to be made into wine by private families living in that neighbourhood, some even manufacturing as much as 200 gallons in a season. This wine, for the preparation of which he furnishes a recipe, was, he adds, of agreeable flavour, improving greatly by keeping, and of so much efficacy for asthmatic affections that a gentleman residing at Horsham in Sussex assured him that he had been completely cured of a long-standing asthma solely by the use of it. Lord Bacon, too, has left it as his testimony that "It is certain the use of quinces is good to strengthen the stomach" (recommending, however, for this purpose, "quiddeny" of quince, probably a preserve), and in France at least it still maintains the reputation of being an admirable tonic and stomachic when taken medicinally, and made into a *compôte* is highly recommended as a diet to increase the digestive power of convalescents. At Paris the fruit never reaches perfect maturity, and though it ripens after gathering so far as to acquire a rich golden hue and exhale its powerful scent, remains so hard as to be quite unfit to be sent to table, though a forlorn hope of a different future is not yet abandoned by the sanguine French; for, says the *Bon Jardinier* of 1860, "we flatter ourselves yet, no doubt in vain, that time and culture will yet render them eatable." In the South of France, on the borders of the Garonne, quinces are much grown, to be made into a marmalade called *cotignac*: indeed, it would seem that that kind of confection must have been originally made from this particular fruit, since the word marmalade has its etymological root in the quince, the Portuguese name for which is *marmelo*. The seeds are used in medicine, though, says Noisette, not so much as they might be, for the viscous mucilage in which they abound unites with the softening qualities of gum arabic something of an unctuous quality, which renders them peculiarly capable of soothing irritation or inflammation of the most delicate

organs, and they are therefore employed to heal sore lips, inflamed eyes, &c. The same gummy juice, extracted by simply boiling the seeds in a little water, furnishes the toilette with that "fixature" which puts a gentle restraint on the straggling hairs of fair ones with flowing locks.

The delicately tinged blossoms of the quince are similar in structure to those of the apple and pear, but grow singly, and are much larger, being about the size of a wild rose. The fruit varies in form and size, but is always downy when young and yellow when ripe; and offering externally nothing remarkably different from the two before-mentioned fruits, was confounded by Linnæus with these its orchard brethren; but on cutting it open, it is found to contain in each of its five cells from 12 to 40 pips,* instead of only one or two, as is the case with both apple and pear, a peculiarity which has sufficed to assign it, in later systems of botany, to a separate genus. Owing probably in part to the little attention paid to it in modern days, but few varieties have arisen, and only five sorts are generally grown in either England, France, or America. The Apple-shaped (called by the ancients the "male") Quince is a tree of weak growth, both the leaf and fruit of which are small, but as the latter is of fine colour and becomes very tender when stewed, it is the most popular of the tribe in America, where the Pear-shaped Quince is condemned as tough and of bad colour, though pronounced by the French, on the contrary, to be in every way preferable to the other. It is much grown by them as a stock or *mère* in nurseries, and it may have been from using it similarly for grafting purposes that the ancients gave it the name of "female." English nurserymen prefer to graft on the Portugal Quince, a stronger, handsomer tree, bearing larger and finer fruit, which when cooked turns a fine crimson or purple colour, the only and great drawback to its otherwise incontestable supremacy over the other kinds being that it bears very scantily. These three varieties, though cultivators observe great differences in them, are all reck-

oned by botanists to be of one species, to which also belongs a new seedling sort, both large and good, recently raised at New York, and so highly appreciated there that it has been sold at the rate of nine dollars for about a bushel.

The Chinese Quince, only introduced into Europe during the present century, bears a highly perfumed, red, barrel-shaped fruit, about 4 in. long, and which will keep until the spring, whereas the other sorts usually perish before the end of autumn; but, unfortunately, whether eaten raw or cooked, it is found tasteless and insipid, and is therefore only grown for the sake of its red violet-scented spring blossoms. The last on the list, the Japan Quince, or *Cydonia* (popularly miscalled "*Pyrus*") *Japonica*, is also only grown for ornament, its dark green hard fruit being less eatable than even the preceding; but its blossoms, white, pink tinged, or more usually brilliant flaming scarlet, are far more beautiful, and appear earlier, forming one of the commonest but most favourite spring adornments of English grounds and gardens.



CHAPTER IV.

THE MEDLAR.

IN all *pomes* the calyx, which, immediately surmounting the ovary, first enwraps the flower-bud and then supports the open blossom, remains in a shrivelled position after the petals have fallen and the stamens withered away, still holding its place, while the fleshy expansion beneath it swells and ripens, forming to the last an actual part of the fruit. While, however, in apples, pears, and quinces this dried-up relic of the blossom displays itself but as a small spot upon the summit of perfected fruit, in the Medlar it spreads over a large part of the surface, and strikes the eye at once as the most notable feature in the object. Resembling in its internal

structure the apple and the pear, the core consisting of five cells each, containing usually two pips or seeds, though so hard is the wrinkled shell which takes the place of the leathery coating of other "pips" that these might almost be called stones, the medlar differs externally from its pomal brethren in being invariably of a dull russet brown colour, and in losing rotundity of form, in consequence of the calyx spreading over the whole top of the fruit, which therefore presents the truncated appearance to which it owes its generic name *Mespilus*, which is composed of two Greek words (*mesos pilos*) signifying *half ball* or *cap*; its French title *nefflier*, written by purists *nefflier*, being similarly derived from a Celtic word *naff*, which means *truncated*. Its surname *Germanica* is due to its being both more common and more appreciated in Germany than anywhere else.

The medlar does not appear to have been known to the ancients, though it is indigenous to various parts of Southern Europe, being common in the woods of Italy and Sicily, where it grows into a good sized tree with a straight stem; while in England, where, though it is occasionally found growing wild, it is generally supposed to be rather naturalized than a native, it becomes more like a shrub than a tree, assuming a low spreading form of very irregular and often even grotesque appearance. The reddish-coloured wood is hard and very durable, but too small to be of much use, except that in France the branches are greatly esteemed for the purpose of making whip-handles. The short-stalked oblong or oval leaves, three or four inches long, and smooth edged or but slightly indented, are in the wild kind often accompanied by thorns, and the white Rosaceous flowers, characterized by five styles and about 20 stamens, grow singly at the end of the branches, which therefore do not admit of being pruned. They appear about June or July, and the fruit is not fit for gathering until after the first autumn frosts, requiring even then to be laid upon straw for some time, until the first stage of decomposition (technically called *bletting*) begins, when its previous harshness disappears, and it becomes soft and of mild agreeable fla-

vous. The wild kind are no larger than the top of a man's thumb; but culture improves both their size and flavour, though the largest of garden growth do not exceed the size of a small apple. These are most commonly propagated by grafting either on the pear, quince, the wild medlar, or its first cousin the hawthorn, for if the seeds be sown, unless they be taken out of the fruit as soon as ripe and set at once in the ground, they seldom germinate until the second year after planting. Varieties are not very numerous, and but three kinds are generally grown in England—the common or Nottingham sort, which are of sharp pleasant taste, but small; the Dutch or Large German, which are of greater size but more insipid, yet are more cultivated in this country than either of the other sorts; and finally, the Monstrous Medlar, which combines the magnitude of the latter with the good flavour of the former, besides possessing the further virtue of being an abundant bearer. The kind most esteemed in Italy and France is a seedless sort, which though small contains a larger amount of eatable substance, owing to the absence of pips, besides being so much less austere than the other kinds that it can be eaten, when once it has attained full ripeness, without waiting for the “bletting” process, and is therefore worthy to be more generally cultivated than it is at present, though in England it has not been found to be equal to other kinds, its keeping longer being here reckoned its chief virtue. The flowers of this kind abound in stamens but have no pistil, and it is therefore that the fruit remains seedless, though it still matures, thus proving that fecundation is not essential to the production of fruit, although it is to the reproduction of offspring.

The most singular member of this family is the Japan Medlar, as it is called, which was introduced into France from Canton in 1784, but was there for some years before it put forth its blossoms in the form of panicles of white flowers scented like those of the hawthorn, but yet more fragrant; and it was not till 1810 that it bore fruit, the produce proving to be of the size and colour of cherries, and a sample having been presented to the great patroness

of pomology, Josephine, was pronounced by her to be of very agreeable flavour. Though an evergreen, with very fine large leaves, this plant thrives perfectly when grafted on the deciduous hawthorn, but as it does not blossom until autumn, rarely perfects fruit in Europe. It is specially noteworthy as furnishing the connecting link between what had hitherto been looked on as quite distinct groups, viz., the *Mespilus* family and the *Azeroliers*, the latter being now reckoned by many botanists as only varieties of the medlar (their blossoms agreeing in every respect except that the number of styles varies from two to five), though cultivators still maintain the ancient distinction between them, and our Loudon includes the *Azeroliers* in the family of the *Cratægus* or Thorn. Their little berry-like fruit* bears, indeed, a strong resemblance to the common "haws" of our hedges, and are in some sorts hardly larger. Scarcely grown in this country, and even in France not acquiring much size or goodness, though held in some esteem in Provence and Languedoc, in Italy and the Levant they are much eaten, the climate there improving them, while it also renders their sharpness more welcome. They require to be fully ripe, but do not, like the medlar, need *bletting*, and are eaten both raw and in tarts or confections. Five or six sorts are grown, the best being the Azerolier of Italy, the leaves of which resemble those of the hawthorn, except that they are larger and less divided, and the flowers are also similar, but are larger and more fragrant, while the roundish yellow fruit is like a very small Siberian Crab. The natives of Italy are so much finer than those grown in France that they are exported from the former to the latter country, being first dipped each one separately into melted white wax, which, forming a thin shell around them, preserves them from injury during transport, and also, by excluding the air, tends to keep them longer from decay. The Azerole of the Levant differs chiefly in being red and of longer shape, besides being smaller. The Scarlet or Canadian Azerole is only of the size of a mus-

See Plate II., fig. 8.

ket ball, but being of a very pleasant taste, is sought for in Paris towards the end of September; while the other kinds, being no larger, less fleshy, and less agreeable in flavour, are likely to be rather endured than enjoyed by those who partake of them.

CHAPTER V.

THE PLUM.

FROM the wave-hollowed cavern in the cliff to the Cathedral of St. Peter's; from the wild gorilla of the woods to the thorough English gentleman; such are the analogues that present themselves when we would think of illustrations of progress equivalent to the stride from the Sloe to the Greengage—from Nature's thorny stunted bush, with its puny leaves and harsh, insignificant, berry-like produce, to Art's shapely tree, with broad ample foliage and large luscious fruit, fair child of human care and culture. Yet, the Adam of the race, the Sloe, without which, if the theory of development be true, we should have had no Greengage, claims the first attention in a notice of this tribe, the first favourites of autumn, whose fleshy drupes form so nicely graduated a link between the juicy berries of summer and those substantial pomes which accompany us into winter. The plums, as a family, are native to the greater part of Europe, and some parts of Asia, Africa, and America; but the only member indigenous to England is the Sloe (the *Prunus spinosa*, or Thorny Plum), which is very commonly found wild in our hedges, usually not farther north than Wales, though, as it will endure a moister climate, it is sometimes found in Highland valleys, where the more fastidious furze-bush refuses to grow. Grown in open parks as a single tree, it may be reared to a height of even 30 ft., but in hedges is rarely seen more than 20 ft. high; in

France, never above 15 ft., and it is generally far below that altitude. Its creeping root throws up such numerous suckers that, if left undisturbed, a single plant would in the course of a few years spread over an acre of ground—a peculiarity which has led the French to bestow upon it the title of “*Mère du Bois*,” for not only does it thus multiply itself to an enormous extent, but its suckers affording shelter to any seeds of timber-trees that may be dropped among them by birds, these too thrive unusually, and thus, under the direct and indirect influence of the Sloe, the field, in the course of a few years, becomes a forest. This encroaching disposition makes the plant very unsuitable for boundary hedges, as the limits of neighbouring property may be indefinitely varied by its growth; and when once established, it is no easy task effectually to serve an ejection upon it, since, even when grubbed up by the roots, every fibril left in the soil will spring up again and become a separate plant, making the very measure taken to extirpate it only a new means of multiplication. The only sure method of making head against such pertinacious power of vegetation is to oppose to it the force of animal voracity; and as all cattle, and especially sheep and goats, are fond of the leaves of the Sloe, whether fresh or dried, by calling in their aid the stems are gnawed down even to the quick, the shoots rise next year very feebly, and, again consumed, give up the contest in despair, seldom appearing again at all in the third year.

The taste for Sloe-leaves is shared in also by beings of higher nature, though the pleasure they impart is mostly partaken of in unconsciousness of its source, they being more often used as an adulteration than avowedly as a substitute, but really taking the place of tea better than any other European plant yet known, having a peculiar aromatic flavour (shared in by the meadow-sweet and some other plants), which offers some resemblance to the delicate perfume of China's peerless leaf. Besides its leaves, the branches are thickly armed with sharp thorns, the wound from which is so much less easy to heal than those made by the hawthorn, that Withering suspects

their action is chemical as well as mechanical, and that there must be something poisonous in their nature. During the bleak days of March, before any other fruit-tree has blossomed, and often even before its own leaves have appeared, the Sloe unfolds its small white flowers, solitary, so far as that implies that they do not grow in clusters, but thickly strewn over the branches, and consisting of five petals, from 20 to 30 stamens, with orange-coloured anthers, and generally one, but sometimes two, central styles. Balfour says that fruits formed like these by the ovaries alone, are more liable to drop off and to suffer from unfavourable weather than those in which the calyx is retained to enter into their composition, as is the case in the gooseberry, apple, and most other tribes; but when their course does run smooth, by September these blossoms have matured into little violet-skinned azure-bloomed balls scarcely larger than a fine black currant, so austere that they can scarcely be eaten until somewhat mellowed by frost, and held in so little esteem even by omnivorous children, that it is only by courtesy they can be allowed to rank upon the list of fruits. In France they are pickled while unripe in salt and vinegar, as a substitute for olives, and when ripe are fermented with water, to form a beverage much drunk by the lower classes, though by no means wholesome to be taken habitually, its acid astringent qualities causing internal obstructions. Properly fermented, the Sloe makes a wine not unlike new port, and contributes occasionally to the adulteration of that much mystified compound; while the *schnaps*-loving Germans and Russians put it to the same use to which they devote almost everything of a fruity nature which comes in their way, and contrive to distil a spirit from it. Its juice may further be used as a marking ink, for it gives a stain to linen or woollen which cannot be washed out; and though the plum tribe are often looked on with terror as the fruitful source of autumnal *diarrhœa*, this head of the family is so eminently famed for the contrary effect, that its expressed juice is used in pharmacy, and its bottled fruit in domestic practice, as almost a specific against that complaint.

The essential properties of the plant vary strangely at different stages of growth, for the flowers are moderately purgative; the fruit when first ripe extremely astringent, yet soon lose that character, and when very fully ripe become decidedly laxative. The bark is used in tanning; it affords, in conjunction with alkali, a yellow dye, and with sulphate of iron a fine black ink, and is also employed in intermittent fevers as a tolerably efficient substitute for Peruvian bark. The upright branchless shoots of the Sloe are more used throughout Europe than any other wood for walking-sticks, the glossy, horse-chestnut-coloured bark needing no polish, and the bases of the thorns variegating it with a beautiful appearance as of knots.

One Sloe, the double-flowering variety, is exalted above all others to a well-merited place in the garden, for in its blossoming season in May it is scarcely surpassed in beauty by any vernal blooming shrub, its slender shoots, 10 or 12 ft. high, being thickly covered with charming little white double blossoms about the size of a sixpence, and resembling miniature roses. It is a special favourite in China, and, according to Kœmpfer, is cultivated in Japan, on account of its flowers, with such success that they acquire the size of a large double rose, and are so abundant as to cover the whole tree with a surface of snowy whiteness speckled with blood red. "These trees," says he, "are the finest of their ornaments; they are planted in preference around their temples, and are also cultivated in pots or boxes for private houses, as orange-trees are in Europe." The beauty of this Sloe is the more remarkable as the plum tribe in general present no very ornamental appearance, the double-blossoming plum, though sometimes bearing a large handsome white flower, being very prone to degenerate and become single, and it is always inferior in effect to the former plant.

The next step in plum progress is the Bullace, also a wild growth in England, Germany, and France, which, like the Sloe, is armed with spines, and bears a fruit which is globular in shape, but larger and varied in colour, being sometimes black, sometimes yellowish tinged with

red, or occasionally quite red; and, a matter of more importance, it is much less austere, forming very fair pies and other culinary preparations. When uncooked they are not very attractive, as may be judged by their having earned in Provence the name of *Prunes sibarellles*, because from their sourness it is impossible to whistle just after having eaten them.

From the Bullace we rise to the *Prunus domestica*, the spineless species, including all the numerous varieties which furnish our autumnal feasts, none of which are found truly wild in Britain. There is, however, little record of their introduction, except a mention by Hakbergh, in 1582, of the plum called the Perdigwend (now Perdrigone) being "brought from Italy, with two kinds more, by Lord Cromwell after his travel;" but Tusser, in 1573, had already enumerated 10 sorts; and Johnson, in 1633, says, "To write of plums particularly would require a peculiar volume, and yet the end not to be attained unto nor the stocke or kindred perfectly known, neither to be distinguished apart. The number of the sorts are not known to any one country; every climate hath his own fruit far different from that of other countries. Myself have three score sorts in my garden, and all strange and rare: there be in other places many more common, and yet yearely cometh to our hands others not before known." The multiplication of new sorts having begun so early, it is not surprising to find that the third edition of the Horticultural Society's fruit catalogue contained 127 varieties, to which about 20 more may now be added, besides fresh American originations. The tree will grow in almost any soil, though it thrives best in a strong rich one; for in sand it is specially liable to become a prey to insects, and in clay the fruit is insipid; its shade is considered rather favourable than otherwise to grass growing beneath it. It begins to bear in its sixth or seventh year, increasing in productiveness till the 12th year, after which it continues to bear good crops in favourable seasons until decrepitude comes on—a period which varies much in different varieties and according to soil and circumstances—though it is very

rare to see a plum-tree more than 150 years old. The height varies from 6 ft. to 30 ft.; but as the larger the tree becomes, the less fruit it bears in proportion to its size and the space occupied, and the worse in point of quality, besides the greater difficulty of gathering it, magnitude is by no means desired. Pruning of the roots as well as the branches is resorted to to check its natural luxuriance, and the suckers, which it sends forth more freely than any other fruit-tree, must be removed as soon as they appear—*i. e.*, five or six times in the course of the summer—or not only will the harvest be deficient, but even the life of the tree will be endangered. Sometimes the trees begin to decay internally even when quite young, yet still continue to bear fruit as abundantly as those of more healthy appearance. The different varieties are distinguished partly by the surface of the young woods, which in some is smooth, in some downy or covered with soft hairs; partly by the fruit being divided, like Peaches, into those in which the stone adheres firmly to the flesh, and those in which it parts freely; and another very decided mark of difference is seen in the suture or furrow which deeply indents one side of many plums, while in others it is scarcely visible. Some varieties, however, have features so individually characteristic as to be recognized at a glance; and among these may be classed the universally familiar Damson, valued by the poor for its abundance as much as the Greengage is by the wealthy for its delicacy, growing as it does in every cottage garden, and bringing often enormous crops, and lingering later than any other plum. It is mentioned by Pliny as the Damascene Plum, so called from Damascus in Syria, but introduced long since into Italy; and he remarks further that the stone of this fruit is larger than usual, and the flesh smaller in quality, yet it will never dry so far as to wrinkle, the sun of its native country being needed to produce this effect. We have no quarrel with it on this ground, and are satisfied to dispense with its drying while it maintains the character of being our best baking plum, thousands of bushels being sold annually both here and in America, to be made into

winter preserve. The Muscle is also a well-known good kind for culinary purposes, and the Orleans was formerly a favourite, but has been almost superseded of late years by newer sorts. The old-fashioned *Magnum Bonum*, too, which long held its station as the largest of our plums, is equalled in this respect and far surpassed in taste by the similarly shaped but yellower "Coe's Golden Drop," which partakes of the flavour of the Greengage and Apricot, and, if gathered with part of the branch attached, and hung in a dry room, will keep till near Christmas.

It is, however, in the Greengage that the acme of plum perfection is reached, this famous fruit being admitted, even by the Americans, to surpass every other kind that has been produced in any country. No account seems to have been preserved of how or where it originated, but it is said to have been introduced into France by Queen Claude, wife of Francis I., and is generally known in that country as the *Reine Claude*,* though in some parts bearing local epithets, mostly complimentary, such as "*Abricot verd*" at Tours, and "*la verte bonne*" at Rouen. Its English title is derived from the Gage family, a member of which, some time during last century, procured a collection of trees from the Chartreuse monastery at Paris, on the arrival of which all were found duly marked with names except the specimen of *Reine Claude*, from which the label had been omitted or lost; whereupon the gardener, assuming the sponsorial office, dutifully bestowed upon it the name of his employer, in addition to the adjective denoting its unusual colour. It sometimes reproduces itself from its stones, the planting of which, however, have also given rise to numerous varieties, some coloured like their parent, while others, under the name of red or yellow "gages," have striven vainly to rival their peerless verdant progenitor; while one base counterfeit, strikingly like the Greengage in appearance, mocks the eater in being only remarkable, in point of flavour, for its utter insipidity. Vigorous, but never very

* The Germans, following the sound of these words, give the Greengage the title of *Grunen Renklode*.

tall, the tree both in France and England mostly requires to be grown against the wall; and the fruit is always specially prone to burst its tender skin and form splits, which, however, do not impair its quality any further than that busy insects are ever found ready to avail themselves of the opening, and soon consume the dainty when once thus laid bare to them. The Purple Gage, a new variety lately introduced by the French under the name of *Reine Claude Violette*, may really be considered an improvement on the original, since it is free from this latter defect of a tendency to crack, and has the further advantage that in a dry climate it will keep good until October, whereas the Greengage, which it equals in every other respect, must be eaten almost as soon as gathered. In 1860, too, a new early variety was exhibited by Mr. Rivers, which has the special virtue of ripening in July, when the old sort is still quite hard.

But if, among all that are commonly called plums, the Greengage be pre-eminent, there is one member of the *Prunus* family, a distinct species, and bearing in common parlance quite a distinct name, in which the plum seems to have risen above itself; for in the Apricot it seems as though Nature had "tried her 'prentice hand" before she formed the Peach, as if wishing to see on a small scale the effect of a velvet-like suit before assigning it as the livery of a new tribe. In spite, however, of its woolly disguise, it is recognized as really a plum by its white blossom and smooth stone, though the latter has the peculiarity of being pointed at but one end, whereas in the rest of the race it is found sharp at each end. Easily known by its heart-shaped foliage, the tree is botanically distinguished as *Prunus Armeniaca*, the latter title derived from its having been supposed to have come originally from Armenia; but there is little authority for the notion, since, though it covers the slopes of the Caucasus almost to the margin of the snow, it has never yet been found growing wild there. A French traveller, too, quoted by Mr. Phillips, says, "I was struck with its mode of growth in Egypt, where it was anciently brought from latitudes still more south: its leaves have scarcely fallen

off before the blossoms appear again. The name of *berikokka*, first given to it in Greece, approaches very near to its Arabian name of *berkach* or *berikach*. The inhabitants of the fertile parts of the deserts, called oases, gather and dry large quantities of Apricots, which they bring down to Egypt for sale. The result of every inquiry I made was, that the Apricot-tree grows there spontaneously, almost without cultivation; and as it is not known to grow in the natural state in any part of Armenia, we may very justly conclude that it is an Arabian fruit." In Siberia one sort of Apricot is found showing little affinity with that of Armenia, and Allioria asserts that it grows naturally in the woods of Montserrat. It cannot be certainly identified with any of the fruits mentioned by the ancients, though we may probably refer to it what is said by Pliny of an "early [*præcocia*] kind of Peach, ripe in the summer," which had only been introduced about 30 years before he wrote, and which was originally sold at the price of a *denarius* ($7\frac{3}{4}d.$) apiece, and could be found only at the first-rate fruiterers' shops. It appears that it was known in Italy in the time of Dioscorides under the name of *præcocia*; and it has been suggested that, when first introduced here, it was probably called in Latin a *præcox*, and that word being taken by the ignorant for the plural, and the article becoming confounded with it, the word "Aprecockes" arose, making in the singular "Aprecocke," the very form in which it appears in Gerard and other English horticultural writers, and really its original Anglicized appellation, the present genteeler "Apricot," being actually the corruption. Evelyn, writing in 1658, mentions it by the name adopted by the French, *Abricot*, their term for the tree being *Abricotier*, which gave rise to the clever pun, recorded by Madame de Genlis, of Cotier, head physician to Louis XI., who, after the death of that monarch, falling into disgrace under the new regency of Madame de Beaujeu, withdrew from the court, and had an Apricot-tree sculptured over the door of his house, with the inscription "*à l'abri Cotier.*"

Some varieties of this fruit are exceedingly delicious,

and the best found in Persia, the Apricots of Iran, have won for themselves the glowing title of "Seed of the Sun." In Japan the tree attains very large size, but by the Chinese the double-blossoming kind is reduced to a dwarf, and grown in pots as a favourite ornament for their rooms in spring. One sort, too, which has little pulp, is cultivated only on account of its kernel, which is very large, sweet, and nut-like. The Wild Apricot in that country, though admitted into a corner of even the Emperor's garden, needs no culture, will grow in the worst of soil, and flowers so late in spring as to be in no danger from frost. The otherwise barren mountains which lie to the west of Peking are covered with these trees, and "what, perhaps," says Grosier, "will be hardly believed, is, that the crops produced by them, and the oil extracted from their kernels, render the peasants who inhabit these mountains as rich as those who live in the lowlands. The oil is superior to that from walnuts,* is burnt in lamps and used at table; the peasants warm their stoves with what remains of the stones, and collect the cinders to manure their land." In China, too, Apricots are generally the earliest fruit of summer. When fully ripe, the Chinese preserve them in a conserve, and also take out the stone, dip them several times in some of their own expressed juice, and then dry them in the sun to eat during winter, stewed; or if boiled till quite dissolved, and honey and vinegar added to the water, they afford a wholesome and most refreshing drink, used by all classes. Their expressed juice, too, is formed into lozenges, also sometimes dissolved in water to make a beverage.

Gough records, in his *Topographical Anecdotes*, that the Apricot was first brought to England by Wolf, head gardener to Henry VIII.; and there are now about 20 good English sorts besides the Peach-Apricot, supposed to be a hybrid between these two fruits; while from time to

* Oil is also extracted in France and Piedmont from the Briancon Apricot, the produce of a small tree or shrub, 10 or 12 feet high, which is a native of the Alps, and bears abundance of small round yellow fruit, in clusters, which are scarcely eatable, but furnish, when crushed, "*huile de marmotte*," which sells for double the price of olive oil.

time new kinds still appear. The Black Apricot, a very dark kind, but more curious than excellent, is believed to have arisen from the fecundation of an Apricot-tree with the pollen of the Myrobalanus, or Cherry Plum, which, in buds, leaves, and blossoms, greatly resembles the former tree; and, indeed, as Loudon observes, "there can be no doubt but that an endless number of hybrids, varying in their leaves, blossoms, and fruits, might be produced by fecundating the blossom of the plum with the pollen of the Almond, Peach, Apricot, and Cherry; and though some may be disposed to assign little value to these kinds of productions, yet it must not be forgotten that almost all the cultivated plants of most value to man have been produced by some kind of artificial process. Experiments of this kind, therefore, ought never to be discouraged. What culture has done we know, but what it may yet accomplish is concealed in the womb of time."

The plum appears always to have existed in France, but, unlike the Cherry, it is a tree not of the forest, but of the field; and Du Hamel disputes the paternity of the Sloe as contrary to analogy, considering that such of the domestic kinds as have not been imported from abroad are more likely to have originated from the black or white Damask Plum,* or from the *Cerisette*, all of which are indigenous to that country, than from the one which we admit as the type of the race. The two former are rather larger and rounder than our Damson, and of a sweeter but more insipid taste; and the latter, being small, nearly round, and of a pale violet red, bears a strong resemblance to a Cherry, in which respect, however, it is surpassed by the Canadian Plum, brought from Canada to France in 1750, and which has yellow flesh and a fiery red skin, quite free from bloom, thus forming as decided a link between the plum and the Cherry as the downy-coated Apricot does between the plum and the Peach, the drupaceous fruits being thus all specially bound in a common bond of brotherhood.

* The title *Damas*, or Damask, is given by the French to plums which split easily, and the flesh of which separates freely from the stone.

Though large supplies of fresh-gathered plums are imported into England from the other side of the Channel, as many as 25 tons of this fruit being sometimes brought thence to London in a single night by the South-Eastern Railway route alone, yet in France the plum is looked on far less as an article for immediate consumption than as a provision for winter — a fact, indeed, so thoroughly acknowledged here that the very term “French Plum” seems necessarily to imply a dried fruit. The most *recherché* preparation which comes to us under that title is that made from the large yellow Brignole Plums, grown chiefly near the town of that name in Provence. When these are fully ripe, the trees are slightly shaken, and the rich produce gently descends, Jupiter-like, in a shower of gold, upon cloths spread to receive it, and is set aside in a dry place until the next day, when the victims are condemned to be deprived of their skins. As it is recorded that one of the Champions of Christendom meekly accepted his doom of death on condition that it should be inflicted by the hands of a virgin, we may suppose that if the fate of Marsyas can possibly be made acceptable, it may be so to these martyrs of Brignole, when it is ordained that they are to be flayed solely by the nails of women, who keep constantly dipping their hands in water in order that they may perform the operation quite coolly; for as the rude touch of any iron weapon would mar their delicate colour and transparency, the use of any such is strictly forbidden. After being left skinless in the sun for several days, they are then impaled on pointed osier rods, and exposed for several successive days to warmth and air, all damp being carefully guarded against; their stones are then extracted, they are pressed into rounded shape, and put away covered with woollen cloths until required for sale, when they are duly confined in little round flat boxes made of willow and lined with a shroud of white paper cut at the edges, having, through manifold inflictions, become refined into a most super-excellent sweetmeat. The more common, but still very superior ordinary “French Plum,” is also mostly prepared from Provence Plums, which, as being

the most fleshy and bearing the most bloom, are the finest for the purpose. In order that the beautiful bloom may be retained even in their dried state, they are gathered very carefully before sunrise by taking hold of their stalks without touching the fruit, and laid one by one, and free from contact with each other, on vine-leaves placed in baskets, being left thus for two or three days, when they are submitted to the same process as the humbler Prunes. The latter are made in very many places, but those from the neighbourhood of Tours are considered the best, and various kinds are employed; a nearly black sort, called the *Prune d'Agen*, being one of the commonest. When shaken from the trees, the first which fall are rejected as being probably worm-eaten; the rest are placed in an oven slightly heated and shut close for 24 hours, then taken out, and the next day put in again, the oven having been heated this time to 80°. After another cooling interval, they are exposed to a temperature of 100°; then taken out and left till cold, when, in the case of some sorts, they are rounded by turning the stone without breaking the skin, and, after this process, are replaced in the oven, the heat of which is again reduced to 80°; and this time not only is the door closed, but every crevice is stopped with clay or dried grass. After an hour of this close confinement they are released, and a cup of cold water being put into the oven, by the time that this is just as warm as a finger put into it can bear, they are once more exposed to the fiery ordeal for another 24 hours, at the end of which period that white dustiness manifests itself which is to them what the bloom is to the growing fruit; and should they now require any more drying they must receive it at once, for this delicate efflorescence is lost if they are now re-heated after having once been suffered to cool; an artificial bloom, produced by means of indigo, being then sometimes substituted by the unprincipled. Those employed judge when the drying process is complete by the look of the fruit, and seldom are mistaken—a matter of some importance, since if insufficiently dried the fruit would not keep, and if left too long becomes hard, and is then little esteemed. In

some villages an oven for prune-drying is dug in the earth, which, for one season at least, does as well as a built one.

What are known as German Plums are made from the *Quetsche*, a variety largely cultivated in Germany, Belgium, Switzerland, and the North of France, for the purpose of drying; for though less sweet, and therefore less fit for this use, than many other kinds, it has the advantage of coming to perfection at a convenient season, when people are tired of the fresh fruit, and when cultivators have little else to attend to; besides that, it will flourish in colder climates, and is less liable to fail than almost any other sort. In Lorraine an orchard of these plums brings four times more profit to the owner, according to Bosc, than could be derived from any other crop on the same amount of land; and the same author bemoans the ignorance or carelessness of his countrymen in not planting this kind of plum throughout the length and breadth of France, so that Prunes might become a hundredfold more plentiful than they are at present, since he considers that the sun alone would suffice to dry them in warm provinces, and in others, four days of care, such as the children of a household could in great part assist in rendering, would suffice to lay in a large stock of wholesome and pleasant provision for the winter. M'Intosh, too, laments that his Scotch compatriots make no efforts in this direction, plums being little used now by the poor, even for ordinary preserving, whereas drying sorts fit to be made into Prunes for home use could be well grown in Scotland, in hedgerows and on banks not available for anything else, and their produce thus become an article of common consumption.

There are three species of wild plums indigenous to America, from none of which, however, has any cultivated kind been reared; but our *Prunus domestica*, early introduced there, found that country so congenial an abiding-place that it soon became naturalized, and in the Middle States grows almost spontaneously, sporting continually into new and fine varieties. Among these the magnificent Washington Plum holds a pre-eminent place, yielding, it

is true, to the Greengage in point of flavour, but surpassing in size and beauty every plum that has ever been grown. The parent tree of the "Washington" grew on a farm near New York, but, being used as a mere stock and grafted with another kind, escaped notice, until a sucker from it was sold by a market woman to Mr. Bolmer, a merchant, in whose garden it came into bearing in 1818, and attracted universal attention. One of its descendants was soon after sent to the Horticultural Society of London, and it is now known throughout Europe, and registered A 1 in all collections. This tree has large broad glossy foliage quite unlike any other kind, and the fruit is of a roundish oval form, about $2\frac{1}{2}$ in. diameter by $2\frac{1}{8}$, with the furrow very slightly marked except just near the stalk; and in colour, when fully ripe, is deep yellow, relieved with pale crimson, either suffused in a blush on the sunny side or scattered in dots upon the cheek. The stalk, which is a little downy, is scarcely $\frac{1}{4}$ in. long; and on the whole the fruit is not unlike in appearance to its pomal compatriots, the little American Lady Apples. It ripens in August, and the flesh is yellow, firm, and very sweet and luscious.

The same influences, however, which foster vegetative luxuriance, act with equal power upon its great antagonism, insect life, and the ardent American sun, which mellows the fruit to unusual size and savour, also warms into existence more determined foes than have ever attacked it in our cooler clime. The two great obstacles to plum culture in the United States, and which prevail in some districts to so great a degree as almost to destroy the value of the tree, are the "knots," a disease which appears in the form of tumours on the bark, and the cause of which is not yet satisfactorily ascertained, and the far more deadly *curculis*, scientifically termed the *Rhynchæmus Nenuphar*, or plum weevil, an insect which is the special bane of all smooth stone fruit in America. A week or two after the blossom has fallen, the small newly-formed fruit begins to show the little half-moon-shaped mark, which denotes that the destroyer has marked it for his own, and, if the tree be then struck, down falls a

shower of the insects drawn up as if dead, the frightened dissimulators looking, while in this state of collapse, merely like a number of hemp-seeds, but on recovering their natural appearance, they are seen to be little dark brown spotted beetles, scarcely one-third of an inch long, with two camel-like humps on their backs, a long curved snout, which when at rest is bent between their fore legs, and a pair of wings. These devastators have been employed in depositing their eggs, one in each plum, from which a progeny of grubs are hatched, which begin to eat their way to the stone, and as soon as this is reached—that is to say, early in July—the cultivator, who has watched the trees blossom well and the fruit set in abundance and become half grown, has the mortification of seeing it nearly all fall to the ground, spoiled and useless, while the grub enters the soil, and hides there in safety till ready to emerge again, transformed, and recommence its attacks. Finding an easy passage through light sandy soils, it is in such localities that it chiefly abounds, and being found rarely troublesome in heavy ground, and scarcely seen in the case of trees planted in well-trodden places, the plan was tried of paving or spreading hard cement under the trees, an expedient which proved highly successful. It is then only necessary to turn a few swine into the orchard, to dispose at once of the fallen fruit before its uninvited tenant quits possession, so that no insects may survive to renew the campaign next year, and the victory is complete, and the cultivator once more “worth a plum.”

CHAPTER VI.

CHERRY RIPE.

“See cherries here, ere cherries yet abound,
With thread so white in tempting posies tied,
Scattering, like blooming maid, their glances round.”

SHENSTONE.

ABOUT a century B.C., Mithridates the Great, a man of genius as well as a monarch, conceived the idea of

freeing Asia from the Roman yoke. Unscrupulous as to means, a general massacre throughout the country, of every man, woman, and child of Italian birth or origin, was planned, the tragedy of Cawnpore rehearsed on a terribly vaster scale, and the ruthless worker out of a grand "idea" thus became master of almost the whole of Asia Minor. Rome in wrathful fury sent out Flaccus to execute vengeance; on his death Lucullus took his place, and met at first with great success, but being at last defeated, the command was taken by Pompey, whose victories, finally terminating a contest which, it is said, had cost the Armenians 155,000 men, delivered the Roman republic from the most formidable foe she had ever known. The fruit of all this mighty conflict of thrones and dominions, this strife, and massacre, and bloodshed, was—a cherry. For this Armenia, deemed by its proud conquerors half barbarous, possessed a treasure yet unknown in mighty Rome; and when Lucullus, notwithstanding subsequent reverses, was decreed a triumph for the victories he had gained, amid all the golden spoil, the weeping prisoners and the captured standards, the most striking object in all that proud procession were the branches of Pontic cherries with which the victor had wreathed his triumphal car. And well it might be so, for every other result of that victory has long since passed away—the mistress of the world is now not even mistress of herself, but her cherries at least she still retains, and the credit too of having introduced them to the rest of Europe; for, from the trees planted by Lucullus B.C., "Italy," says Pliny, "was so well stocked, that in less than 20 years after they had spread to other lands, even as far as Britain beyond the ocean." Some have affirmed that we are indebted to the great Mithridates personally for this fruit, and that this famous master of 25 languages, when at the height of his power, deigned occasionally to vary his linguistic studies with experiments in gardening, and by grafts made by his own royal hands perpetuated what was at first perhaps but an accidental variety. On the other hand, Theophrastus is quoted to show that it was in his time that the good cherries, as distinguished from

scarcely eatable wildings, passed from lower Asia into Greece, 228 years before Lucullus found them in the garden of Mithridates and brought them thence to Rome. The difference of a century or two would, however, have no effect in invalidating the argument drawn by Hume, from this transplantation of the cherry-tree taking place within the period of historic record, to prove that the present world could only have been called into existence at a comparatively recent period.

The cherry, however, was not absolutely "a new thing under the sun" when the Pontic prize of war was borne in triumph to Rome, for wild cherry-trees are indigenous throughout Central Europe; are found not unfrequently in England, being ranked by Evelyn among our native "forest berry-bearing trees"; are more plentiful in Scotland and Germany, and abound in France; as well as being native to the N. and E. of Asia, and to the N. of Africa, where in Barbary the fruit is dignified with the title of "Berry of the King." It does not thrive in tropical climates, even flourishing better in the more temperate than in the warmer parts of Europe, and it has long been said to be impossible to rear cherries in Egypt. The Chinese too do not succeed in raising good fruit of this kind, though they seem to be specially sensitive to its attractions, in one form at least, for Abel tells us that "the embassy found in every part of China cherry brandy to be the most seducing cordial they could offer to a Chinese palate." As regards endurance of the other extreme of temperature, it will ripen in some parts of Norway, though not a native there, and an ingenious method has been devised at St. Petersburg of securing in that inclement climate a full summer supply even of the tender Morello, by means of training the trees on horizontal trellises only 10 or 12 in. from the ground, so that the heavy snows of winter soon completely bury the whole plant, and thus protect it from all injury during frost. In the S. of Russia it is said there are "forests of cherry-trees," but there we are approaching the headquarters of the race, for *Cerasus* or *Cerazunt*, whence they were first brought, and whence their present bota-

nical name *Cerasus* is derived, was a city on the borders of the Black Sea. They still linger lovingly in the region which is looked on as their native place; for Dr. Walsh described the gardens on the W. coast of Asia Minor, as consisting wholly of cherry plantations, into which strangers may enter freely and eat as many as they please, being only required to pay about $\frac{1}{2}d.$ per lb. for any which they may wish to take away with them. The trees are of enormous size, but are exceeded in this respect by another variety, growing in the woods in the interior of the country, which were from 90 to 100 ft. high.

All the numerous varieties of cherries which now exist, and among which it can no longer be told which was the first improved Mithridatic one, are traced back to two wild types, the one red and sour, the other black and bitter; the former being called by the French *Cerisiers*, and the other *Merisiers*, a contraction of *Cerises amères*, still further contracted by English provincials into "Merries," or sometimes *Guigniers*, anglicized into "Geans," while the same admirable methodizers to whom we are indebted for these distinctive appellations further divide the cultivated kind into the firm-fleshed *Bigarreaux*, from *bigarré*, parti-coloured, these fruits being generally variegated with red and yellow; and the tender-fleshed *Griottiers*, formerly *Agriottiers*, from *aigreur*, sourness. It has been doubted whether the *Cerisier* be really an indigenous growth of Europe, for even in France it is only in the vicinity of human habitations that it is found wild; but the indubitably native *Merisier*, growing in the woods as tall as oaks or beeches, with horizontal branches, and bearing fruits more or less bitter, abounds more perhaps than any other fruit-tree. It was so highly prized as supplying food for the poor, that in 1669 a law was passed for the special protection of all the cherry-trees in the royal forests, till, left thus unchecked, they multiplied to such an extent, that there would soon have been little room left for anything else, when, with a rush to the other extreme, a new edict was promulgated commanding all the rapidly rising race to be ruthlessly destroyed, except a select number of saplings reserved to secure

a supply of timber. This inconsiderate measure was a great calamity for the poor, for soup made of cherries with a little butter and bread was their chief sustenance during a great part of the year, the fruit being not only put to this use while fresh, but also dried in great quantities by exposing it on boards in the sun, or in ovens, and an inexpensive provision thus secured for the winter, the wood-cutters and charcoal-burners contenting themselves with little else beyond this frugal fare. In Germany also *kirschen-suppe*, consisting simply of cherries stewed with sugar and water, and slightly thickened with potato flour, is a frequent dish at most tables, either as a soup to open or a sweet to close the repast. Crushed and fermented, these wild cherries can also be made into a wine of agreeable flavour, but so weak that it can hardly be kept, even when bottled, until the next season, and has therefore never become an article of commerce, but is chiefly distilled to make *Kirschwasser*, some of the stones being previously broken, in order that the kernels may also contribute their flavour. It takes 20 pints of fermented pulp to produce a single pint of this liqueur, which is clear as water, being valued according as it is free from any tinge. Even in France it is always sold dearer than the best brandy, though, as the fruit from which it is made costs nothing for cultivation, Bosc observes that it ought to be far cheaper, and would be so, since it can be made wherever wild cherries grow, were it not for the ignorance and inertness of the peasantry, yet further exemplified in the fact, that in 1821 there were still "many cantons" in France where the cherry was absolutely "not known." The manufacture of *Kirschwasser* is chiefly carried on in some parts of Germany and Switzerland. In Italy, the yet more precious cordial *Maraschino* is distilled from the leaves and kernels of a small Gean pounded in a mortar, mixed with honey, and slightly fermented. Fresh cherries distilled, and even dried ones boiled, afford also, it is said, a liquor found very beneficial in whooping or ordinary coughs; and Evelyn says of our own wild black cherry, that "with new wine and honey they make a *conditum* of admirable effect to

corroborate the stomach," an assertion likely to be taken little notice of in days when it is statements rather than stomachs for which the world asks corroboration.

The wood of the cherry-tree is extensively used in Paris for furniture, being reckoned only second to mahogany. Yet few cherry-trees are ever planted in France, this office being left to the birds, who, however, carry it on with sufficient assiduity to secure an unfailing supply, whether for fruits, timber, or as stock upon which to graft the cultivated kinds, the trees being found both to grow better and to live longer when the stem at least is of the wild kind. The exterior bark of the cherry-tree having more circular fibres than other trees, becomes thereby so tough as sometimes to hinder the growth of the plant, and it is said that in some places slits are made in the bark as a remedial measure, but this seems very doubtful, since, if that part be wounded, the sap exudes in the form of gum, which is looked on as a disease, as the same effect takes place from age or deficiency of nourishment. This gum, which exists in plum-trees also, but is most abundant in the cherry, resembles gum arabic, but only swells when placed in cold water, and requires boiling fully to dissolve it. It is, however, sometimes used in France for manufacturing purposes when there is a scarcity of gum arabic, but as its extravasation is thought to enfeeble the trees, and the branches must be cut in order to procure any considerable quantity, it is forbidden for any but the proprietor of the land to gather it.

The first notice we have of cherries in England, after Pliny's mention of their being introduced here by the Romans, occurs in 1415, when Lydgate's verses recount their being cried for sale in London streets. The culture of them seems, however, to have rather languished until the time of Henry VIII., when it received a great impetus from the efforts made by Richard Haines, fruiterer to that monarch, who imported a number of trees from Flanders and planted them at Tenham in Kent, in which county tradition asserts that those originally brought by the Romans had also found their first resting-place. Before the end of the king's reign they had, in the words of

Fuller, "spread into 32 parishes, and were sold at great rates. I have read," continues that author, "that one of the orchards of this primitive plantation, consisting but of 30 acres, produced fruit of one year which sold for £1,000; plenty, it seems, of cherries in that garden, meeting with a scarcity of them in all other places." Most extravagant prices were indeed sometimes paid for this fruit; for Mr. Thornbury tells us that in Shakespeare's days, "the pretty and capricious ate cherries when they were an angel [7s. 6d.] a pound," this too at a time when the cost of a fat goose was but 1s. or 1s. 2d. They had probably become comparatively common in neighbouring countries by this period, for we further learn that strangers arriving here "brought over things that were cheap with them and dear in England, as paper, oranges, pippins, cherries, &c." About this time too they were introduced to a sister land, for according to Dr. Kitchener they were first planted in Ireland by Sir Walter Raleigh, at his estate at Youghal, where some of his cherry-trees were still lately to be seen. By a near connection of that great man the same tree was made the subject of one of the earliest pomological experiments practised in England, for Sir Hugh Platt, in his "Garden of Eden," thus relates an anecdote of loyal gallantry quite worthy of the relative of Raleigh: "Here I will conclude," says he, "with a conceit of that delicate knight, Sir Francis Carew, who, for the better accomplishment of his entertainment of our late Queen Elizabeth of happy memory, at his house at Beddington, led her Majesty to a cherry-tree whose fruit he had of purpose kept back from ripening at the least one month after all cherries had taken their farewell of England. This secret he performed by so raising a tent or cover of canvas over the whole tree, and wetting the same now and then with a scoop or horn, as the heat of the weather required; and so, by withholding the sunbeams from reflecting on the berries, they grew both great and were very long before they had gotten their perfect cherry colour; and when he was assured of her Majesty's coming he removed the tent, and a few sunny days brought them to their full maturity." It is said, too, that a means

of hastening the ripening of cherries was adopted at Poitou so early as in the 16th century, hot limestones being laid upon the ground under the trees, and hot water poured upon the soil, by which method ripe fruit was obtained by the 1st of May.

Though cherry-gardens are less numerous than formerly in Kent, this fruit continues to be its *specialité*. The variety for which it is most famous, which is named from it the "Kentish Cherry," and which is supposed to be the original sort brought by Haines from Flanders, is distinguished by the peculiarity that it suffers the stone to be plucked from within it in much the same style as Richard "robbed the kingly lion of his heart," the stalk establishing so firm a hold upon it by means of the fibres which link them together, that it may be withdrawn by laying hold of that appendage, leaving the fruit seemingly whole in the hand of the gatherer, while its extracted core remains in the tenacious grasp of the stalk. The Kentish Cherry is one of the best kinds for cooking, and its application to culinary purposes is greatly facilitated by this easy removal of what Pliny, in the presumption of his antique ignorance, ventures to call the "faulty superfluity," which, in the case of cherries, is, as he phrases it, "environed by the good fruit, whereas fruit otherwise is ordinarily defended by the said imperfection (!) of the shell." Verily censures when cast upon the arrangements of Nature, like curses, "come home to roost."

The pale, sweet, firm-fleshed *Bigarreau* is the cherry most generally seen at the dessert-table, but the one considered by many to be the most delicious fruit of the whole tribe is the Elton, an invaluable hybrid variety raised in 1806 by Mr. Knight. Beautiful in appearance and rich in flavour, it bears a great resemblance to the *Bigarreau*, but is distinguished by its longer stalk, while it comes into season earlier, and has more tender flesh.

The Morello, so called either from the dark juice being like that of the *morus* or mulberry, or from the French word *morelle*, a negress, on account of its swarthy shining skin, is another of our most valuable kinds of cherries; and though so austere when exposed to a

northern aspect as to be only fit for making preserves or putting in brandy, when trained against a south wall its rich juicy fruit, larger than any other of the tribe, is excellent for the dessert, if left a sufficient time to mature. It is, however, the small black cherry, which grows wild in several parts of England, particularly in some places in Suffolk, where it is commonly called the merry tree, which is mostly used in the manufacture of cherry brandy. These black cherries abound also in Bedfordshire and Herts, and when they are in season give occasion for "pasty feasts," at which pasties made of them form the principal feature. At Ely in Cambridgeshire, too, a special "Cherry Sunday" is observed, on which people repair to orchards in the neighbourhood, and for a small payment are allowed to eat as many as they choose. Nor are such compliments to cherry attractions peculiar to England, for in some villages in Erfurth, where there are very extensive plantations of this fruit, the people set apart a day to celebrate their ripening, and assemble on the "Cherry Festival" to pass the time in sports and rejoicing; while Phillips records a yet more interesting "Feast of Cherries" as being observed annually at Ham-burgh, by troops of children carrying branches adorned with ripe cherries, parading the streets with joyous cries. In this case, however, the custom originated in a desire to perpetuate the memory of an event said to have occurred in 1423, when the Hussites having threatened Ham-burgh with immediate destruction, one of the citizens proposed that all the children in the city between the ages of seven and 14 should go, clad in mourning, to supplicate the enemy's forbearance. The advice was adopted, and with the happiest result, for Procopius Nasus, the Hussite chief, was so touched at the sight of such a band of little sorrowing innocents, that after regaling them with a feast of fruit he sent them home laden with cherries, and uttering shouts of "Victory!" for they bore to their parents his promise that the devoted city should be spared. Throughout Germany, indeed, the fruit is a general favourite; trees of it are much planted on the road-side both in that country and in Switzerland,

and Loudon mentions one avenue in Moravia from Brunn to Olmutz as being 60 miles long, while others extend all the way between Strasburg and Munich. These are planted by desire of the government; and though the main crop when ripe belongs to the proprietors of the ground, all passengers are allowed to partake of them freely while growing, so long as they do not hurt the trees. Should the owner wish to preserve the fruit of any particular tree untouched, he has only to tie a wisp of straw round one of the branches, when no one will think of gathering from it, this mark of "taboo" being always religiously respected.

"The cherry-tree," observes Pliny, "is one of the first that yields fruit to his master, in token of thankfulness and recognizance of his pains all the year." And, indeed, the appearance of this fruit is still one of London's earliest signs of summer. Tied carefully in scattered rows on sticks, or grouped closely into little "posies" as though they had grown together to form a sort of magnified mulberry, they afford the first faint flush of "celestial rosy red," brightening the street stalls almost as soon as the fruiterers' windows, glad harbingers of a radiant burst to come, when full July shall pour out all her crimson treasures and glorify the year with a flood of ruddy ripeness. Though thus early in developing its produce, the blossoms only whiten the tree with their pure snowy lustre about the same time as the later apple and pear put on their spring vestures. They are like those of most of our fruit-trees, formed on the type of the rose, a calyx with five petals surrounding a ring of numerous stamens, the centre in this case being occupied by a single ovary, which eventually becomes the fruit, every trace of the blossom disappearing when this is formed. The perfect fruit is, in botanical language, a *drupe*, for the hard or bony part, which combines with skin and flesh to make up its being, is not, as in the case of nuts, spread in Crustacean style over its exterior, but, after the fashion of superior animals, is kept as a skeleton within, collected into a central ball as a foundation for its globose shape. A very pleasant object to the eye is this round ruddy shining cherry; and

what a contrast is presented in its smooth swelling globular form to that of the flat and pointed leaf, with its sharply-cut serrations at the edges, even as its fierce flaming colour is in striking opposition to the cool green of the foliage! And yet pleasanter is it to the taste, that morsel of delicate flesh all oozy with freshening juice. Can any likeness be found there to the dry crude matter which fills up the veiny network of the leaves? Yet, says the morphologist, this red tasteful ball of juicy pulp is but, after all, a leaf; altered, it is true—call it perfected or call it perverted, whichever term may be preferred—but still a leaf, and nothing more; and it is a cherry-tree which is especially pointed to as the triumphant vindication of this view. The first hint of its being possible that leaves were gradually transmuted into all the other organs of a plant appears to have been given by Linnæus, but it was the poet Goethe who wrought out the idea and developed it into a system, now so generally adopted that there are few, if any, naturalists who do not admit at least its great principles, viz., that the laws which regulate vegetable structure are so simple and uniform that their action in every part of a plant are exactly similar, and the arrangement of any subsequent development is but a repetition of that which was observed in the normal germ; as a melody may be made the theme of a thousand variations, yet through all the “linked sweetness long drawn out” the notes of the original air be still distinctly traced. According to this theory, then, a flower-bud, being exactly analogous to a leaf-bud, the object into which it develops is to be considered as a metamorphosed branch, though, instead of shooting out into a long twig garnished throughout its length with scattered leaves all formed upon one pattern, its energies, compressed within nearer limits, unfold into a more closely gathered group of objects of diversified form and texture. In *ascending* or progressive metamorphosis the first departure from the regular form of the leaf is seen in the usually still green and somewhat leaf-like sepals, or divisions of the calyx; the next modification changes these into the petals or divisions of the corolla; one more advance contracts these into stamens;

and the final step forms a central pistil, the divisions of which, if more than one leaf enters into its composition, are termed carpels. Cultivation or other causes will sometimes "reverse the charm" and induce *retrograde* metamorphosis, such as is seen in ordinary double flowers, where the petals, which in the usual course of nature would have changed into stamens, are arrested in their progress and retained in the former stage, the flower thus spending its whole capital at once merely to obtain the more showy appearance of a largely increased number of transitory petals, instead of making a provision for the future by investing some portion in the formation of stamens, a proceeding which involves its fortune dying with it, for in the absence of those organs of fertilization the ovary cannot be fecundated, and can never therefore mature into a fruit. In the double cherry-blossom, however, a still more marked retrogression often takes place, an ultra reactionary movement beginning just when the extremest point of difference has been reached; for not only do extra petals take the place of stamens, but the innermost carpels, instead of combining to form a pistil, revert to the most normal figure and become a group of separate leafy expansions in the middle of the flower; as though a party of princes of the blood who had overcome all opposition should suddenly resign all thought of monarchy, and resolving themselves into a democratic convention, hang out the red flag of *egalité* from the very throne-room of the palace. The result is that the withering of the blossom leaves behind a bunch of leaves instead of a succulent fruit. Even, however, when no such striking proof of identity of essence in the various parts of the plant occurs, the morphologist still traces in the ordinary cherry (the germ of which was seen in the blossom in the form of the little ovary at the base of the pistil, now swollen and become pulpy) all the elements of the leaves, and looks on it as only a leaf bent in upon itself and with its edges united, the place of their junction being marked by the furrow seen not only on the surface of the fruit, but which extends even to the very kernel, always found to be more or less deeply fluted. The leaf consisted of three

layers, an inner integument covered on each side by an epidermis; and in the cherry these three parts are still found similarly disposed, the external membrane, somewhat thickened, still remaining outside as the *epi-carp* (from *epi*, upon); the moister larger, middle grown vastly more succulent, is the *meso-carp*, or middle part; while the covering of the under side, become central by the inward turning of the leaf, has hardened into the *eudo-carp* or inner part, the woody case which contains the kernel. Any fruit so formed is technically termed a *drupe*, a name which applies therefore to some of the many growths which popularly share the very indiscriminately-used title of "berry," as well as to all which in common parlance are called "stone fruits," of which number the plum is so strikingly similar in its construction to the cherry that they were classed together by Linnæus, but have been separated by modern botanists on the ground of other differences in the plants, chiefly seen in the unfolding of the leaves.

A very remarkable cherry cultivated in France as a curiosity is the *Cerise à trochet*,* also called *Cerise à bouquet*, the flowers of which consist of from five to seven petals, 30 or 40 stamens, and six to 12 ovaries, some of which always become abortive through want of nutriment or room to expand, while the rest mature into a cluster of cherries all on one stalk. They ripen about the end of June, but are always smaller than ordinary cherries, and too acid to be eaten raw.

The foliage of the different varieties of the cherry varies very much, but it is usually found that trees, where this is of large growth, bear also the largest flowers and fruit; and Loudon makes brief allusion to a certain "tobacco-leaved cherry," the fruit of which weighs at the rate of four to the pound, a magnitude which, in spite of wise saws, would certainly make the proverbial "two bites" a by no means uncalled-for proceeding. The cherry sports more into varieties when raised from seed than any other fruit, but grows larger and lives much longer in that case

* See Plate IV., fig. 2.

than when budding or grafting are resorted to. The stones must be either planted in autumn or preserved in sand until the spring, which would seem to betoken no very tenacious hold upon vitality; yet one at least of the cherry tribe, a N. American variety, appears to possess very great power of lying dormant until circumstances favourable to its development shall occur, since it is difficult otherwise to account for the peculiar property which, according to Michaux, it possesses, in common with the paper birch, of springing up spontaneously in all places which have at any time been cultivated, and in parts of the forests that have been burned, either where accident has made an extensive clearance, or even merely where a fire has been once lighted by a passing traveller, as though some strange sympathy with man induced it only to spring into existence in spots marked by his footsteps, or where the element of which man alone is master had at least prepared the way for his presence.

Speaking of the various uses of the wild cherry in France, Bosc says prettily, that "it is a manna sent by Heaven for young birds," and cherries of all kinds, except the Kentish and Morello, are much preyed upon by these "light-winged gentry." But the feathered race are not entirely left to compete with zealous man, so apt to claim "all things for his use," for a share of what he too can relish; for the Creator's tender care has even allotted to them a whole family of the *Cerasus* tribe for their special and exclusive use, as far at least as the fruit is concerned, which are thence called "Bird Cherry-trees," and which grow wild in many parts of Europe and America. The fruit, which is small, with a very large stone, black, and growing in *racemes* like currants, instead of in clusters as our cherries do, is so nauseous that it is quite unfit for human use, except that in some places in the North a spirit is distilled from it, or it is infused in brandy to give a flavour which some approve; but is greedily devoured by birds of all kinds, while the leaves are so peculiarly attractive to insects that the tree is often quite laid bare at the very beginning of summer, when other foliage has scarcely been attacked. This circumstance led a Bavarian

writer to suggest that if a few trees of this kind were planted in all cherry orchards the moths and butterflies in the neighbourhood would deposit their eggs upon them, and though the poor scapegoats would soon present a hideous appearance, the other trees would be quite safe.

The most noted variety of the Bird Cherry is the *Mahaleb*, or perfumed kind, every part of which exhales a powerful scent, something like that of the clematis, that of the blossoms being so excessive as to be insupportable in a room. It specially abounds in Champagne in France, and, flourishing in the poorest soil, where nothing else could grow, gives value to large tracts of land which would otherwise be worthless. The leaves are used, either fresh or dried, to feed cattle, and are also put into dead game, to impart a flavour to the flesh. The wood, which is brown, beautifully veined, and susceptible of a fine polish, is much sought after by cabinet makers for ornamental work, and is sometimes burned for the sake of the perfume it sends forth while consuming; while the hard shining berries are strung as beads to form bracelets, &c., the "cunning perfumers" of two centuries ago bartering them for John Bull's gold, as imposingly as though that respectable old gentleman had been a mere Indian savage, for they were "sold to our curious ladies and gentlemen for rare and strange pomanders, for great sums of money." The timber of the Virginian Bird Cherry rivals mahogany in beauty, and is much used in America for furniture; but in England trees of any of the species are only planted for ornament, or to attract singing birds to shrubberies.

The cherry claims the honour of near kindred with the tree of Apollo, being closely related, as the name indicates, to the *Lauro-cerasus* family, including both the common and the Portugal laurel; and though doubt has sometimes been cast on the assertion of Cowley, when, recounting the triumphs achieved by man in the vegetable kingdom, he adduces as a crowning exploit,

"Ev'n Daphne's coyness he does mock,
And weds the Cherry to her stock!"

experiment has proved that the alliance is quite possible,

and a cherry grafted on a laurel has more than once been shown at a modern exhibition.

As regards the properties of cherries there is little to be said. The fruit is recommended in fevers for its refreshing qualities, as almost any fruit might be, but even in days when occult virtues were attributed to nearly everything in nature, Parkinson concludes his article upon them, not, as in the case of most of the other fruits, with a list of the special benefits to be derived from their use, but simply with the honest avowal that "all these sorts of cherries serve wholly to please the palate." Dr. Bulleyn, however, the very earliest English writer on such subjects, affirms that they "be most excellent against hotte burning choler," and doubtless were an angry person always to eat half a pound of cherries before letting out the irate thought in words, the sun would be less likely to go down upon his wrath than even were the commonly recommended expedient resorted to of counting 100 before giving vent to it, while the virtue would assuredly have done something more towards securing "its own reward."



CHAPTER VII.

THE PEACH.

ITALY rejoices in its vine, Greece in its fig-tree, England glories in its "home-made" gooseberry, and, indeed, almost every country of Europe has some fruit, either native or adopted, for which it is specially famous; while on other continents, Arabia blesses Allah for the date-palm, as a more than sufficient compensation for every other deficiency, and South America claims the supreme honour of having supplied the world with pine-apples.

But what, then, is left for the other and "better half" of the New World to wreath round the staff of its star-spangled banner? and wherewith shall the country which "flogs creation" scourge us into a sense of her superiority in "fruit notions" as well as in all else beneath the sun? An answer is not lacking, for Pomona has vindicated her impartiality in bestowing upon the "States" one of her choicest gifts, and though not native to their soil, it has proved so good a foster-mother to the fruit, that the Peach is now in America what the orange has become in Spain or the Azores, at once the commonest and the best of its fruits.

A true child of the sun, the origin of the peach is distinctly traced through its ancient title, "Apple of Persia," to that land of the far East—a derivation the memory of which is still preserved in its botanical name *Persica*, the generic prefix being the same as the almond, *Amygdalus*. An old tradition asserted that being originally of a poisonous nature, causing dreadful tortures to any who ate it, it was sent from Persia to Egypt with the malicious view of injuring the inhabitants of that country, who, it was supposed, would be tempted by the beauty of the new introduction to partake of what would prove to them a fatal banquet—a wicked design, which was unexpectedly frustrated by the beneficent Egyptian soil working so wondrous a change in the plant that its produce, gathered there, proved as harmless as delicious. In reference to this, Dr. Sickler considers that the peach might have been at least unwholesome in Media, and have become good and salubrious as it gained increased pulpiness when transferred to the rich alluvial soil of Egypt; and our own Knight suggests, as the most probable solution of the bane having thus become a blessing, that the Median fruit spoken of might have been really an almond, the flesh of which contains a considerable quantity of prussic acid, and is to this day held to be poisonous in some parts of the Continent, but which, transplanted to Egypt, might have become modified into a true peach; indeed, he characterizes the latter fruit as neither more nor less than an improved or fleshy almond, or rather "an almond swollen

and become pulpy," considering that "nut," as it is popularly reckoned, to be really to the peach what the crab is to the apple and the sloe to the plum. This theory he justified by an experiment in hybridization, which resulted in an almond-tree fecundated by the pollen of peach blossoms producing a fruit which combined the flesh of the latter with the kernel of the former. Du Hamel, too, speaks of an *amandière-pêcher*, the fruit of which mostly splits at the furrow while on the tree, as does the almond-husk, the flesh being sometimes quite worthless, sometimes very tolerable, and the kernel differing little from an almond; and that some such effect was known even to the ancients, though wrongly attributed by them to grafting, may be gathered from the statement of Pliny, that "the plum-tree grafted on the nut exhibits what we may call a piece of impudence quite its own, for it produces a fruit which has all the appearance of the parent stock together with the juice of the adopted fruit, and in consequence of its being thus compounded of both, it is known by the name of *nuci-pruna*, or "nut-plum." Columella adopts the story of a poisonous gift treacherously conveyed to Egypt, alluding in his ancient treatise on the garden to

" Apples which most barbarous Persia sent
With native poison armed (as Fame relates),
Though now they 've lost their power to kill, and yield
Ambrosian juice, and have forgot to hurt,
But of their country still retain the name";

though some ancient writers affirm that this legend referred not to the "*persica*," but the "*persa*," a very different fruit, not identified with any now known; and others assert that the peach was really first planted at Memphis, and assuredly with no bad motive, by Perseus, on which account Alexander chose it afterwards as the tree that should supply crowns to the victors in the games instituted in that city in honour of his dragon-slaying ancestor. In the days of Pliny it had only been lately (during the reign of the Emperor Claudius) and with considerable difficulty brought into Italy; and he records that in the island of Rhodes, its first resting-place on the way from Egypt, it remained perfectly barren: nor does

it seem that it could have been very plentiful in Rome, considering the price obtained for it, for, being a special favorite with invalids, and having the reputation of being a particularly harmless fruit, it was sold sometimes at the rate of 30 sesterces (about 5s.) apiece, a price beyond that of any other fruit, although, too, it was of so perishable a nature that when once plucked it could never be kept longer than a couple of days, so that by that time, as the writer remarks, "sold it must be, fetch what it may." Soyer assigns a yet higher price, and says that the ancient Romans sometimes gave as much for their peaches as £11 13s. 4d. a dozen, or 18s. 9d. each!

There is no authentic record of the introduction of the peach into England, though it was probably brought from Italy in 1524, together with the apricot, by Wolf, the gardener to Henry VIII., for it is mentioned in the lists of fruits growing in this country, as enumerated by Tusser, in 1557. Gerard, who mentions several varieties, recommends the leaves boiled in milk to destroy worms in children—a prescription which is still considered to be efficacious, though it needs to be followed with great care, since an overdose may have the effect of destroying not only the worms but the children as well; an effect which has also occasionally resulted from the use of a syrup made from the flowers as a purgative, though it is said that this has only occurred when the flowers had been imprudently gathered from trees grafted upon almond stocks, the blossoms in this case partaking of the nature of the stock, and their virtues being accordingly changed. A safer use for the leaves is to infuse them in white brandy, which thus, when sweetened with sugar candy, makes a fine cordial similar in flavour to noyau. They also serve to distinguish the different varieties of the plant, and the history of the discovery of their being available for this purpose affords great encouragement to the general cultivation of habits of observation. It appears that some means of ascertaining what kind of peach would be produced without waiting for its actual appearance had long been desired, when M. Desprez, a judge at Alençon, came to Paris in 1810 as deputy to the legisla-

tive corps, and, being a lover of nature, spent much of his leisure in the imperial nursery-grounds at the Luxembourg, in the study of fruit-trees and of peaches in particular. Looking often very attentively at the leaves, he was struck one day with the glands or little red protuberances which many of them have on the edges of their petioles or on their first serrations, and which no one had yet observed; and on carefully studying their form, found that some peach-trees never had any, others had them always in a regular globular form, and in others again they were invariably of an irregular or kidney shape. He mentioned this to Messrs. Poiteau and Turpin, the learned editors of the new edition of Du Hamel, who also beginning to study them, soon found that he was quite correct in his observations, and owning with shame that they who had spent their lives in studying fruit-trees had never noticed these glands until pointed out to them by the legal amateur, acknowledged them to be an infallible mode of distinguishing varieties, most valuable, as it could be referred to at almost any season, and adopted therefore in all subsequent works, even in England, peaches being now always divided into kinds without glands on the leaves, and with globular or reniform glands. The fruits, accordingly as they part from or adhere to the stone, are divided into free-stones (*pêches*) and cling-stones (*pavies*). The tree flowers very early in the spring, and its pink rosaceous blossoms, with numerous red anthers surrounding a single pistil, even when they escape the blighting east wind, which is England's vernal bane, and which too often prematurely wither them, soon drop off, leaving the ovary to mature into a large fleshy *drupe* covered with a thick velvet-like skin, and containing an oval stone irregularly furrowed with numerous corrugations, within which is a kernel strongly impregnated with hydrocyanic or prussic acid. The flesh of this drupe is so juicy that it is found when ripe to contain 80 per cent. of water. The fruit varies in size from 14 in. in circumference, to the dwarfs grown in France on tiny trees about a foot high, which are placed in pots upon the dessert-table to display their eight or 10 peaches, each about 2 in.

in diameter, which, however, are mere curiosities, being too bitter to be eaten. As regards abundant produce in favorable seasons, the peach may rival any tree in the teeming condition of its branches, 32 plants having been known to produce in one season 15,184 peaches and nectarines. The tree is popularly supposed to be particularly short-lived, for the common custom of grafting the peach upon almond stocks induces a premature decay, so that they rarely survive their twentieth year; but, grown as seedlings, or grafted on their own kind, with good management they will remain healthy and fruitful at least as long as the ordinary span of a human life; while preaching, too, an eloquent lesson to humanity, in the fact that not only do trees of from 40 to 60 years old bear good crops when younger ones are found failing, but the fruit of these veterans is also of finer flavour than that produced by the rising generation. In England they always require the protection of a wall, but it was Mr. Knight's opinion that in successive generations the tree might be so hardened and naturalized to our climate as to be grown successfully in its proper form as a standard. That gentleman originated many of the varieties now grown, impregnating the pistil of one blossom with the pollen from another: only three peaches were allowed to mature upon each tree, the stones of which were then sown the next year, and new and fine kinds thus obtained.

In France peaches are more plentiful than with us, but even there they usually require to be grown against walls; and though the soft melting sorts thrive admirably near Paris, the firm-fleshed varieties, though they attain fine flavour, never completely ripen.

In Sierra Leone the peach is reckoned one of the most valuable of the fruits grown there; at the Cape it is abundant and cheap; and we may hope that by this time it is fast spreading over the interior of Africa, not only adding an innocent luxury to the scanty fare of the natives, but quickening them to desire improvement, by displaying itself as in every sense one of the fruits of civilization, and calling forth the kindly emotions in reminding them of the disinterested benevolence of the white brother to

whom they owe it, the peach having been introduced in 1822 by the enlightened and beneficent traveller Burchell. In this gentleman's interesting account of S. Africa, he mentions having distributed peach-stones on several occasions, and particularly when taking leave of the chief of the Bachepins, to whom he presented a quart bag full, advising him to send a few to each of his subordinate chieftains; assuring him that they had been brought for no other purpose than to benefit the Bachepin nation, by introducing into their country a fruit superior to anything they had ever yet known, a few berries being their only spontaneous growths, and gourds or melons the only cultivated ones; and impressing on him their value by telling him that when once grown, they would continue year after year, without further trouble, to produce abundance of large fruit of very fine flavour. Judging that it would be the best pleader of its own cause, the kind-hearted traveller endeavoured, as a further inducement to his savage friend to take care of the future trees, to give him a foretaste of their fruit, and accordingly, having a few dried peaches among the stores of his waggon, prepared them to the best of his ability, by softening them in water and adding a little sugar and salt of lemons, to revive somewhat of the faded flavour, and then set this "dainty dish" before the chief, whose appreciation of the foreign novelty was soon shown not only in the strong approval he expressed, but also in the fact that, contrary to his usual custom when in public, of offering some portion of what he partook of to those who sat by him, on this occasion the wild potentate consumed the whole himself, except one small piece which he gave to his uncle—a picture which affords a strange reflex, in ruder colours, of our Charles II. handing to Evelyn a morsel of the first king-pine brought to England.

But of all the countries of the Old World, it is in China, according to Downing, that this fruit reaches the highest perfection in open orchards; * and the peaches of Pekin,

* The eminent botanical traveller, Mr. Fortune, does not endorse this American account of the perfection of Chinese peaches, but, on the contrary, in his *Wanderings* speaks of them as being curious but of very poor quality.

double the size of European ones, are considered the finest in the world. Nor is the superiority of these celestial growths simply of a material nature, for a spiritual significance also attaches to them, undreamed of as regards the wall-fruit grown by earthly-minded barbarians, the peach-tree seeming to hold very much the same place in ancient Chinese writings that the Tree of Knowledge does in the Hebrew Scriptures, or the golden apples of Hesperides in the classic mythology; and it is said that traditions are preserved in early Chinese books, both of a Peach-tree of Life, which bore only once in 1,000 years, but the fruit of which when eaten conferred immortality, and of a Peach-tree of Knowledge, which had existed in remote ages on a mountain guarded by 100 demons, and "whose mortal taste brought death" to those who partook of its produce. Whatever may be thought of these gatherings in the field of fancy, it would seem to be a fact that the ordinary fruit (for no sucker of those divinely-gifted trees survives in these degenerate days) is looked on rather as a food than as an occasional luxury, for "*Tao-yuen*" (translated "a peach-tree and a spring") is a common byword in China to express philosophical retirement—a saying derived from the history of one of their sages, who sought solitude in a desert, and found enough to satisfy all the wants of nature in these two sources of nourishment, the only ones it afforded. Considering the large per centage of water shown in the analysis of the ripe fruit, a carping Diogenes might even then perhaps have called the spring a luxurious superfluity.

But however abundant peaches may be in China, there is no country in the world where they are grown in such quantity as in the United States, while, as regards quality, those of America surpass all except the Chinese. In the Eastern States some artificial aid is generally required, but in many parts they grow almost spontaneously, and thousands of acres are devoted to this crop to supply New York and Philadelphia. Extreme plenty causing fastidiousness, in seasons of abundance whole sloop-loads of this fruit, of second quality or slightly decayed, may be seen thrown into the North River in a single morning.

The market price of those which are considered worthy of being sold varies considerably, but as they grow on lands too light to afford good crops of almost any other kind, the investment can never be a very bad one; many growers in New Jersey have, therefore, orchards of from 10,000 to 20,000 trees, and in the course of a good season send out about that number of bushels of fruit from such of the trees as are in bearing. Mr. Downing, as the enthusiastic champion of the chosen fruit of his native land, boldly throws down the gauntlet, offering to maintain its peerless beauty against all rivals; but, convinced that to praise the American peach would be at least as superfluous an undertaking as "to gild refined gold, or paint the lily," he proposes to stop the mouth of any one who may presume to question its excellence by presenting him with one of his best growth—"a soft answer," indeed, which might well "turn away wrath," but the prospect of which would be rather calculated to tempt a provocation of the discussion, for the sake of incurring the termination of it by so melting an argument.

Besides the immense quantities consumed while fresh, peach pie being as common fare in an American farmhouse as apple dumpling in an English one, the fruit is also largely used during the winter in a dried state, being prepared, either on a small domestic scale by being placed in ovens after the withdrawal of the bread, or, when for sale, in small drying-houses heated by a stove and fitted with drawers formed of laths, with spaces between to allow the air to circulate; in these the fruit is placed, skin downwards, being left unpeeled, though cut in halves in order to extract the stone. After being left thus for a short time, the drying process is complete; and in the South a still simpler one is adopted, the fruit being merely laid on boards and dried in the sun, after dipping them first while whole, a basket-full at a time, for a few minutes in boiling water.

The peach was introduced into America by the early settlers, somewhere about 1680, and before long was grown everywhere south of 48° latitude, literally without cultivation, it being only necessary to plant a stone, and

in the course of a few years * abundance of fruit was obtained, the supply continuing for a long future. This is still the case in the far West, and indeed in all parts the peach is more easily propagated than any other fruit-tree; the stones, buried in heaps in the autumn, being taken up in spring, cracked, and the kernels set in rows in prepared soil, wherever they are intended to grow. In the course of the same spring they vegetate, soon grow 3 or 4 ft. high, and may be budded the following September. In two years from that time, if left undisturbed, they will usually bear a small crop, and by the next season an abundant one. In the older States, however, within the last 50 years two great evils have appeared to obstruct the former smooth course of the fruit-grower, in the shape of two diseases of different degrees of injuriousness, but the combined influence of which has vastly diminished the natural term of the peach-tree's life and the value of peach orchards. One of these is caused by a grub, which devours the bark and thus kills the tree.

Far more fatal because less understood is the "yellows," a malady which affects the peach-tree exclusively, and seems also to be peculiar to America; which propagates itself both by the seed and by grafting, and is also contagious, spreading gradually but certainly through whole districts. The contagious characteristic is much doubted in theory, since there is nothing analogous to it in the whole range of the vegetable kingdom, but, being proved practically true, has to be taken for granted so far as acting upon it is concerned, for only where every vestige of the infected trees has been utterly destroyed has the plague been stayed and the health of the remainder been preserved. Perfectly unknown for at least a century after the introduction of the fruit, it was about the year 1800 that it first appeared, in the neighbourhood of Philadelphia, and slowly extending its ravages, did not become general until after the close of the war. The grand cause of this peach disease is supposed to be the exhaustion of the land

* Seyd, in his *California and its Resources*, mentions that in that country peach-trees, in 28 months from the time when the seed was planted, bore fruit over 9 in. in circumference, and weighing from 7 to 8½ oz.

by excessive and unintermittent cropping, it having been found impossible to trace it to any external cause whatever; and as it is well known that the hardier apple-tree requires a year to recover its strength after having borne a very full crop, while the great natural luxuriance of the peach induces it to begin forming new fruit-buds even while its branches are still laden with the harvest of the current year, it is only reasonable that the latter should require a larger supply of nutriment in order to enable it to maintain such extraordinary activity; and therefore its becoming enfeebled when left wholly to itself, unpruned and unmanured, is no more than might have been expected. The injurious effects of this disease are not confined to impairing the size and quality of the fruit, but are also manifested in the premature decay of the tree itself, now proverbially short-lived; whereas in lands far less favourable in point of climate, but where art has lent its kindly aid to the peach, its existence has been prolonged beyond even the term which Nature seemed to have assigned to it; for while the American peach, left to itself, never lives beyond 20 or 30 years, trees in France subjected to annual pruning have been found, when upwards of 60 years old, still in full health and vigour. Future peach prosperity in America is therefore considered to depend on the observance of three requirements—the extirpation of every diseased plant, the sowing of none but healthy stones, and the yearly pruning of all new trees; and it would certainly be worth while to comply with harder conditions than these, rather than forego the advantages afforded by Nature in so well adapting the climate to this fruit that our best sorts when taken there become still better, whereas their first-rate ones if transplanted here prove but of very inferior quality.

In the Southern and Western States, where imperfect means of communication prevent the surplus of the farmers' orchards being sent to regular markets, it is disposed of by being converted into peach brandy, hundreds of barrels being sometimes supplied from the produce of a single orchard; while the refuse of the stills is employed to fatten hogs—a fact which probably gave rise to an error

in an English horticultural work, which Mr. Downing quotes that his compatriots may share his amusement at learning from this author that "the Americans usually eat the cling-stones, while they reserve the free-stones for feeding the pigs;" while, in fact, not to mention lesser magnates, the noble late red "Rare-ripe," one of the very finest of all American peaches, belongs to this very tribe of "free-stones" thus summarily consigned to the wash-trough.

The colour of the peach varies from dark reddish violet, through many shades of crimson, green, or yellow, to the Snow Peach, a variety of American origin, and which is all over of a clear beautiful white. It is more usual, however, for "the side that's next to the sun" to wear a ruddier tint than the more shaded cheek. In form there is no very great diversity, though some peaches (in particular *Persica mammillata*) have very decided lemon-like nipples at one end, some show slight remains of the style at their extremity, and others have the furrow extending all round their circumference. The most curious departure which is seen from the normal figure is that displayed by the Flat Peach of China, which rather resembles a dried Normandy pippin in shape, the centre being so compressed as to leave nothing there but the stone covered on each side by the skin, the fleshy part surrounding it like a ring. It has been grown in England and proved of very good flavour; the tree, too, having the advantage of our kinds in being almost an evergreen, and continuing to grow throughout mild winters.

The Double-blossomed Peach, which Parkinson, in 1629, says "hath not been seen or known long before the writing hereof," occasionally seen here, is very common in America, and is one of the most beautiful flowering trees grown in either country. The blossoms, which are three times the size of those of the ordinary peach, and which grow very thickly upon the branches, are of a lovely rose colour, and nearly double, like a ranunculus. They are succeeded by a small fruit, which is not of much value.

The most important variety of the peach, however, is that known by the name of the Nectarine (*Persica lævis*),

a title derived from the "nectar" of the Olympian divinities. The poet Thomson distinguishes the "ruddy fragrant nectarine" from the "downy peach;" but it was some time before it attained the distinction of a separate name; for though the former is always smaller, and has a perfectly smooth and wax-like skin, instead of the velvet coat worn by the latter, besides being gifted with a special piquancy of taste, partaking more of the flavour of the kernel, yet the trees on which they grow are so alike in habit and appearance that the difference can scarcely be told. It is found in Northern India under the name of the *Moondla aroo*, or Smooth Peach, but it does not perfectly ripen there, and it is not known whence it was introduced, though probably from Cabul. Nectarines are often found growing on peach-trees, and even sometimes on the same branch with peaches, and it is now believed that they are only an accidental variety of the peach, usually, though not invariably, to be perpetuated by sowing their seeds. The finest known is the Boston Nectarine, produced originally from a peach-stone.

The leaves of the peach are used in the Greek islands to dye silk green, and the colour called "rose-pink" is extracted from the wood of the tree. The fruit is noted rather for its passive than its active virtues; for while Pliny, after mentioning that it is more wholesome than the plum, bursts into the exclamation, "Indeed, what fruit is there that is more wholesome as an aliment than this!" yet no very special power over the human frame has been attributed to it, and, notwithstanding its wholesomeness, it may become very injurious should its charms tempt the eater to excess. It did the world good service once, indeed, through this very characteristic; and having had the honour of ridding England of a tyrant, deserves quite as well to be held in grateful remembrance by the patriotic as did the "little gentleman in black velvet" to be immortalized in the toasts of the Jacobites; for it was due to no poison in the fruit, but simply because with jaded body and irritated mind he "ate gluttonously of peaches" at his last meal in Swinestead Abbey, that King John closed so abruptly his inglorious career. A great love of

this fruit has, however, by no means been confined to mere voluptuaries, but is specially associated with more than one man of genius. Goethe records, in the memorials of his youth, how, after all the terrors his father held over him had failed to control his childish fear of going to sleep alone in the dark, his mother's soothing promise of an unlimited peach-feast on the morrow proved a sufficiently strong incitement to conquer himself at night in order that he might not lose the promised reward in the morning. The best-remembered portrait, too, which his biographers have given of the Poet of Indolence is that which represents him as lounging about the Leasowes with his hands in his pockets, and languidly lifting his head to bite off the sunny side of a growing peach as it hung upon the wall. Less dainty, because more greedy, Johnson, who demanded quantity as well as quality to appease his luxuriousness, was so fond of this fruit that though, as Boswell says, "he would eat seven or eight large peaches of a morning before breakfast began, and treated them with proportionate attention after dinner again, yet I have heard him protest that he never had quite as much as he wished of wall-fruit, except once, in his life." There are many thousands who might make the same complaint and who have had far less alleviation of it, for the present state of its culture in England makes the peach almost exclusively a luxury confined to the wealthy. It is but few, therefore, who are likely to be practically concerned with the information that the fruit should not be plucked until it is so fully ripe that it will fall into the hand at the slightest touch, and that the flavour is best developed when it is gathered some time before it is required, and left for a few hours in a cool place before being eaten; for to the majority of the population the only hope that can be held out of ever being able to partake plentifully of peaches, involves nothing less than an emigration across the Atlantic.

CHAPTER VIII.

THE DATE.

EVEN after the mild breath of spring has begun to kindle a light of blossoms on our boughs, in the gradual progression of our seasons, yet a long time must elapse ere summer's warmer smile shall have ripened the flowers into fruit: while awaiting her slow coming, we are glad to avail ourselves occasionally of any fructal variety afforded by the produce of other lands, and thus the desert can hardly fail sometimes to include a treasure from the East, which introduces us to a class of vegetation altogether different from our own. The fruits which have been hitherto under consideration, if not all the growth of our own clime, have yet at least been all the produce of trees formed on the same model as those which daily appeal to our most casual observation. Such trees surround us everywhere, and if we traverse the whole land, no other arboreal form appears than this one type, with tapering stem, diminishing its substance as it ascends by continually throwing it off to form antlered branches with endless ramifications, all covered with a coat of separable bark, and clothed with leaves veined with a network of interwoven reticulations; for these are the distinguishing characteristics of the *exogens* or *outward growers* of the temperate zone, which derive this name from their constantly developing their new wood on the outside of that formed the previous year. To this class all European fruit-bearing plants belong, from the lordly walnut-tree to the humble gooseberry-bush, from the creeping strawberry to the upward-climbing vine. The grasses and cereals offer us, indeed, abundant specimens of a miniature kind of endogenous growth; but it needs the ardour of a tropical sky to call forth an arboreal endogen—a tree towering upwards to its loftiest height, unbranched, and therefore unlesened in magnitude, and terminating at its extremity in a fountain burst of green spray, its long

downward curving leaves or *fronds*, as they are called, marked with no intricate network, but simply by parallel veins connected by transverse bars. Developing its new woody matter in the interior—as its name *endogen* or *inward grower* denotes—yet restricted by Nature from extending its substance far in a horizontal direction, the continual internal pressure causes the exterior to become dense and hard, though surrounded by no distinct separable bark; and, unable to expand in circumference, it still presses upward till it reaches an altitude far beyond the general proportions of its bulkier exogenous brethren, and stands erect in slender stateliness, a graceful and virgin-like form.

That it was the nature of palm-trees to grow in this manner was a fact which Lindley acknowledges to have been known to Theophrastus, who speaks distinctly of the difference between exogenous and endogenous wood; though he was not aware that it extended to a considerable part of the vegetable kingdom, separating it, indeed, into two grand divisions. That particular palm which bears the date fruit became generally known at a very early period, for it is *the* palm of the Scriptures, so early mentioned in sacred record as the first food found by the wandering Israelites in the wilderness, when “they came to Elim, where were twelve wells of water and three score and ten *date*-trees,” for it is thus that the passage stands in the old English Bibles of the 16th century, wherein what is now translated “palm” is constantly rendered by the term “date”-tree. It was too, in all probability, the palm earliest known to the Greeks and Romans, among whom it was held sacred to the Muses. The fruit of one variety “we” says Pliny, “consecrate to the worship of the gods; but they are called *chydæi* (from the Greek *kydaïos*, vulgar or common) by the Jews, a nation remarkable for the contempt which they manifest of the diyinities”; a comment which seems to show that the word must have been used by the Hebrews in this case in the same sense in which it was by St. Peter, when he objected to eat of anything “*common* or unclean;” but it was probably only when the fruit was polluted by being

employed as an idol offering that they thus held it in abhorrence. The tree was, indeed, so far identified with their country, that it was looked upon as the symbol of Judea, as is seen in the well-known Roman coin bearing the inscription "*Judea capta*," though it is thought that it may not have been thus selected so much on account of its being peculiarly abundant in Syria, as because it was there that it would be first met with by the Greeks and Romans in proceeding southward.* It holds a place too in barbaric mythology, for it is said that the Tamanguas of South America have a tradition that the human race sprang again from the fruits of the palm, after the Mexican "Age of Water;" a story almost reversed in Mahomet's account of its origin, which is, that it was made of the tempered dust which remained after the formation of Adam, and he therefore calls it the uncle of mankind, using it too as an illustration of the virtuous and generous man, who, like it, "stands erect before his Lord, and devotes his whole life to the welfare of his fellow-creatures." The inhabitants of Medina say that at one time the prophet, being asked to testify to the truth of his mission by working some miracle, placed a date-stone in the ground, from which, taking root downward and shooting suddenly upward at his bidding, there arose forthwith a lofty tree in the perfection of fruitful maturity. On another occasion, when he happened to pass beneath a date-palm, the conscious tree was so elated at the privilege of overshadowing the messenger of Allah, that it broke forth into a spontaneous shout of gladness, and hailed him with a loud "*Salaam Aleikoom*." Many Oriental writers, indeed, assert this palm to be no mere vegetating insensible plant, but actually a creature partaking of the animal nature, adducing, in proof thereof, that it appears to possess an inherent warmth above all

* The tree was known to the Greeks in the time of Homer, since he makes Ulysses compare the tall graceful Nausicaa to "the palm by Phœbus' altars," and the locality thus assigned to it is explained by the myth, that when Latona was in travail of Apollo at Delos, the earth suddenly produced a large palm-tree, against which she rested in her labour. It is further said that even in the time of Tully immortality was attributed to this tree, and it was looked on as one of the greatest wonders in creation.

other trees; that the cutting off of its head causes it to die, and that not only are the trees of this race of two kinds, as breathing creatures are of two sexes, but that, as they affirm, even particular trees have their individual partialities, and blossom simultaneously with some chosen companion, as birds pair off at nesting-time. A curious example of the influence of this superstition is contained in an extract given by Beechy from a Moorish horticultural work. "When," says the author, "a palm-tree refuses to bear, the owner, armed with a hatchet, comes to visit it in company with another person. He begins by observing aloud to his friend, in order that the date-tree may hear him, 'I am going to cut down this worthless tree, since it no longer bears me any fruit.' 'Have a care what you do,' replies his companion, 'for I predict that this very year your tree will be covered with dates.' 'No! no!' cries the owner, 'I am very determined to cut it down, for I am certain it will produce me nothing;' and then approaching the tree, he proceeds to give it two or three strokes with his hatchet. The friend again interferes, and begs him to try one more season; adding, that if it does not bear then, he will let him do as he pleases. The owner at length suffers himself to be persuaded, and retires without proceeding to further extremities. The threat, however, and the few strokes inflicted with the hatchet, have always the desired effect, and the terrified palm-tree never fails to produce the same year an abundant crop." It is curious matter for speculation what may be the connection between this strange custom and the Christian parable of the barren fig-tree.

Among these people, too, it bears different names at different stages of its growth, and every part of the tree is distinguished by some special title, so that it is said there are actually 300 words in the Arabic language enlisted in the service of this plant, all used to give expression, in various ways, to that one idea—the date-palm; while, according to Gibbon, the native writers have celebrated in prose and verse no less than 360 uses to which it and its products are applied. An anecdote is related by Sir John Malcolm, that an Arab woman who

had been taken to England as an *ayah*, and remained here for some years, on her return was eagerly questioned as to our relative advantages or disadvantages as compared with Arabia. Her account of the luxuries and elegances of civilized life spread a cloud of discontent over the faces of her interrogators, and they were about to retire, gloomily brooding over Bedouin deficiencies, when the returned traveller recalled them with the remark, "There is, however, one thing wanting in England." "What is it?" was the anxious inquiry. "They have no date-trees. I looked for them everywhere the whole time I was there, but never saw a single one." The spell was broken: envy changed to pity, and the crowd dispersed, congratulating themselves on being so much more blest than the Franks, and wondering how any people could possibly exist in a country where there were no date-trees.

It is no great marvel that this tree should be regarded with rather warm feelings in its native clime, for it seems to have been kind Heaven's special gift to the inhabitants of that part of the world; and as the camel has been called the "*ship* of the desert," so the date-palm might well be termed, in the American sense of that word, the "*store* of the desert," furnishing as it does all the necessaries, many of the comforts, and several of the luxuries of Arab life. Affording a house to the settler and a tent to the wanderer, providing either the one or the other with forage for his cattle and food and drink of varied and delicious quality for himself, offering him while growing a cooling shade, and when cut down a warming fuel, gladdening his eye with the sole shape of beauty on which it can rest when gazing over the arid plain, where its feathery form alone breaks the bare flat solitude, this beacon of the wilderness is yet more endeared by its association with the most priceless treasure of these sun-scorched sands, for it is in this green setting that the "diamond of the desert" sparkles, and where the palm-tree is, there also will be water. Entwined, too, must it be with desires and feelings deeper, if not more engrossing, than those of physical necessity, for the date-

tree is a sort of medium of exchange, and it is in this currency that the bridegroom often pays the price demanded by her father for the damsel who is to be the light of his tent and the sharer of his lot. In comparatively small space, too, can such riches be stowed, for a full-grown palm occupies but about 4 ft. of space; and as they may, therefore, be planted within 8 ft. of each other, a limited area suffices for a large plantation; and as it is reckoned that each tree affords a sequin profit annually, the owner of 3,000 or 4,000 trees—not an uncommon number for a wealthy Arab to possess—has a profitable estate within a very contracted ring fence. Considering all these things, well may it be that the first question asked by a Bedouin of any passenger he may chance to meet should invariably be “What is the price of dates at Mecca or Medina?”

Date paste, called *adjoue*, and consisting of the ripe fruit pressed into large baskets, and forming a sort of cake, is the staple Arab subsistence during the 10 months of the year when fresh dates are out of season. The fruit is also eaten boiled, stewed with butter, simmered to a pulp with honey, in short, *Soyerized* in so many ways, that it may be fairly said a date in an Arab tent can even rival an egg or a potato in a French *restaurant*, for she is not reckoned a good housewife who cannot furnish her husband, every day for a month, with a dish of dates differently prepared. The young, tender leaves, too, are eaten with lemon-juice as a salad. The pith of the tree when cut down—called the “marrow” of the date—though inferior to true sago, forms yet a sweet and nourishing diet; and the “cabbage” or unexpanded central bud, tastes much like a fresh chestnut; but as to obtain this luxury the life of the plant must be sacrificed, it is only indulged in occasionally, and taken from trees already condemned to perish for the sake of their sap, for—blest by Bacchus as well as by Ceres—this tree furnishes drink in addition to food, and beverages too of various kinds and qualities. The date paste, simply infused in water, forms a pleasant and wholesome draught; incisions, too, are occasionally made in the tree, and a mild and refresh-

ing liquor thus extracted, bearing the name of date milk, which milk, however, yields a very potent "cream of the valley" when subjected to the process of distillation; but "on weddings and great occasions," says Shaw, "guests are entertained with what is called the honey of the date." It is only the older trees which are becoming barren that are doomed to furnish this vital "honey," the very life-blood of the plant, the fatal process by which they are forced to yield it being thus carried out. The head of the tree (including the dainty "cabbage") is cut off, and a basin scooped in the top of the trunk, into which the sap rises, at first at the rate of several pints a day, but diminishing gradually in abundance, till in about two months the exhausted victim is dead and dry. The sap thus collected can be fermented into toddy or palm wine, and distilled becomes *araky*, the general Arabic name for spirituous liquor of any kind; and as it was on the juice of the grape that the Prophet's stern interdict was laid, the Mussulman Arab rejoices in a good conscience while partaking of these palmy products, though certainly finding them no bad substitute for the British Christian's logwood port or peppered brandy.

Eaten in Europe only as a simple fruit, the charms of the date, unheightened by any elaborate culinary processes, have yet been fully appreciated. That they were so by the ancients is sufficiently seen in the works of Pliny, who speaks of them indeed as though he had himself felt their fascination, and needed his philosophy to resist being led astray by it, when he says that in a fresh state "they are so remarkably luscious that there would be no end to eating them, were it not for fear of the dangerous consequences;" dangers incident, however, only to excess, for, partaken of in moderation, they are peculiarly wholesome. The application of the same epithet to them in the *Commedia Divina*, shows that Italian taste had not altered in later days in this respect, for an incidental mention of them occurs in the story of Manfred Lord of Fuenzi, who after a life of feud and cruelty turned friar, and, to celebrate his reconciliation with his former foes, invited them to a magnificent banquet. At

the end of the dinner a horn blew, as though to announce the dessert, but it was in truth a fatal signal appointed by the dissembling conspirator, and the only fruits served that day to his too confiding guests were a troop of armed men, who rushing on the victims, suffered none to escape alive. The memory of this incident is still preserved in the Italian proverb, which says concerning any person who has been treacherously used, that he has eaten of "the fruit of Brother Alberigo;" and Dante makes the traitor use the same metaphor to describe his fitting punishment in another world:

"The friar Alberigo, answered he,
Am I, who from the evil garden plucked
Its fruitage, and am here repaid the date
More luscious, for my fig."

Considering the Italian fondness for figs, these words convey a compliment indeed to the date.

When they were first introduced into England does not seem to be on record, but it was probably at a very early period, for they were tolerably common in Tudor days. Among Strutt's collection of the bills for the funeral of Sir J. Rudstone, who died in 1581, a grocer's bill is included, wherein occurs the item of "six lb. dates, 2s."—a very moderate price for so far-travelled a luxury, at a time, too, when raisins were being sold at 6*d.* per lb. and sugar at 2*s.* 6*d.*

The fruit seems afterwards to have risen in price, and also declined in public favour, for Phillips, writing in 1821, says that at that time the best sort cost 5*s.* per lb. though inferior kinds could be bought cheaper "for medicinal purposes, for which they are chiefly used."

The trunk of the *Phoenix dactylifera*, as the date-palm is called by botanists, is a cylindrical column 50 or 60 ft. high, and from 12 to 18 in. in diameter, its appearance evidencing plainly its mode of growth, and showing that it is made up of the remains of former foliage. The present *fronds* which crown its summit, are from 8 to 12 ft. long, shining, tapering, and of feather-like structure, each being composed of a long double range of narrow leaflets, growing alternately from the sides of a central stalk, and

forming an object not very obviously suggestive of military tactics, yet which, according to Pliny, first gave the idea of a troop of soldiers presenting face on both sides at once. These leaflets, near the base end of the stalk, are sometimes 3 ft. in length, yet do not exceed an inch in width, and each terminates in a sharp black spine or thorn. The leaves are at first enveloped in a white smooth leathery kind of sheath, which decaying after they are unfolded, and assuming the form of a web of brown fibres, is carefully collected for the purpose of making cordage. A tree raised from seed will not bear fruit before its sixteenth year, but the common mode of propagation is by taking shoots from the roots of full-grown trees, and in this case the young plant will begin to bear in the sixth or even the third year of its growth. The Phoenix is a diœcious tree, having what are called the female organs of fructification upon one plant, and the male upon another; but in both cases the flowers, crowded in clusters, grow in long bunches from the trunk upon a stalk between the leaves, and are enwrapped in an enormous bract developed at their base, which is called a spathe, and which opens when they have reached maturity, and then withers. A single bunch of male flowers contains about 12,000 small colourless blossoms, supported by little bracts and composed of three sepals, three petals, and six or sometimes only three stamens; for trinality is an endogen characteristic, and three or a multiple of three is the number on which their organs of fructification are almost invariably formed, as those of exogens are upon the numbers five or four. On fruit-bearing trees the flowers are still smaller, and in their centre is seen the rudiments of the dates, about the size of small peas, there being three ovaries, of which, however, but one ripens. Nature provides that by some means the wild trees shall become duly impregnated; but when under cultivation, although the trees are still of the same species, and the two kinds are always planted together, fructification cannot be ensured unless the pollen be collected from the one and deposited on the other, for otherwise, dispersed by the wind, it does not reach the pistilliferous flowers in suffi-

cient quantity to prove availing. As soon as the blossoms on a female tree have emerged from their spathe, the Arab seeks another, which he knows by experience to be a stameniferous one, though the distinguishing flowers have not yet burst their cerement; for then the pollen would have become spilled and lost, and it is therefore a special point in cultivation to know the exact time when the cluster is ripe but yet unopened. Tearing away the enveloping veil, he then takes out the blossomed spike, gently divides it into pieces, and lays one small fragment among the little branches of the flower stalk within the spathe of the pistilliferous tree, completing the ceremony by carefully covering the whole with a palm-leaf. The flowers on this detached spray soon shedding their pollen, then wither away, and about four or five months after fecundation, the fruit, a one-seeded drupe, begins to swell. When nearly full grown the heavy clusters are tied to the base of the tree to prevent injury from the wind, for the burden of a good tree amounts to no less than from 15 to 20 clusters of dates, each weighing from 15 to 20 lbs., a single tree thus sometimes producing a crop of above 2 cwt. of fruit in one year. By June, the gathering, which occupies two months, is begun: temporary huts of palm-branches are erected in the valleys, and crowds of revellers pass the hours in joyous conviviality, for the harvest-time of the Northern nations and the vintage of the South are here combined in one, and the Oriental date-gathering is therefore a festival indeed, an abundant crop spreading gladness over the land, while a year of failure becomes truly a year of gloom.

When left to ripen fully, the fruit is most delicious; but in this case it must be eaten almost immediately, as it cannot be kept long nor carried far without fermenting; and therefore, when intended for preserving, the dates are gathered a little before perfect ripeness, but require no other preparation than merely to be laid on mats and left in the sun to dry. In Egypt the branches are cut off with the fruit upon them, and packed into baskets made for the purpose, with an aperture only just large enough

for them to be thrust through; then boats are laden with them and dispatched to Cairo, where they ripen in succession after their arrival. In Upper Egypt they form the entire subsistence of a large part of the population, but in Lower Egypt fewer are eaten on the spot, the greater quantity being reserved for sale. The fruit is largely exported to Europe, the quantity sent to England in 1862 having amounted to 32,262 cwt.

The seed of the date, like that of all endogens, *monocotyledonous*, or forming one undivided mass, is an oblong cylindrical stone marked lengthwise down one side with a ventral indentation or furrow, and looking sufficiently like a vastly magnified grain of rye to prove its relationship with the cereals, which are also endogens. No soft kernel lies within its rocky walls, but the substance throughout is one albuminous solid, save a minute embryo in the midst of the apparent petrification, lying mostly remote from the *hilum* or scar which marks where the seed was attached to the fruit. In Barbary these stones are submitted to the lathe, and made into beads for rosaries. Soaked in water for a couple of days, they become soft enough to be eaten by camels, cows, and sheep, and even in this state are said to be a more nutritious food than barley; while in some parts, under the influence, perhaps, of some local "Mary Wedlake," they are made to go through the further improving process of being bruised or ground. At Medina there are shops where this seeming refuse is the only article bought and sold, and in all the main streets diligent beggars eke out the gains of mendicancy by collecting date-stones as they are flung away by fruit-eating passengers.

The varieties of the date-palm are almost innumerable, nearly every district having some kind peculiar to itself, and Burckhardt was informed that above 100 different sorts grew in the immediate neighbourhood of Medina. The commonest kind, said to have owed its origin to Mahomet's miracle, bears a fruit not larger than a mulberry, but extremely sweet. Another variety, called, according to Crichton, the *Birni*, was, however, the Prophet's special favourite, and, taking thought in

his divine benevolence even for the stomachs of the faithful, he recommended every Arab to eat seven of these most wholesome and digestible fruits each morning before his breakfast. Yet superior are the *Jebeli*, which are real *magnum bonums*, full 3 in. long, and of very fine flavour. These dainties, packed in boxes holding about 100, form a *specialité* of the Holy City, and a customary present from returning pilgrims to their friends at home. The monks of Sinai, too, send *backsheesh* yearly to Constantinople, in the shape of large boxes of dates, after having first, with a gustative cunning worthy of monkhood, extracted the inedible stone, and substituted in its place a toothsome almond.

Except during the season for the fecundating process, date-trees need little attention beyond occasionally lopping off the old leaves as they wither, only a fragment of their stalks being usually left projecting from the trunk, to assist the ascent of the climbing fruit-gatherer. A little watering, too, is sometimes required. Instead of being formed, like exogenous timber, of regularly disposed bundles of woody fibres, radiating from the centre through a cellular tissue of medullary matter, the substance of the palm-trunk, composed of longitudinal woody fibres scattered irregularly through a mass of pith, is hardly to be called timber. The ends of the fibres are too hard, and the medullary matter too soft, to admit of its being held together by means of glue, and the same causes prevent the surface from taking polish, so that the only way to preserve it is by the use of varnish. The trunk, however, makes very good posts and beams for building purposes, and is also employed for fuel. The leaves are made into baskets and brushes; their mid-ribs are used to form garden fences, cages, &c., as a substitute for wicker; while the flower spathe and inner barklike fibres are converted into strong cordage, ropes, and matting. Unlike the generality of the palm tribe—which rejoice in the most fervent tropical heat, and scarcely spread beyond where this is felt—the date delights in a milder climate, and may be considered an intermediate between the fruits of the torrid and of the temperate zones; by a

gracious law of Providence its *habitat* being chiefly where little else can grow. It will not flourish in southern latitudes, but attains perfection in the northern parts of Africa, and forms a border along the margin of the Great Desert, so abounding where so little other vegetation is seen as to give a name to the region, called from it "Biledulgeria," or the Land of Dates. The fruit cannot ripen beyond a line drawn from Syria to Spain, about 29° or 30° N. lat., though the tree will vegetate a few degrees farther north; it abounds in the gardens of Naples and Sicily; is found in Valencia, Genoa, and the island of Elba; and even at Toulon two fine specimens are seen growing in the Botanical Gardens in the open air. It has been introduced, too, into Bordighiera, in the south of France, for the sake of the leaves, which are made use of in spring by the Christians, in Palm Sunday ceremonials, and in autumn by the Jews, during the celebration of the Feast of Tabernacles; and near Elete, in Spain, is a complete wood of no less than 200,000 date palms, the leaves of which are bound up in mats till they are bleached almost white, and then gathered and sent in ship-loads to Italy, for Palm Sunday processions, and to Madrid, where a house without its blessed palm-branch at Easter would seem as incomplete as an English dwelling without a sprig of holly at Christmas.

An attempt once made to cultivate the date-palm in Jamaica, proved a failure, but it grows in India, though it does not ripen fruit well in that latitude, and is therefore valued chiefly for the sake of the sap, which is manufactured into a coarse sort of sugar, that harmless-seeming but mystic *goar*, which, as the chosen offering of Kali, held so prominent a place in the fearful ceremonies of Thuggee. The juice is extracted by means of tapping the tree in cold weather; and Dr. Roxburgh states that each trees yields annually from 120 to 240 pints, producing from 7 to 8 lbs. of sugar. At the time when Dr. Roxburgh wrote, 10,000 cwt. of date sugar was made yearly in Bengal, whence considerable quantities were exported to England and elsewhere, date sugar selling for about one-fourth less than cane sugar.

Palms were introduced into England as green-house plants about 150 years ago, and the noted Miller, of Chelsea, is said to have been the first who cultivated them. The attention they have received of late years has resulted in great success, and the splendid specimens shown at Kew form one of the most striking attractions of those truly royal gardens. Miller says that they grow so slowly, even in their native climate, as often to make but 2 ft. in 10 years, and mentions some at Chelsea which had been planted 20 years before he wrote, and then had trunks but 2 ft. high, though the leaves were 7 ft. long, and they had even borne fruit. In consequence of their utmost circumference being soon attained and farther expansion denied, palms are prevented from attaining any very great age. At the end of about 70 years the slender cylindrical column of the *Phoenix* ceases to aspire any higher; for another 70 years it continues in perfection, then begins to decline, and mostly falls by the end of the second century. Yet utter extinction does not await the aged tree, for its grave becomes the cradle of its successor, and from the withered stump springs forth at least one shoot, which in time fills the place of the defunct parent, and "keeps its memory green." It is to this peculiarity that the tree owes its name of "Phoenix," and it is said to have given origin to the fable of that bird of the sun whose dying "*resurgam*" chant roused a new life out of its own ashes. The *Phœnicians*, too, it is considered by some, derived their name from the number of palm-trees growing in their country. The specific name *dactylifera*, from the Greek *dactylus*, a finger, is due to a fancied resemblance between the clusters of fruit and the human fingers. The Arabic name, *tamr**, signifies straight or upright, and furnishes also the etymology of Tadmor, that palm-girdled city of the desert founded by Solomon, the title of which was translated in later days into Palmyra.

The curious fact of the trees being divided by Nature into the fruit-bearing and the pollen-supplying kind was

* This word supplies, too, the title of the tamarind, called in the East the *tamr hindee*, or Indian date.

very early noticed; that the former became barren if "widowed" by the removal of the latter is distinctly mentioned by Pliny; and the Arabs had not only learned exactly that it was in the formation of the blossoms that the difference lay, a discovery far beyond that of the ancient writers, but had acted on this knowledge in their fecundating process for centuries before botanists had gained equal insight into the physiology of plants, and while what is now an elementary principle of science was generally looked on as but the dream of poetry. Pontanus, an Italian poet of the 15th century, embodied in glowing verse the loves of two palm-trees growing in his time; whereof the one, planted in the wood of Otranto, never bore fruit until it grew, Calypso-like, so to overlook the neighbouring trees that it could gain a view of the other tree at Brindisi, 15 leagues distant, when one quickening glance sufficed to make it burst forth into abundant fruitage—an illustration of the "Sentiment of Flowers" now coolly prosified by the scientific assertion that it had simply grown tall enough to catch the Brindisi pollen borne upon the breeze. Linnæus mentions another instance of a palm, at Berlin, which had flowered for many years, but never perfected fruit until some blossoms sent by post, from a stameniferous tree flowering at the same time at Leipsic, were applied to it, when fruit was at once matured, and a specimen of the offspring, raised from the seed thus obtained, was then flourishing in Linnæus's own garden. The Swedish botanist, Hasselquist, when travelling in 1749, was so anxious for further information upon this subject, that his first question on reaching Smyrna was concerning the nature and the habits of a plant which, as he expressed it, "botanists do not yet know;" but his desire to be shown the distinction between the trees and the mode of inducing fructification was thwarted by the perversity of his interpreter. On arriving next year in Alexandria, he wrote to Linnæus that the first thing he had done there had been to visit the date-palms which form the principal ornament and principal wealth of the country, and to make inquiries respecting them. The Arab gardener to whom he applied was astonished

at his being already aware of the distinction of sexes, saying that all Franks who had hitherto come there had considered what was told them on this subject as either a fable or a miracle, and, gratified at such a proof of his interest in the favourite tree, readily showed him the whole process of fecundation, as already here detailed.

Pistilliferous trees largely preponderate, one male sufficing for 400 or 500 of the other sort, but perhaps it may be in some measure to this disproportion that the necessity for human intervention between them is due. That this is necessary is proved by the fact, that in the year 1800, when the Turks and the French were so busied with warfare that the only field labour carried on was that of the field of battle, the neglected palms blossomed, indeed, as usual, but entirely failed to produce a harvest. But yet worse evils than mere neglect have occasionally been suffered by the palms in time of war, for they have sometimes been wantonly cut down by invaders, and an instance is on record of this having once occurred during a civil war in Persia, when all the stameniferous trees in one province were completely destroyed. The inhabitants, however, had prudently provided against such a contingency by preserving a quantity of pollen in close vessels, and when they regained possession of their land, after a lapse of 19 years, this long-hoarded treasure had lost none of its virtue, and they were thus enabled to impregnate the pistilliferous plants and obtain the usual crop. It is still customary to preserve a portion of this farina from season to season, in case of accident, a scarcity of dates being about as serious an event as any that can occur in the chronology of a palm-growing country.

CHAPTER IX.

THE GRAPE.

WHETHER our first parents in Paradise sat under the shade of their own vine as well as of their own fig-tree,

or whether they were spared a second fructal temptation by being left in ignorance of charms so powerfully seductive, we do not know; but if not antediluvian, it is recorded to have been at any rate one of the first plants that flourished in the rich mud left by the retiring Noachian Deluge, and to have proved to the patriarch and his family a very "tree of the knowledge of good and evil," even as it has been since to myriads of his descendants. That it was a blessing which might readily become a bane may have been the cause that among the Jews it ranked below those trees whose produce could be less easily abused; for in the earliest of fables we find Jotham representing the sovereignty of the woods as being offered to the olive and to the fig-tree before application was made to the vine to assume the arboreal crown. But the etymology of the name it now bears, derived from the Celtic *gwyd*, *tree*, whence was borrowed (the Celts dropping the *g* in pronunciation) the Latin *vitis*, Spanish *vid*, French *vigne*, and English *vine*, shows that when later nations became its sponserers they gave it a rank with regard to other plants analogous to that which was assigned to the Scriptures with regard to other writings, the vine being *the* tree, even as the Bible was *the* Book. Wherever it was found among the Gentile nations of antiquity, its introduction was always traced to a divinity; and whether the chubby Bacchus of the Greeks be really identical or not with the awful Osiris of the Egyptians, in this point, at least, their history agrees, that each was represented as being the first vine-grower of his country, Bacchus, too, being said to have taken the plant to India. Humboldt, who affirms that the vine is not a native of Europe, says that it grows wild in Asia Minor. Michaux found it wild on the borders of the Caspian, and it is now generally considered to be indigenous to Persia, whence it is thought to have been taken to Egypt, Greece, and Sicily, and from the latter place to have reached the other European countries. "Why did Bacchus go to India?" asks Dr. Sickler, the great German authority on ancient fruit culture. "Not, assuredly," he replies, "to take the vine thither, for it was already there, but rather to fetch it thence, to

spread it in other lands. This India was, however, not the Hindostan of our day, but the lands on the shores of the Caspian, probably including Persia." It was probably introduced into ancient Italy from Greece, but met with little attention for some time, the early Romans being ignorant of the art of wine-making, and only planting the vine in order to eat the grapes, until the time of Numa, who, in order to encourage its cultivation, not only permitted libations of wine, which it is said Romulus had forbidden, but even declared the offering to be sacrilege unless it were from the produce of a *pruned* tree; though it was not till the 6th century v.c. that the Romans began to value their own wines, which, however, eventually competed with those of Greece. Fearing the risk of permitting women to be exposed to its seductive influence, the use of wine, when it became general at Rome among men, was forbidden to the other sex under penalty of death; one gentle clause, however, in this harsh decree permitting all male *relations* on meeting their female kindred to test whether they had kept the law, only by the soft trial of a kiss, a form of inquisition which it was found was always most vigorously put in force in inverse proportion to the distance of the relationship.

Some believe that the vine was first introduced into Britain by the Romans, while, according to others, it was first brought here by the Phœnicians, who have also the credit of having transplanted it from Palestine to the islands of the Mediterranean. By whatever means it may have come, when once here the gift was by no means neglected, and long before French fashions "came over with the Conqueror" home-made wine shared with ale, mead, and cyder the honour of being one of our national drinks, for the earliest English chronicles make mention of English vineyards. Gloucester was famous for them, and one is known to have existed in the 13th century on that spot now sacred to the Court Circular, the "Slopes" of Windsor. Thus Jean Vigne, since looked on so jealously as a foreign rival, was then competing in friendly strife side by side with his compatriot John Barleycorn, for the suffrages of their mutual countrymen. Vine culture con-

tinued to flourish in Britain until about the time of the Reformation; but when the decline of the feudal system caused more attention to be directed to corn husbandry, and the introduction of the hop did so much for the improvement and preservation of malt liquor, little time or thought was left for grape-gardens; while in tracing the cause of their decline, something, too, may doubtless be attributed to the loss of monkish care which we may well believe had been ungrudgingly bestowed on so rich a source of monkish solace. Surrey was at one time famous for its Champagne, Sussex for its Burgundy, and at Arundel Castle, in the latter county, so lately as in 1763, there were 60 pipes of native wine in the cellars of the Duke of Norfolk. The rebuilding of our obsolete wine-presses has every now and then been urged by some enthusiastic supporter of the claims of a British Bacchus, and one of its latest advocates, Professor Martyn, has suggested that any disadvantages of climate might be overcome by training the vines near the ground, as is done in the north of France, a system which increases the size of the berries, as well as promotes their earlier ripening. Whether for wine making or to serve for humbler uses, it would certainly be well were more general attention paid to the open-air cultivation of a plant which, however it may require greenhouse pampering to secure its full perfection, may yet be made to attain no slight degree of excellence at the cost of but a little care and trouble. Many a wall now bare and unsightly might be turned into an object of beauty and a source of pleasure and profit were it taken advantage of and dedicated to the vine, for properly prepared soils and judicious pruning are the chief requisites for the production of good grapes; and it is owing to the general ignorance on these points, rather than to ungenial climate, that this fruit so rarely ripens in the open air in England. There is an extra difficulty to be encountered, it is true, to which the vine planter in regions farther south is not exposed, in the fact of our short summer being apt to pass away before the vine has absorbed all the heat which it requires, the sunshine not lasting long enough, though being quite hot

enough while it does last. This, however, may be overcome by due attention to other circumstances which can be made to exert a counterbalancing influence, for "one of the principal causes of grapes not ripening well on open walls in this country," says the eminent grape-grower, Clement Hoare, "is the great depth of *mould* in which the roots of vines are suffered to run; which, enticing them to penetrate in search of food below the influence of the sun's rays, supplies them with too great a quantity of moisture; vegetation is thereby carried on till late in the summer, in consequence of which the ripening process does not commence till the declination of the sun becomes too rapid to afford a sufficiency of heat to perfect the fruits." The simple remedy is a supply of loosely laid dry materials, such as broken bricks, bones, &c., to the soil, by means of which the roots are also enabled to obtain air, which is as requisite to them as earth. The importance of this subject in an economical point of view may be judged by the declaration of Mr. Hoare, that "it is not too much to assert that the surface of the walls of every cottage of a medium size, which is applicable to the training of vines, is capable of producing annually as many grapes as would be worth half the amount of its rental." Thus the English vine might become as serviceable to the cottager as the Irish pig, while it would certainly be a more agreeable adjunct to a dwelling.

A system, too, has been lately introduced by the French, which holds out a fresh hope of our ultimately attaining general success in open air grape culture, it being strongly recommended as a very effectual means of hastening the ripening process, "especially in cold and damp climates." This method, termed "ringing," first practised by a gentleman residing near Rambouillet, on a cold damp soil, consists in removing from every branch of the vine, just below the first bunch of grapes, a ring of bark from $\frac{1}{10}$ to $\frac{4}{10}$ of an inch wide (the latter width is usually found most successful), and is performed soon after the flowering of the vine, when the fruit is just forming. When a committee of the Paris Horticultural Society visited, in 1858, the scene of M. B.'s operations, to test the effects of his

process, they found the bunches on ringed vines showed larger berries and had become ripe a fortnight earlier in consequence of the treatment to which they had been subjected, a result analogous to what has taken place in other fruit-trees so handled, for the method is not a new invention, but only newly applied to vines.* It has since been tried in England, and found to have very little effect on some sorts of vines, while on others the result has been very promising, but scarcely sufficient time has yet been afforded to pronounce a decisive opinion as to its probable influence on English grape cultivation.

Whatever were the virtues of our vintage in the olden time, its excellence, so far as temperature was concerned, was solely owing to the unassisted kindness of our much-reviled climate; for it was not until the beginning of the last century that grapes were fostered by artificial heat, and 50 years more elapsed before they were cultivated under glass. Glazed vineries are now generally made use of by all who desire to reckon with tolerable certainty on an annual crop of grapes, the result being so much less precarious than when the fruit is exposed quite unsheltered to every change of temperature; and the decrease in the cost of the material as compared with what it was a few years ago, together with simplified methods of erection, render them no very costly luxuries to the private consumer, while, as a profitable investment, they have scarcely yet attracted so much attention as they merit, Mr. Rivers pronouncing it to be "a national disgrace" that black Hamburgh grapes are so largely imported annually from Holland, when, with cheap vineries, they could be well grown in England to sell at a fair profit for 6*d.* or 8*d.* per lb. Yet, even when a tolerably mild and equable climate is thus artificially secured, much still depends upon the soil provided for the vine, the grapes, for instance, grown at the Oakhill Gardens, Barnet, having been sold year after year at Covent Gar-

* Or rather to the production of dessert grapes, for in some parts of both Italy and France it has long been occasionally practised in vineyards, in cold wet seasons.

den for 16s. per lb., while the very same variety grown at Southgate, only a mile from Oakhill, were fetching only 1s. 6d. per lb., the difference in quality being traceable chiefly to the superior care shown at the former place in preparing the borders in which the vines are grown. Formerly the vine was considered to be a very gross feeder, the coarsest of offal not being thought too strong or rich for its appetite; and even so lately as in 1858 a correspondent of *The Gardener's Chronicle* (the first English horticultural periodical), after relating how Napoleon I., when at a loss for gunpowder, in order to secure a supply of saltpetre, had "middens" constructed of "filth, dead animals, offal, and urine, with alternate layers of turfy loam and old lime mortar," hazarded the assertion that "his nitre bed was the very pattern of a vine border," and that, "when the materials had been turned over and over again for a year or two they were exactly in a state to yield either gunpowder or grapes, according as they were manipulated." This opinion, however, was immediately and strongly controverted in the same columns by men of science and experience; and the general opinion now seems to be, that calcareous elements in the soil are to be chiefly relied on, and that carrion is so unsuitable as a manure that, though the vine to which it may be applied, if not killed at once (for vines will bear a great deal of ill-usage, and adapt themselves to very difficult circumstances), may produce a few crops of large but coarse fruit, the eventual destruction of the plant under such a mode of treatment is inevitable. Another mode of enriching the soil, which commends itself at once to reason as a most plausible system, is recommended in a work published a few years back, which states that, in most wine countries, all defective ill-formed bunches or berries, with any superfluous shoots or branches, are removed every year, about the end of June, broken into small pieces, and buried about a foot deep around the vines. Committed to the earth in this green state, they are decomposed in less than 30 days, and return again to the vine immediately to increase its vigour and maintain the soil in proper condition, as the trees in a forest flourish for cen-

turies on the nutriment afforded by the annual decomposition of their own leaves.

A vineyard once planted requires indeed constant care, but rarely needs renewal; for the plants are said to improve in quality until they are 50 years old, and many are found in full bearing in France and Italy which have at least not deteriorated during a lapse of three centuries, while Pliny mentions one patriarchal vine which had attained even double that age. The size which the trunk eventually attains is sometimes very considerable, amounting in one instance in England to 4 ft. in circumference, while the spread of the branches seems almost unlimited. The giant vine at Cumberland Lodge, Windsor, and its Brobdignagian parent at Hampton Court, each covers a space of about 147 square yards, and would extend much farther were they allowed to do so, their produce amounting respectively to about a ton weight of fruit annually, in the form of above 2,000 bunches, representing a money value of upwards of £400. On one occasion George III., having been greatly pleased with the performers at Drury Lane Theatre, gave orders that 100 dozen bunches of grapes should be cut off for them from the Hampton Court vine, if so many could be found upon it, when, not only was the munificent donation forwarded as desired, but with it also a message from the gardener that he could still cut off as many more without stripping the tree.

Grapes, as they consist chiefly of juice and contain very little fleshy matter, are one of the least nutritious of fruits, and are also very laxative, a few fresh gathered being sometimes eaten fasting as a gentle purgative; while, when taken to excess, they often cause dysentery. In constitutions where the latter danger is not to be apprehended, they are sometimes found beneficial, eaten in large quantities, for pulmonary complaints. The leaves, being astringent, are sometimes used, dried and powdered, as a medicine to stop dysentery, and are also sometimes given as food to cows, sheep, and hogs; but when employed for this purpose, are left till they fall off the plant, then collected and stored in a dry place, or, if salted,

pressed, and left to ferment, are considered all the better for the process. The leaves are also used in Egypt to envelope balls of hashed meat, one of the most common dishes at good tables there, and as for this purpose they must be used young, they are often sold dearer than even the grapes. In this country they are similarly employed in the roasting of wheat-ears. The lees of wine furnish cream of tartar, the acid of grapes being chiefly tartaric, though malic acid also exists in them in small quantities; while their other chief constituent, the sugar of grapes, differs from common sugar in containing a smaller quantity of carbon.

Too valuable for its living products ever to be destroyed for the sake of its mere substance, yet the wood of the vine is capable of being turned to good account whenever it does fall into the hands of the carpenter, being both beautiful and extremely durable; for, though Ezekiel speaks of it contemptuously as "meet for no work," and only fit for fuel, classic authors tell of statues and temple columns formed from it; Evelyn records, in his *Sylva*, that the great doors of the Cathedral of Ravenna were in his day discovered to be made of vine planks, some of which were 12 ft. long and 15 in. broad; and the museum at Versailles contains a table more than 2 ft. wide, formed of a single piece of vine wood. From the charred stalks of old vines, too, is made the "blue black" of the artist and also the finest printer's ink.

In spring, when the sap rises, the circulation of the vine is so active, even to its very extremities, that great care has to be taken to have all the pruning over before the vernal warmth calls forth this flow in its veins, or every part touched with the knife would pour out a vital stream, and the vine would actually "bleed" to death. This notable sappiness reaches its fullest extent in a variety called the *Vitis Indica*, Caribbean Vine, or *Liane des Voyageurs*, the branches of which are often 200 ft. long, and of so dropsical a constitution that, if a wound be made in one of its limbs (which are about the thickness of a man's arm), and another cut about 3 or 4 ft. lower down, in less than half a minute nearly a pint of

clear, cool, tasteless—or slightly acidulated—liquid will drain from the lower incision, a provision of Nature which has sometimes saved the life of thirst-stricken wanderers in the woods. Fed by such a flow of liquid life, the little rounded buds, which have been lying all the winter wrapped in down so close as to look like mere little excrescences on the pale brown bark of the branches, begin rapidly to expand and shoot forth into sprays of tender green; one leaf from each articulation of the many-jointed twigs, and mostly a waving tendril too, to bear it company, these being, according to Carpenter, developed from supernumerary flower-stalks; and it is said that curious experimentalists have even sometimes succeeded in transmuting them into fruitful bunches of grapes, by cutting the branch immediately above them. Soon after appears the blossom, little bunches of tiny five-petaled, five-stamened flowerets of pale yellowish green, so similar in colour to the leaves and so hidden among them as to be scarcely discernible without close inspection. The insignificance of their appearance has furnished Krummacher with not the least beautiful of his *Parables*, when he represents the haughty, self-sufficient youth Adoniah as led by the prophet into a vineyard in spring, and shown how humble is the forerunner of the noblest of fruits, that he might learn of the vine in the blossoming time of his youth; “and Adoniah took all these words of Samuel to heart, and went on henceforth with a still, soft spirit.” The flowers have the reputation of being odorous; but the perfume is not very perceptible, except in an American variety called the “Sweet-scented,” which grows by river-sides in some parts of the United States, and the blossoms of which exhale an exquisite fragrance, resembling that of mignonette. But ere long these humble blossoms disappear, the berries which take their place swell larger and larger, until the little diverging stalklets on which they grow, together with the central stem whence these proceed, are altogether hidden by the clustering mass; finally the colour changes as they ripen, and the vine attains its full glory. And a glorious object, indeed, it is! Whether in the pole-supported plant of

Germany, but a few feet high, the short, thick stock grown in Spain, or the scrubby bush to which it is dwarfed in France, there is much of beauty manifested in the elegant form of the triply-pointed, deeply-serrated leaf, with its strongly-marked network of veins, so dear to ornamentalists in all ages; in the wild freedom of its curving tendrils; and, above all, in its shapely and rich-tinted fruit, varying from clear chrysophras green to semi-lucent amber, or rich bloom-clouded purple, like violets seen through mist; each particular berry blending into one fair cluster, that "bunch of grapes" with which Titian loved to illustrate a *perfect* composition, every part completely finished in itself, yet not obtruding as a part, but only contributing its share to the completeness of the whole. How graceful, too, are their growth, and the positions which their loose suspension on many stalks permits them to assume! I remember once seeing a cluster which had thrown itself over a large gourd with a fling so light and free as to recall in a moment to my mind the attitude of Ariadne on the panther, and prompt almost a conviction that Dannecker must have been indebted to such a source for the suggestion of the exquisite pose of that figure. But it is in Greece or in Italy that the vine is seen in perfection; where, with all its other charms, is combined that of a display of its natural mode of growth, and, "wedded" to the elm or poplar, it is left free to wreath itself as it will round the supporting trunk to which it clings, and fling its light festoons in wild luxuriance from bough to bough. With no dusky rootlets like those which bear something of earthliness into the loftiest aspirings of the ivy; with no tenacious suckers like the Virginia creeper, adhering with a gripe as of desperation to the surface it climbs; but only twining its slender tendrils with firm yet tender clasp round the object it embraces, the fertile, loving vine stands forth the truest, fairest type of womanhood. Well might the Psalmist make it his metaphor when he recounts among the chief joys of him whom God hath blessed, "Thy wife shall be like the fruitful vine by the sides of thine house." And how was its typical significance deepened when

chosen to shadow forth Him in whom, as the representative of perfect humanity, the woman was blended with the man, and who, appropriating it as His own special symbol, declared, in words that have left an aureole of glory around it for ever, "I am the true Vine."

But to dissect our plant botanically will be an easier task than to attempt to analyze it æsthetically. The grape is a true berry, a mass of juicy pulp enclosed in a skin, and containing loosely floating seeds, which, according to the most correct principles of vegetation, should be five in number, one for each stamen of the flower; but as vegetables, like more highly organized beings, do not always act up to their principles, one or two at least usually remain abortive: an arrangement of Dame Nature's, which, however, is rather satisfactory than otherwise, especially at Christmastide, when the three or four which she does mature are found quite sufficiently troublesome to those whose department it is to "stone" the raisins. In pity perhaps to busy plum pudding preparers, a few varieties are left quite seedless, as is seen in the Ascalon or Sultana raisin; and Theophrastus in his antique wisdom sagely informs us how we might secure any sort becoming so by simply extracting the pith, with a proper instrument of horn or bone, from a twig, as far as it is to be set in the ground, then lightly binding it round, and setting it in moist earth to grow and bring forth a pipless progeny; "for," saith he, "if you rob the vine-branch of the pith, whereof the stones are gendered, you may secure grapes without stones." The vine in Italy furnishes oil as well as wine, a kind being extracted from the pips which is reckoned superior to any other sort either for eating or burning, as it has no odour and burns without smoke. The dried fruit furnishes no unimportant item of commerce, our imports in 1862 amounting to 278,750 cwts. of raisins and 873,529 cwts. of currants (the dried miniature grapes of the Greek islands), valued together at £1,227,538.* The Valentia raisins, according to Laborde,

* Our imports of fresh grapes were calculated, some years ago, to amount to $1\frac{1}{2}$ million lbs. annually.

are dipped in a ley made of ashes of vine-branches and rosemary, to which a little slaked lime is added, and then placed on the rocks to dry, while those of Malaga are simply dried in the sun without any preparation. At the latter place there are three gatherings in the year, the first, which takes place in June, furnishing the Muscatel and bloom raisins, which are exported annually to the extent of millions of pounds weight, making yet little perceptible difference in the vintage gatherings, which are effected in September and October. The Americans, it is said, import more raisins than all the rest of the world put together, for great as has been their progress lately both in growing grapes and in utilizing them, they have not yet attempted the drying of them for their own use. But it is by no means absolutely necessary that the fruit should be dried before it can travel to us, for the rapid transit afforded by steam permits us to receive many thousands of pounds' worth of fresh foreign grapes during the season, brought over packed in sawdust. When grapes are perfectly ripened they contain the elements of preservation within themselves, but in a variable degree, depending upon the proportion of sugar they contain; fleshy sweet berries, such as the Muscatel, having the greatest tendency to remain unchanged, while juicy subacid sorts, such as the Black Hamburgh and Sweet-water, are least fitted for keeping. In all cases damp promotes decay, and in Spain, where the finest dried grapes in the world are prepared, it is found, that if the slightest dew fall on them while they are in course of preparation, although the kind used is the sweet fleshy Muscat, the raisins are very apt to become spoiled, even after they have been packed in boxes. If, therefore, grapes are left hanging in a vinery after they are ripe, the interior should be kept as dry as possible. When it is wished to preserve them after gathering for any length of time, various means may be resorted to: the classical mode was to suspend them in jars of wine; the Americans prefer to imbed them in cotton wadding; and among ourselves they are usually merely hung upon a line in a dry room. Some invert the bunches, hanging the stalk end downwards, since the berries then do not

rest upon each other ; and the favourite plan of one fruit-grower was to cut off a portion of the stem along with the bunch (which in any case promotes the preservation of the fruit), and insert the part below the grapes into a bottle of water, which was occasionally changed. Others content themselves with sealing each end of that portion of the branch to which the fruit is attached.

Tusser, in 1560, speaks only of two kinds of grapes grown in England, the white and the red ; but so much have varieties multiplied since then that the list made by Thompson in 1842 enumerates 99 kinds, and by the present time a dozen or two more have been added, while in foreign countries they are numbered by hundreds, though practically there is but one *species* grown in Europe. It was affirmed, however, by Loudon that in Britain we have not only the best varieties, but that we grow the fruit to a larger size and of a higher flavour than anywhere else in the world. This seems a bold assertion, considering that the climate of Southern Europe must be so much more congenial to the vine ; but it must be remembered that it is of dessert grapes that he is speaking, and that in wine countries the chief care and attention are concentrated on vineyard grapes. The opinion, too, is confirmed by more recent testimony, for whereas we might rather expect to be surpassed in this particular by France than perhaps by any other nation, yet a correspondent of the *Gardener's Chronicle*, in reporting the great Paris Horticultural Exhibition of 1858, observes concerning the grapes, that they consisted of sorts which ripen mostly in the open air, and, to those who had seen the fine grapes shown a fortnight before at our own Crystal Palace, had but a miserable appearance.* The *Bon Jardinier*, too, for 1864, after giving a rather limited list of the kinds now in cultivation, concludes with an admission that "many other dessert sorts might be introduced with advantage." The English-grown kind, which in the opinion of our

* The result of the great International Exhibition in the gardens of the London Hort. Soc., in October, 1862, only afforded further proof of the surpassing excellence of English hothouse grapes.

cultivators is the best of all black grapes and deservedly the most popular, is the Black Hamburgh, which owes its name to having been introduced into this country from Hamburgh in 1724, though it came originally from Franckenthal on the Rhine, and is known all over the Continent as the Franckenthal Grape. When in perfection the skin of the berries is quite black, covered with a thick bloom, but it will sometimes appear brown or red even on a vine which has hitherto borne fruit of the most approved hue, this deterioration being a sure symptom of something wrong in the soil or temperature of the vinery. This variety grows better in England, in the open air or under glass without fire heat, than any other kind; and when bunches of seven different sorts, including the Sweet-water, Muscadine, &c., all grown in orchard-houses, were sent to the Fruit Committee of the London Horticultural Society, in 1861, for the purpose of comparing their relative merits, the preference was unanimously given to the Black Hamburgh, as evidently the best fitted for that mode of culture. It ripens in October.

What is commonly sold as the "Portugal Grape" is really the White Hamburgh, which, keeping for a remarkably long time after it is ripe, is imported here, chiefly from Holland, in very vast quantities, it is said to the value of £10,000 yearly.

The size of the berries is more an object with English fruit-growers than the size of the bunches; but these sometimes attain great magnitude, those on the vines in the conservatory at Chiswick, in 1860, varying in measurement from 6 in. to 2 ft. in length. The largest bunch ever grown in England was produced by the Duke of Portland's gardener at Welbeck, Mr. Speechley (called "the very father of vine-growing in England"), and the tree which bore it was a Syrian vine, which was accustomed to yield clusters of such large proportions that a single "shoulder" of one of them was enough to fill a good-sized dish. This one most famous bunch weighed 19½ lbs., and when transmitted by its noble owner as a present to a friend at a distance, was carried, suspended to a pole, on the shoulders of two men, in the style of the spy-

borne cluster of Eschol. The latter are supposed to have been of the kind now grown on Mount Libanus, where the vines creep along the surface of the ground and bear grapes as large as plums. In Madeira, too, there is a dessert grape, the clusters of which are said often to weigh 20 lbs.

An interesting account is given by the French writer, Noisette, of the early history of the vine in his country, now one of its most congenial homes. Among the many diverse accounts as to who first introduced this tree into Gaul, he assigns most weight to the authority of Strabo and Justin, who say that it was brought there by the Phocians when they founded the colony of Marseilles, about 600 years B.C. For nearly seven centuries it continued to flourish, but in A.D. 92, a scarcity of grain throughout the empire happening to coincide with a very abundant vintage, the one was thought to have had some effect in causing the other, and consequently Domitian, who was then emperor, issued an edict, ordering that a large proportion of the vines should be everywhere uprooted, and that throughout Gaul the plant should be entirely eradicated—a command which was so ruthlessly obeyed that the inhabitants of that country were reduced to resume the use of hydromel and such other poor drinks as they had been obliged to content themselves with before the introduction of wine. A Greek distich against the Goat, having by a slight change been adapted into an epigram against Domitian, in which the vine, addressing him, exclaims, “If you should destroy me down to the very roots, I will still bear fruit enough to furnish a libation when you are immolated,” exciting a fear that the general dissatisfaction might expose him to the danger of assassination, induced the tyrant to relax the stringency of this law in the other provinces; but in Gaul it continued in full force even after his death, and it was not till the year 282 that the Emperor Probus, after having restored peace to the empire, gave the Gauls permission once more to plant the vine. An author named Dunod, giving an account of this event, says that it was a truly delightful spectacle to see crowds of both sexes and of all ages joyously assembling to aid in the grand restoration of their

beloved vines, all anxious to take some part in it, and not in vain desiring to do so, for the plant can afford occupation for all; and while the men broke the rocks and dug the trenches, the women and children prepared and carried the plants, and the aged people, recalling all they had heard in their youth, went about to point out the spots where tradition said the plants had formerly best flourished. The ardour of the people ensured success, and soon every favourable situation was covered with thriving vines; nor was the plant confined, as it had been before, to the extreme south of the country, but spread through almost every province; for during the two centuries of its banishment forests had been cut down, marshes drained, and waste places rendered fertile, so that the land had thus been prepared for it to take possession and flourish. Perhaps, too, a new system of cultivation may have contributed to the effect, for the Gauls had formerly followed the Greek mode of culture, and now adopted that of the Romans. They were not left long to the undisturbed enjoyment of their recovered treasures, for the attacks of the Northern barbarians began with the beginning of the 5th century, though their incursions were more hurtful to the vine-dressers than to the vines, for it was for the sake of this plant and its produce that the conquerors came, and they therefore took care that its culture should not be neglected. By this time it had extended even to the vicinity of Paris, and it would appear must have succeeded there better than it does at the present day, for the Emperor Julian has left on record a special commendation of the wine of this canton; and the hill of St. Geneviève, all that part of the city now known as the Latin quarter, and even the enclosure of the Louvre, were all dedicated to the growth of the grape. In the course of time this extensive multiplication of vineyards drew down a fresh proscription on the persecuted plant, for a bad harvest occurring in 1566, Charles IX., a worthy imitator of Domitian, attributing the scarcity of corn, as the latter had done, to the prevalence of vines, commanded that they should be destroyed, but, somewhat less severe than the Roman, was content that they should be permitted to

occupy in each canton only one-third of the ground which had hitherto been allotted to them—a decree which even then fell heavily indeed on districts which had hitherto been devoted exclusively to vine-growing. Since that period no later government has been so unwise as to interfere with the natural course of demand and supply in this particular, and the vine has been suffered to flourish unmolested wherever Nature has provided it with a fitting *habitat*.

Wine grapes are not considered fit for the dessert, the kinds appropriated for the latter use having firmer flesh of sweeter and more agreeable flavour, and containing fewer pips in proportion to their size. The sort most esteemed in the Paris fruit market is the *Chasselas de Fontainebleau*, a grape of fair size, both as regards the bunches and the berries, which are yellow, tinged with red on the exposed side, and with skins so thick as to make a noise when they are crushed by the teeth. The large family of Muscat grapes—so named, not, as might be supposed, on account of the musky flavour which distinguishes them, but because the berries are particularly attractive to flies (*muscæ*), a reason which caused the Romans to name them *vitis apiaria*—are also very general in France, and by Du Hamel and many other authors are ranked as the best of grapes, but they are sweeter and less refreshing than other kinds, and distinguished too by a peculiar scent and flavour, which does not allow of their being partaken of very plentifully, and renders them absolutely unpleasant to many tastes.

A common grape in some parts of France, under the name of *Raisin des dames*, is the little *Corinthe*,* the same species which in the Greek islands furnishes us with the currants of commerce. Growing in long straight bunches, of fair medium size, and either white or purple, on very vigorous and productive trees, the individual grapes are no larger than peas, but are considered very agreeable in flavour, and are entirely free from pips; while in a sub-variety, the *Petite Corinthe*, the berries are but half the

* See Plate IV., fig. 3.

size of the preceding, and the whole bunch so small as to form but a single mouth-full. Another singular kind, which, however, seldom comes to perfection, is the *Cornichon*,* the berries of which are sometimes three times as long as they are broad, and very peculiar in form, having one side convex, so as to resemble capsicums rather than ordinary grapes.

The varieties of wine grapes grown in the south of Europe are too numerous for any attempt to be made here to particularize them, though a passing word may be given to the *Teinturier* or Dyer Vine, a few of which are grown in most vineyards in France in order to give colour to the wine when other sorts prove deficient in that quality. The leaves of this variety become quite crimson by the time that the grapes are ripe, so that it may be distinguished at a distance among its verdant kindred, and the flesh and juice of the berries are of so deep and engrained a red that a few of them suffice to tinge a large quantity of wine. Another kind, the *Bourdels* or *Verjus*, being intensely sour while green, is never allowed to ripen, but its large berries are made to yield their juice, to be used instead of vinegar or lemon-juice for sauces, drinks, and medical purposes. Other wine grapes are also sometimes made into verjuice while green, and when ripe are also eaten by the poorer classes instead of dessert grapes, being sometimes sold in the streets of Paris as low as *1d.* per lb.

The *marc* or residue left after wine-pressing is mostly used to make a thin beverage called *piquette*, but "before serving this purpose," says a French author, thus suggesting the delicate idea that the one use would still not prevent the other, "it is often used for baths." Carried at once to cellars or other places, he describes it as being left in heaps till as hot as the hand can bear, when a hole is made, and the patient either gets in entirely, or inserts the limb which requires bathing if the application is to be only local. In the former case the bath must only be taken in a place with a current of air blowing through it,

* See Plate IV., fig. 4.

and the head must be covered and turned the same way as the wind, or the alcoholic and carbonic vapour which rises would cause intoxication, headache, and even syncope and asphyxia. It acts like an ordinary warm bath, only that, in addition, the vapours also penetrate the pores and excite the internal organs, so that though never to be ventured on in inflammatory complaints, it has had marked success in curing cases of old rheumatics, sciatica, tumours, &c., &c., and in the wine-growing provinces the vintage season is impatiently waited for through the course of the year by all who have become afflicted with chronic maladies of this description. "It may be," says Noisette, "that more efficacy than is really due to them may be attributed to these baths by the inhabitants of the wine districts, but they are of sufficient importance to merit being more widely known." The sap of the vine, too, though no longer in use as it once was among regular practitioners, is very popular as a medicine among the French peasantry, who are accustomed every spring to cut a long vine-branch, the end of which is fixed in a bottle, into which the sap is thus drained at first in a perfectly clear state; it soon becomes turbid, undergoing a sort of fermentation, after which it again clears, and is then kept for use, being applied to the skin as a cosmetic to remove spots or stains, or to cure chilblains or inflamed eyes, and also taken internally to allay the pain incident to those who are afflicted with the stone, or to assist in dissipating the fumes of intoxication.

In Germany, Coblenz on the Rhine is generally looked on as almost the limit of grape culture, the vine zone in Europe being considered to extend from the 31st to the 51st^o N. latitude; but a few vineyards are to be found even near Dresden and in Moravia, and by artificial means dessert grapes at least may be produced much farther north, for the hothouses of Stockholm and of St. Petersburg furnish very good specimens.

Many as are the varieties of the grape cultivated in different parts of Europe, they may all be considered as of one species, the *Vitis vinifera*; but, once across the Atlantic, we are beyond the dominion of Bacchus, and

though certainly a vine abounds in America, it is no longer *the* vine, the sacred plant of the son of Semele. This wild climber, peculiar to the New World, has, as Humboldt says, given rise to the general error that the *vinifera* is common to the two continents, whereas in truth the *Vitis vulpina* of America is of another and far lower caste, long looked upon as a very pariah of vines, tainted—it was thought indelibly—with a flavour which could only be described, according to the indication of its specific name, as “foxy.” As the fruit is fine in appearance, and the leaves, which are but very slightly lobed, are much larger than those of the European vine, it is sometimes grown in England for ornamental purposes, but has never been much esteemed on any other ground either here or, until quite of late years, even in its native clime, owing to the hardness of pulp and strong disagreeable savour by which the grapes were distinguished. But though it seemed that the fox had thus “spoiled the vineyards” in a manner unthought of by Solomon, so that when the manufacture was first attempted, even the wine made from these native grapes retained a brand of the “brush” which rendered them far from pleasant to many palates, later experience would seem to show that this was only because they were, in the words of an American writer, “generally but one remove from a wild state, accidentally improved varieties that sprang up in woods and fields from wild vines.” For some years past our Transatlantic brethren have laboured not in vain to induce the rosy god to smile upon them, and eventually crown their bowl with a native nectar free from vulpine or any other offensive taint.

The vine of Europe was introduced into America by colonists within 50 years after their first settlement in that continent; but the climate of the States, so favourable to almost all other fruits, is singularly inauspicious to the foreign grape. In any case it requires great attention, and seldom bears good fruit except when quite young, and for vineyard cultivation is utterly unsuitable, experiments having been tried again and again under the most favourable circumstances by men of capital and prac-

tical skill, in various parts of the country and with different varieties of grapes, but always ending in disappointment and failure.

The efforts made to bring the native vines into use have resulted far more successfully, for, much superior in hardiness and productiveness to the foreign sorts, though the more attention they receive the better the fruit becomes, yet little more culture is absolutely required than to train the branches up poles or along a trellis, when they will continue from year to year to bring forth fruit abundantly, and the most improved varieties are therefore among the most valuable fruits of the Middle States, since they are easily available to the farmer and common gardener, to whom the delicately constituted foreign grape, which needs so much care, would be quite beyond attainment. In the rich alluvial soil of Western America the plants sometimes attain enormous size, vines having been found on the banks of the Ohio with a stem measuring 3 ft. in circumference, and branches 200 ft. long; but the cultivator must of course repress such exuberance if fine fruit is to be attained. Still an extraordinary degree of fertility, as compared with ordinary European vines, is often manifested by these growths of America, one growing near New York having been known to yield 12 bushels of fruit in a single year, while one raised near Baltimore bore in the course of a season 54,490 bunches, without reckoning small immature ones, which amounted to about 3,000 more. Downing, in his *Fruits of America*, gives a tolerably long list of names and descriptions under the head of "Native Grapes," which, however, is hardly satisfactory as proving their unquestionable right to that denomination, when intended to imply that they are of purely aboriginal descent, for while some are admitted to be probably or even certainly seedlings from foreign sorts, the others, or at least those which have good characters assigned to them, are marked as of "uncertain origin," and therefore are open to the suspicion of being of similar parentage. The one most largely cultivated is the Catawba, which is characterized as being one of the hardiest, most productive, and excellent of the native varieties,

either for wine-making or table use. It probably has its name from the Catawba River, and was first noticed as a wild grape in 1802; but it was not till 1826 that its merits were discovered by Major John Adlum, an officer of the Revolution, who devoted the last years of his life to vine culture, and in the course of experimenting upon native vines found this variety growing in a garden in N. Carolina, say some, but according to other authorities in Maryland. After a fair trial he was so convinced of its value as a wine grape, that on sending some slips to Mr. Longworth of Cincinnati, he accompanied them with a letter in which he affirms, "I have done my country a greater service by introducing this grape to public notice, than I should have done if I had paid the national debt." The major soon after died, but the zealous and patient perseverance of Mr. Longworth for a period of more than 30 years has at length established vine culture on a firm basis, and seems likely to bring about at last a fulfilment of his friend's prophetic words. Next in popularity to the Catawba is the Isabella Vine, a native of Carolina, first introduced to notice in 1818 by Mrs. Isabella Gibbs, after whom it is named. In flavour it resembles the Catawba; but as it is more hardy and ripens earlier than that kind, it is more widely disseminated, and is particularly valued in the colder parts of New England, requiring the least possible care to enable it to perfect its produce. It was at first generally believed to be of foreign origin, but the best American botanical writers now assert it to be an indigenous growth. To the Swiss at Vevay is due the credit of having first begun wine-making in Western America; but the enterprise having been afterwards undertaken by some public-spirited citizens of that part of the country (including the above-mentioned Mr. Longworth) aided by skilful emigrant vine-dressers from France and Germany, the practicability of profitable vineyard culture in the valley of the Ohio has now been placed beyond a doubt, the grapes chiefly grown being the Catawba and Isabella. The vineyards on the Ohio now cover many acres, producing regular and very large crops of wine, offering similar characteristics to Madeira, Hock, and

Champagne, while it is said by some that native wine is beginning to supplant imported Rhenish and Champagn even at equal prices. Other vineyards, too, being established, and new varieties of grapes attracting attention which ripen earlier, and are therefore suited to two or three degrees further N., by 1853 the vine had outstripped the tobacco-plant in the relative money value of their respective produce within the boundary of the U. States for in the Patent Office Report that year it was stated that the annual value of the wines grown in the State amounted to 2,000,000 dollars, whereas the value of the tobacco was only 1,990,000; and as it is said that these wines are quite distinct in flavour from any made in Europe, and have besides the special peculiarity that no spurious compound can effectually imitate them, it seems probable that they will in the course of time become yet more profitable as an article of export. The American *Year Book of Agriculture*, in giving some details respecting native beverages, mentions that the most expensive wine in Europe, Tokay, contains also the least amount of alcohol—9·85 per. cent; but that the still Catawba of America shows only a percentage of 9·50, in fact, the lowest percentage of spirit to be found in any wine in the world. S. America, too, abounds in vineyards, and wine is made both in Paraguay, Brazil, Peru, and Chili.

Although Asia is the native home of the vine, it is only in some parts of that continent that it thrives, the uninterrupted heat of Southern India not admitting of the fruit coming to perfection. It is true that even in the north it is often excessively hot, the thermometer in May standing at mid-day at 140° in the sun, and 110° even in the soldiers' tents in Cabul and Candahar; yet in no part of the world are grapes more delicious than in these places. Mr. Atkinson mentions that on the 30th June he saw donkeys laden with panniers of fine purple grapes, at the very same time that the paper on which he was writing was actually curling up with the excessive heat as crisply as though before a blazing fire. Dr. Lindley, however, explains the phenomenon of the vine thriving in such a climate by the observation that it is

during the blossoming-time in spring that it specially requires coolness, and that whatever may be the temperature in these countries during the day, at night, at least at that season, it is extremely low, most of our soldiers' nocturnal marches there being recorded to have taken place in a cold, bracing, and even frosty air; a regular period of rest being thus afforded to the plant during each 24 hours, compensating for the extreme heat it has afterwards to endure. But the vine requires not only the repose of night alternating with day, as necessary generally to vegetables as to animals, but also the periodical rest of winter after summer; and Sir Emerson Tennent observes in his *Ceylon*, that vines taken to that island grew freely, but, like the peaches, cherries, and other European fruit-trees introduced there, became evergreens, and, exhausted by the ceaseless excitement of uninterrupted hot weather, bore leaves indeed abundantly, but never ripened fruit. The government agent in whose garden they grew conceiving, however, that "the activity of the plants might be equally checked by exposing them to an extreme of warmth as by subjecting them to cold, tried with perfect success the experiment of laying bare the roots in the strongest heat of the sun. The result verified his conjecture. The circulation of the sap was arrested, the vines obtained the needful repose, and the grapes, which before had fallen almost unformed from the tree, are now brought to thorough maturity," though it is added that they are still inferior in flavour to those produced at home. A similar experiment in affording the vine an artificial winter by laying bare its roots, and which was equally successful, is recorded in the Transactions of the Agricultural and Horticultural Society of India, under the date of 1824, but the system does not seem to have been applied anywhere to any practical extent.

On the western coast of Africa the vine produces fruit twice in the year; in Morocco grapes abound; and we have daily proof of the rapid improvement taking place both in the quantity and quality of the wine produced in the British possessions in S. Africa.

As regards Australia, in 1830 specimens of the best

varieties of vines were planted on the Camden estate near Sydney, N. S. Wales, and they have since been also cultivated in some other districts. Several specimens of wine manufactured at Camden were sent to the Great Exhibition in London in 1851. These wines are said to be very dry, and to have also a tinge of bitterness, which, however, wears off with age. No less than 30 different specimens of S. Australian wine were sent to the International Exhibition of 1862, and the wine produced in 1863 in Queensland greatly exceeded the quantity obtained the preceding year, while the demand for it was so rapidly extending that almost all hotels, taverns, and wine merchants supplied it, and the trade in imported wines was beginning to be sensibly affected by the consumption of the home-made beverage. The high price, however, which it still maintained, being retailed at from 30s. to 40s. the dozen, or 1s. a tumbler, had been a great obstacle to its becoming thoroughly popularized.

As far as can yet be judged, therefore, the quality of the produce of Australian vines seems to be such as to promise that whenever the colonists may be able and willing to turn their attention to its extensive culture, there will be little reason to fear that the climate will offer any obstacle to their success, and we of this quarter of the globe need not therefore be under any apprehension of sharing the fate of ancient Rome, or dread the invasion of some Brennus of the New World, attracted from his own grapeless land by the charms of our vines, and determined no longer to leave us in undisturbed possession of such a luxury. There is every prospect, too, that as the reign of the vine extends, the grape will more widely attain its highest glorification, in being dedicated to the noble service of the wine-press; for this, after all, is the grand use of the vine, and that to which all its other uses are by comparison merely incidental and unimportant. Other fruits may please the palate as well, but this is serving a mere material purpose: it is the proud prerogative of the kingly grape to minister to the mind, and though it is true it does not stand quite alone in this, yet it is its lofty distinction to reign supreme over

every other substance to which a portion of this power is permitted. Let sensuality and intemperance pervert it as they will, it is in itself a good and not an evil, and was given by the Source of all good to "cheer the heart of man" and gladden his spirit. It is too true that the gift has often been abused, so much so that legislators have sometimes attempted wholly to interdict it; and it is said that the grape has once or twice been entirely rooted out of the land of China by imperial decree. Nature, however, cannot be permanently thwarted, and it has mostly been found that where the vine has been banished something worse has taken its place, it being a significant fact that wine-growing countries are really the least intemperate. Next, indeed, to the corn which supplies our daily bread, we may truly say that by the greater part of the world no gift of Heaven has been more valued than the grape. In enumerating the honours of the vine, we must not forget that it afforded one of the earliest offerings to the Deity, for "bread and wine" were brought forth to Abraham by Melchizedek, "the priest of the Most High God." Consecrated too to the most sacred rite of the religion of Jesus, it has thus been made to us a link between heaven and earth; and though we look not with the heathen or the Mahometan to an actual quaffing of grape-juice as part of the bliss of eternity, yet every Christian must feel that there is something hallowed in the symbol which reminds him of his future hope to drink hereafter "new wine in his Father's kingdom."

CHAPTER X.

THE GOOSEBERRY AND CURRANT.

WHILE every bright-tinted blossom still slept within its bark-built cell, and only the first faint streaks of spring

green was yet dawning over the dark bare boughs of winter, from among the earliest of leaves crept forth one of the earliest of flowers; but flaunting no brilliant hues to mark it out amid the universal verdure, this hardy little pioneer was attired, on true rifle brigade principles, in a garb assimilating closely with its surroundings. Possessed of neither beauty nor fragrance, it lived out its little life unnoticed, perhaps, by one eye out of a hundred among the many eagerly watching for the bloom of spring, but connecting that idea solely with the snowy vestures of the cherry and the pear-tree, or the richer glories of the almond and apple. With the advancing season, however, the outgrowth of those humble blossoms soon becomes apparent, and being endowed, while yet immature, with virtues beyond those of any of our other fruits in a similar stage of progress, though not yet fit for the dessert, they grace the dinner-table at least with a charm that has been long absent, and our English feast of first-fruits is therefore always a feast of Gooseberries.

The botanical name *Ribes*, shared in common by both gooseberries and currants, is an Arabic title originally bestowed on them through a mistake, for the description given by Arab botanists of the plant to which they had given this appellation, seemed to apply so well to our fruits that they were classed with it, and as the Europeans had not seen the real *Ribes*, and the Arabians never came in contact with the gooseberry or currant, neither party discovered the error that had been fallen into until it had continued too long for the name to be altered, though the distinct nature of the respective plants has been long since ascertained, and even a cook-maid would hardly now suspect that rhubarb (the Arab *Ribes*) had anything in common with the gooseberry beyond the similarity of flavour in the tarts made from them. The surname of the latter species—*grossularia*—is said to be derived from the resemblance of the fruit to little unripe figs, called *Grossuli*, whence, too, comes the French *Groseille*, the Scotch *Grozer* or *Grozet*, and, according to some, our name *Gooseberry* also, though the latter is more generally considered to have been corrupted from *gorse-berry*, on account of

the prickly bush on which they grow, while some gardeners believe that it alludes to the *gross* or thick skin of the fruit, and others again trace its etymology in the fact of its having been formerly much used as a spring sauce for the goose. In some counties it bears the name of Feaberry, contracted from feverberry, the juice having been considered beneficial in fever.

Before it has opened, the blossom of the gooseberry* in size, shape, and colour very nearly resembles a grape-stone. When fully blown it is seen to consist of a green calyx, slightly tinged perhaps with dull red, and divided at the edge into five sepals; at the base of these rise five tiny colourless scales, which represent petals, and between these are the five stamens; the whole arranged upon a central ovary, situate below the floral part, and looking like a sudden swelling of the flower-stalk. Ere long this ovary swells more and more; it is soon traceable that there are little seeds within it, arranged in two groups, and attached to its sides by threads; and when eventually it has become a large juicy berry, these seeds are still fettered to its walls and sustained amid the pulp by the same soft but firm ligatures. And though the blossom has long since withered, its principal part, the calyx, has not disappeared, but merely dried up, and now, brown and shrivelled, still clings to the object which has so distended beneath it, and keeps the same place to the last upon the great berry which it did at first upon the little ovary—a relic of humble origin retained by the expanded fruit, like the apron preserved by the ex-blacksmith of Persia in all the exaltation of royal grandeur. X

Even at its best estate this blossom of the gooseberry had been so small and insignificant—making little more show while unopened than a leaf-bud, and scarcely distinguishable in its lair among the leaves even when full blown—that, comparing it with the great and gorgeous flowers which kindle the cactus into stars of flame, it might appear as reasonable for a linnet to claim cousinship with a peacock as for these most opposite-seeming

* See Plate III., fig. 1.

products of the vegetable kingdom to put in a plea of relationship. Yet it is a botanical fact that the plants are closely allied, and the *cactæ* are considered as the tropical representatives of the *grossulariæ* of cold climates. Careful inspection will show many points of similarity, for though the gooseberry has leaves and the cactus has none, consisting entirely of succulent stems, the former shoots forth many appendages, which are affirmed to be foliage in a state of abortion, and therefore tending to disappearance; the "very sharpe, cruell, crooked (?) thorns, which no man's hand can well avoid that doth handle them," spoken of thus plaintively by an old botanist, being now looked on as mere mid-ribs without any expansion of fleshy substance to form them into leaves, and which therefore harden into mere prickly spines. The ovary, too, swelling as it does directly out of the stalk, is another feature in common, and in the matured fruit the resemblance is far more obvious; indeed, so much so, that one species of cactus bears the name of the West Indian Gooseberry. An ornamental species of *grossularia*, a native of California and the west coast of America, introduced here in 1829, and now not uncommon, shows a taste more in affinity with its gaily dressing tropical relatives, by assuming a rich robe of crimson, the calyx of the blossom being large and highly coloured like a fuchsia, making it a very desirable acquisition in the flower-garden. In Siberia are several species of *Ribes* which have the prickles of the gooseberry, yet bear fruit resembling currants, being, indeed, the connecting link between the two. These are not easy for a botanist to class, for the presence or absence of prickles is the one feature by which the plants are commonly distinguished from each other, it being a singular fact, considering how different are the respective fruits into which the blossoms develope, that the organs of fructification are so similar as to offer nothing on which a distinction of *genera* can be founded. The currant has more numerous blossoms, it is true, but the gooseberry produces several in a group, one or two mostly proving abortive, and in each case they are arranged on a common stalk, each with its appended bract, while the flowers are

formed of exactly the same number of parts, disposed in an exactly similar manner. Linnæus attempted to trace a distinction in the presence or absence of hair on the fruit; and were all gooseberries like the little red Esau selected by housekeepers as making the best preserve, the difference from the currant would be obvious enough; but among the former family are to be found Jacobs also, as smooth-skinned as the subtle supplanter of old, and trust in this characteristic would therefore by no means prevent confusion of the tribes, but, on the contrary, only prove as misleading as it did in the days of the patriarch. At a loss, then, for some better family cognizance, Tournefort speaks only of thorny and thornless "*Groseilles*," and modern science has been unable to improve on the classification.

The thornless gooseberries, then, if so we must designate our currant friends, are a widely flourishing race, native to many parts of Europe, venturing in America to the very borders of the Arctic circle, and calling up a vision of cooler climes amid Oriental surroundings in many places in Asia. There is no evidence of the ancients having been acquainted with any of the tribe, but Loudon thinks it hardly probable that they could have been unknown, though we may be unable to identify them with any of the plants mentioned by the Greeks and Romans. It is not noticed, however, by our own oldest botanical writer, Gerard, nor does its title imply any very ancient origin, for it derives the name "currant" from its resemblance to the imported dried fruit which our forefathers called Corinthes, or currants, because they were brought from Greece, and with which, therefore, they must have been familiar before making acquaintance with their now naturalized namesake.

Foremost of this branch of the family stands the universally admired *Ribes rubrum*, or Red Currant, the flowers* and fruit of which grow in *racemes*, *i.e.*, on little stalklets proceeding from the main stalk, and each supporting but a single berry, instead of branching so as to bear several,

* See Plate III., fig. 3.

as in the case of the stalklets of a cluster of grapes. When found growing wild among rocks or in mountains, situations where it often springs up from bird-sown seeds, even in countries where, as in Britain, it is not indigenous, it is a small-leaved bush scarcely a foot high, but under cultivation attains four or five times that height, the leaves, too, becoming at least twice as large. The fruit would seem to attain its greatest size in the North, for in Anderson's "Sketches of the Russian Empire," it is affirmed that on the Altaian Mountains the red currants grow to the size of an ordinary cherry. In the south of Europe it is little known, nor does it seem to have been originally a native of France, the name by which it was formerly known there, *Groseille d'outre-mer*, evidently indicating a foreign introduction. At the present day, however, the fruit occupies a very important position in Paris, less, however, as a fruit than as furnishing the popular *sirop de groseille* which supplies the lady's *petit verre*, and admits her to a privilege unknown to her sister in London—that of finding, in any place of refreshment she may visit, wherewith to slake her thirst at trifling cost and with an innocent and delicious beverage. Besides its cooling influence, currant-juice has also the property of diminishing the secretion of bile. Wherever may have been the birthplace of the plant, it appears to have been in Holland that attention was first devoted to its improvement, and it is thence that our principal varieties have been procured; the English market continuing, too, to be largely supplied with Dutch currants ready grown and gathered. The plant, however, thrives here as well as anywhere, and is seen as often as anywhere trained against a cottage wall, its handsome lobed leaves of rich green and jewelled clusters of ruby drops beautifying the poor man's lowly dwelling, while presenting him with a feast wholesome as refreshing. And though the banquet it spreads endures but a short period if left entirely to Nature, yet, by choosing a northern aspect, and covering the bushes with matting, the gathering season may be prolonged from July even until December.

The White Currant is only a variety of the Red produced

by cultivation, and offering no further peculiarity than the colour of the fruit, for the flavour varies according to the situation in which it is grown, sometimes being less, sometimes more, acid than its ruddy relative. A pink variety is also sometimes grown, and there is a sort cultivated in Austria which is marked with alternate stripes of white and red. The Black Currant is much more decidedly distinct. It has the same geographical range as the Red, but is more abundant than the latter in the north, and comparatively scarcer in southern latitudes, though a few species of *Ribes* even in India and South America have black fruit; and though sometimes found in British woods and hedges, is not known to be truly indigenous to this country. The taste for it, too, seems to be developed progressively northwards. Du Hamel speaks of it as simply medicinal, though the virtues he enumerates as appertaining to it might well induce his countrymen to endeavour to acquire a relish for it; and the most recent *Bon Jardinier* still only specifies its being used to make ratifia, without mentioning any possibility of its being eaten at the dessert. Among ourselves, though one of our old botanists spoke of the fruit as being "of a stinking and somewhat loathing savour," and many still dislike it, this is, perhaps, compensated for by its friends being usually passionately fond of it, for it is one of those strongly marked characters which can hardly be regarded with indifference. It is a significant fact, too, that it usually fetches a higher price in the London market than currants of any other colour. In Scotland it is yet more esteemed than with us, and the jelly is considered there to give an additional charm to whisky and water, as lemon is added to their grog by South Britons. In the north of Russia, where it grows wild abundantly, the love for it is shared by even the bears, who devour it greedily, large quantities being also gathered by the inhabitants, and dried in the sun or in ovens to preserve it for winter use, either in tarts or medicinally. On reaching the utmost extremity of its Pole-pointing tendency in Siberia, it supplies drink as well as food, the berries being fermented with honey, and a powerful spirit distilled from them, while the

leaves form a principal ingredient in the beverage known by the name of *quass*, and are also put into white spirit to give it a brown brandy tint. The efficacy of black currant jam or jelly in affections of the throat is almost universally known and taken advantage of, though its virtues are in England too often greatly diminished by the use of more sugar than is fitting in making the preserve. The leaves of the Black Currant, when dried, are sometimes used in England and Scotland instead of green tea, two or three of them imparting an additional zest to the ordinary Souchong, scarcely to be distinguished, as some say, from real Hyson, and only needing a Celestial name to be esteemed equal to any import from the Flowery Land. It is in the transparent yellow dots at the back of the leaves that the strong and peculiar odour of the plant resides. The flowers vary very slightly from those of the Red species, being greenish-yellow in colour, sometimes tipped with red, and closely resembling in formation those of the gooseberry, but grouped in greater numbers into *racemes*. One of its varieties, too, furnishes that brightest ornament of early spring, the *Ribes sanguinum*,* which, though only introduced here from the north-west coast of America in 1826, is now seen almost everywhere, drooping its elegant clusters of rosy blossoms, varying from pale pink to deep red, among its leaves of vivid green, long before the pale tints of our forefathers' lilacs and laburnums have unfolded their more delicate beauties. The seeds grow freely in this country, producing new varieties, but in all of them it is the flower alone for which they are valued, all the resources of the plant seeming to be expended in decorating itself with these showy blossoms, for the fruit which succeeds them is an insipid bluish-black berry, more similar to a bilberry than either to a currant or a gooseberry, and as a fruit quite worthless. Having thus glanced at its kindred, whether among useful or ornamental plants, we turn once more to the head of the *Ribes* family, the gooseberry, "our own, our native" plant, for we may call it so on double grounds, being not only indigenous to our

* See Plate III., fig. 4.

island, but, in its best estate at least, almost peculiar to it. It is true that it is a native of other countries: the picturesque Vierlander offers it to her Hamburg customers; its bushes may be seen mantling "the castled crag of Drachenfels" and flourishing on the flat coasts of the Baltic; but the best berries brought to market in most parts of Germany bear about the same relation to our fruit as a Shetland pony does to a Barclay's dray-horse. Though unmentioned by ancient French botanists, it grows wild, too, in various parts of France; but the contemptuous notice of it in the *Nouveau Du Hamel*, sums up as the amount of its usefulness that "the bushes make hedges in the country, the green fruits serve instead of verjuice to season mackerel (whence its common French name of *Groseille aux maquereaux*), and the best are eaten when ripe, the red and green sorts being mixed by the fruiterers and sold to children and persons who like such things, by measure. The English make tarts and preserves of them, 'and,' says M. Laundry, 'a wine which is very tolerable, or, at least, very renowned amongst them.'" Shade of Goldsmith! is it thus that a frog-eating Frenchman dares to speak of "our own gooseberry," that sparkling native nectar on which the virtues of the immortal Vicar were nurtured, and with which he was wont to cheer the hearts of Wakefield's most honoured guests? On what trivial grounds the fastidious French may found a dislike, may be judged by the further intimation respecting the fruit, that "on the best sort, the hairy yellow, the hairs are soft, and cannot produce a disagreeable impression on the most delicate lips." On the most hirsute kind they would probably be softer than those which are wont to bristle on a Frenchman's physiognomy, yet which certainly he would never think it possible could cause a "disagreeable impression." But it is the partiality manifested by perfidious Albion for the poor gooseberry which evidently excites this Gallic scorn of it, and induced the editors of so elaborate a work thus to mingle the splenetic with the scientific. The writer continues: "It would seem that the English particularly love the gooseberry, or else that they chose it as specially fit to show the infinite power of Nature

in the modification of matter, for they have established societies to give prizes for new or improved sorts. M. Forsyth devotes so much space and care to it in his treatise, that it would appear they think as much of its culture as we do of that of the peach; but as it is probable it will with us always hold the very last place on the list of cultivated fruits, we will not give it more importance than it merits, as being allowed to occupy a few feet of soil in our gardens, in order to supply us with fish-sauce; though it must be confessed that, thanks to the English, a few sorts are worthy to grace any table. There is, however, no French nomenclature to them, and we will not adopt the English, not from pretension or conservatism, but because to call one sort *Le Roi Georges*, another *M. Smith*, and another *Madame Yong*, all names very good and very beautiful, no doubt, in English, would, in French, be simply ridiculous." It would certainly be no easy matter for a foreigner to render the titles often given to prize gooseberries; for "Jolly Angler," "Crown Bob," &c., &c., would be rather puzzling to translate, and can scarcely claim to be, even in English, "very good and very beautiful;" indeed, the practice of choosing such slang-like denominations as figure not unfrequently among the 300 varieties recognized by English growers, has been condemned by the better class of our gardeners; but even an ill-chosen name is better than none at all, and in France the hapless fruit has found no kind sponsor to bestow upon it any distinctive appellation, and must be content to share with the currant the common term *Groseille*. Considering the fruit is so decidedly anti-Gallican, it is rather curious to find that our favourite dish, gooseberry-fool, must seek its etymology on the other side of the Channel, the latter word being derived from *fouler*, to press or crush.

It is most probable that the French judgment of gooseberries is influenced in some measure by the same cause which led the fox to his well-known conclusion concerning another fruit; for in the native specimens, the *magnum* and the *bonum* seem never to be found in combination: the one figured in Du Hamel as the largest, though in

size but little exceeding a cherry, is so insipid that it is only brought to table to please the eye, while the one which is described as the best flavoured, the "Mignone," is also the very smallest, and a mere dark, slightly lobed little pigmy,* less in size than a good black currant, and burdened with an appendage of shrivelled calyx twice as long as itself. The *Bon Jardinier* even, after describing the plant as "covered with strong numerous thorns, which make it very fit for impenetrable hedges," only names 11 varieties of the fruit. Nor is indifference or contempt for this fruit confined to the French, for a Piedmontese botanist describes it as being "eatable, but somewhat astringent," and in Spain and Italy it is hardly known, the latter having no better name for it than *Uva spina*, or the Prickly Grape, a term poetically elevated at Geneva into *Raisin de Mars*. As it is always found, too, that the fruit soon degenerates unless constant attention be bestowed on the plant, it is hardly likely that sufficient care will ever be taken to develop its capabilities in climates where abundance of fruit, equal or superior to it, can be obtained from the vine, fig, or pear-tree, at the cost of far less trouble. Nor, indeed, might any amount of care be fully successful, for this "cold beauty of the North" does not thrive well in warm countries, a low temperature seeming necessary to brace it to perfection; and, indeed, so long as there be just sufficient sunshine to ripen it, the colder the climate in which it grows the better is its quality; so that, other things being equal, its flavour will be found finer in Yorkshire than in Devonshire; bleaker Scotland outrivals either, and even there Inverness surpasses Edinburgh. It does not even succeed well in the United States, notwithstanding great pains have been taken to introduce it there, the heat of the summers proving too great for it. Mrs. Trollope recorded that at Cincinnati she found "gooseberries very few, and quite uneatable," and in the present day, though in the N. and E. States it thrives very well when planted in good soil, it is most often seen in humble gardens in a very wretched

* See Plate III., fig. 2 (*nat. size*).

state, bearing poor small fruit covered with mildew, partly from ignorance of the proper mode of culture, and partly because the inferior sorts mostly grown are always extremely liable to this disease. In the countries of N. Europe, however, there is no reason why a fruit which so amply repays any care that may be devoted to it in a suitable climate should not be brought to all the perfection of which it is capable; and, accordingly, Germany, in at least its appreciation of the gooseberry, ranks only next to England. Dochnahl speaks of it as one of the most valuable of fruits, and describes no less than 540 sorts, while Dr. von Pausner published, at Jena, in 1852, a very elaborate monograph of gooseberries. The Danish Government, too, are so sensible of its merits, that gooseberry bushes are supplied to gardeners from the national nurseries in Denmark, at a cost of little more than a halfpenny per plant, in order to encourage its culture. In our own country it must have come under cultivation as early as the 16th century, for Tusser, in 1557, writes:

“The barberry, respis, and gooseberry too,
Look now to be planted as other things do;”

but does not appear to have been held in very high esteem, for Gerard, in 1597, after mentioning that the tender leaves are good for salad—information of some value to those who could not, like Queen Catherine, send to Holland when they needed herbs for that purpose—and commending the berries as useful in various culinary compounds, yet adds that, “if eaten by themselves, they engender raw and cold blood.” Parkinson, however, by 1624, had learned to know better than this, and of the five kinds, “three red, a blue, and a green,” which were all that were known in his time, says that “all of them have a pleasant winie taste, acceptable to the stomach of anie, and none have been distempered by the eating of them that ever I could hear of.” Still they were considered inferior to almost any other fruit, and, perhaps, justly so, for they had made but little progress in the hands of the gardeners; nor were our gooseberries equal

to some continental ones, for a writer in 1750 says, "they are nowhere so good as in Holland;" when, about the end of last or the beginning of this century, the plant was adopted as the special favourite of a class of men who devoted to its culture all the enthusiasm for which their ordinary occupation afforded no scope, and under the amateur care of Lancashire weavers the despised berry, which had been left to rustics and children, was fitted to take its place at the most aristocratic tables, and earned the character it now bears, as being "one of our most valuable table and culinary fruits." Its intrinsic excellence is, doubtless, enhanced by the fact of its being the first to greet us in spring, as well as one of the last to leave us in autumn; for the green gooseberry is in season from the beginning of May till the middle of July, when the ripe one succeeds it, and lasts till the end of August, and some kinds will even, when kept shaded, prolong the supply till November, or, in a dry season, till Christmas. Of the various hues assumed by this grape of the North, the amber colour is, according to Rhind, accompanied by the richest vinous flavour, as is the case with the more legitimate, or at least older offspring of Bacchus; the green is specially noted for sweetness, as is also the green-gage among plums; the white are most insipid; and in the red, acidity is more predominant than in any of the others—a fact in accordance with the property possessed by acids of changing vegetable blues to red. Though only a bush by nature, the gooseberry sometimes attains almost arboreal dimensions, for one at Duffield, known to be at least 46 years old, measured 12 yards in circumference, and two plants trained against a wall in the garden of Sir Joseph Banks, in Chesterfield, each extended upwards of 50 feet from one extremity to the other, and afforded several pecks of fruit annually.

It is to the attainment of the utmost possible corpulence in a few chosen berries that everything else is sacrificed by a Lancashire gooseberry grower. Every shoot not absolutely necessary is pruned away; every fruit removed but the three or four carefully selected as the most promising; and besides "suckling" the plant

with copious libations of liquid manure poured at its roots, the "fancy" partially submerge each berry in a shallow vessel of water placed immediately beneath it, thus compelling a continual absorption of moisture until, under this hydropathic treatment, the most dropsical dimensions are attained. Screens of paper or canvas are kept, too, in constant readiness to be put on or off according to the degree of sunshine that may be required, and the most watchful care shown lest the slightest injury should befall the tenderly fostered darling.

"Lest the sun be glaring,
Or the wind too daring,
What fond fears are shown;
For its welfare caring
Far more than for their own."

Of course the "beauty" is not intended to "blush unseen" when the perfection so assiduously striven for shall at length have been attained, and each owner of promising fruit therefore enters his name as an intending competitor at some neighbouring "Show," and subscribes a small amount weekly towards the providing of the silver sugar-tongs, or copper tea-kettle, or sum of money which will be adjudged to the grower of the most gigantic of all the fructal giants that may be produced; each fruit, however, only competing with others of its own complexion, red with red, yellow with yellow, &c., &c., and the rank of the respective rivals being determined by their weight. Seventy or 80 years ago it was thought a grand thing for a gooseberry to outweigh a guinea, while now a berry would hardly presume to enter the lists at an exhibition if it could not make at least five sovereigns kick the beam; and on one occasion the hero of the day at Manchester was a red-skinned mammoth, (for the red fruit always exceed in size any other) weighing no less than 37 dwts. 7 grs. The parent plant, too, comes in for a share of the honours achieved by its offspring, and brings sometimes no small profit to its owner; for cuttings from plants of reputation are in great request, and thus the division of a single bush not unfrequently secures a sum of 20 guineas, and one has been known to

produce, when sold in lots, as much as £32. Greater profit though than can be summed up in pounds or guineas of any amount must accrue to the worthy weaver whose monotonous loom-labours are enlivened with verdant visions of a favourite plant; who devotes his leisure to a recreation necessitating the study of vegetable life and its laws, and who, leaving cruel or debasing sports to workmen of lower tastes, only vies with his fellows in the innocent and useful rivalry as to which can bring to greatest perfection one of the products of their native land. All honour, then, to the fair fruit whose charms have proved so powerful an attraction to this class of the community, and exercised so beneficial an influence upon them. It has called forth, too, a literature of its own, and besides occupying a large share of various gardening publications and local newspapers, a work especially devoted to it appears every year, the *Gooseberry Book* being one of the regular Manchester "annuals." Nor is the taste for gooseberry-growing confined to a single county, but has spread, in company with the weavers, over a large tract of country, and zealous cultivators may be found throughout Lancashire, Yorkshire, and Cheshire. And though weight alone is the all-important *desideratum* with these northern amateurs, and the greatest bulk is hardly compatible with fulness of flavour, their efforts have shown the capabilities of the fruit. Through their partiality the attention of others has been drawn to it, and those who have been willing to sacrifice a little of its bulk in order to attain excellence in other particulars, have succeeded in combining greatness with goodness, and produced that fruit, desirable in every respect, which now adorns our summer dessert, and the enjoyment of which may therefore be enhanced by the consideration that, comparing it with feeble foreign growths, the Englishman may point to his gooseberry as he does to his government, and exclaim with honest pride, "I have made it what it is!" And if any proud spirit should think scorn of the work, and deem the object too petty for attention, the words of the poet may convey to such a lesson of much-needed wisdom, for though not written

with that special intention, to no plant do they apply more appropriately than to the gooseberry.

“If we would open and intend our eye,
We all, like Moses, should espy
Ev’n in a bush the radiant Deity;
But we despise these His inferior ways,
Though no less full of miracle and praise.

“Upon the flowers of heaven we gaze,
The stars of earth no wonder in us raise,
Though these perhaps do more than they
The life of mankind sway.

“Although no part of mighty Nature be
More stored with beauty, power, and majesty,
Yet, to encourage human industry,
God has so ordered that no other part
Such space and such dominion leave for Art.”
COWLEY.

CHAPTER XI.

THE BARBERRY.

SOMETIMES nestling in the sweet centre of a sugary comfit—more often garlanding, with serried sprays of coralline ruddiness, some triumph of confectionery art—the Barberry appears at our tables, usually only in a very supplementary kind of manner; yet as it does “enter an appearance” there in due form, it cannot be denied some notice, especially as it further claims to be one of the fruits indigenous to our own country. It is thought by some to have come originally from the East, but no record remains of its having been introduced thence, and it is now at least found wild in most parts of Europe and also of America; while, to endow it with a respectable classical antiquity, it has been assumed to be the fruit referred to by Pliny, when he describes “a kind of thorny bush, called appendix, having red berries hanging from the branches, which are called appendices.” Gerard informs us that in his time (1597) it was very common in England, and that near Colnbrook especially the hedges were nothing else but barberry-bushes; but now, though still sometimes found wild, it is comparatively rare, though

the stiff, sharp, triply-pointed spines which liberally garnish the branches fit it admirably for a protective enclosure, while, as regards appearance, it forms one of the very prettiest of hedges. Spring clothes it first with a foliage of oval serrated leaves, which, being joined to the leaf-stalk by a distinct articulation, are reckoned as compound leaves reduced to a single leaflet; while the three spines which shoot out at their base are also considered as being the skeletons of undeveloped leaves, or, in the words of Lindley, "a curious state of leaf, in which the parenchyma is absorbed, and the ribs indurated." By June the bush has garlanded itself with wreaths of blossoms, in form, size, and colour not unlike the common little yellow "everlasting" flower, but more light and delicate in make, and far more gracefully disposed, hanging in loosely drooping clusters, while the centre of each flower displays six slender stamens surrounded by six petals and six sepals, but calyx and corolla scarcely distinguishable from each other—the whole of the blossom being tinted with one uniform hue of pale delicate yellow. By September, another and yet more pleasing variation has taken place; for the fruit then begins to ripen, and the bush appears in its fulness of glory—every spray hung with elegant pendent clusters of little oval berries, flushed with the most vivid scarlet. In flavour these are intensely yet agreeably sharp, owing to the presence of a powerful acid, which Scheele (according to Downing) found to be chiefly acetic, but which Royle asserted to be malic, and Lindley pronounces to be oxalic. Pickled in vinegar while green, they form an excellent substitute for capers; when ripe they supply a beautiful garnish, either while fresh or preserved in bunches; and their juice is beneficial to inflamed gums or tonsils, or, in the North of Europe, becomes a substitute for lemon-juice in flavouring punch, &c., while by evaporating it after fermentation, tartar is procured. Preserved, they make a pleasant conserve, which strengthens the stomach, creates appetite, and is useful to check *diarrhœa*; while even the leaves partake of the acid of the berries, and therefore were formerly, and still might be, used as salad; besides

which, they are readily eaten by cattle, sheep, or goats. The bark and roots yield a yellow dye, and possess an astringent quality so powerful that they are not only used medicinally, but also, in Poland, in the manufacture of leather—the skins being tanned and dyed yellow by one and the same process. It might well, therefore, seem strange that a plant with so many recommendations, both as regards use and beauty, should be so seldom met with in our gardens, and have been almost extirpated from even our fields; but better reason can be shown for the disfavour into which the barberry has fallen than can be adduced in every case for the neglect of native plants—a great objection to its being planted near houses being the very offensive odour of the flowers. Phillips mentions having had a monster barberry-bush in his garden, which towered 20 ft. high, spreading its branches over a circumference of 60 ft., and which must therefore have presented a very beautiful appearance when decked with either flowers or fruit; but the smell of the blossoms, fragrant at first as that of cowslips, changed ere they faded into a putrid kind of scent, so exceedingly disagreeable that for about a fortnight no one could walk in the shrubbery anywhere near it. Still, for hedges in the open country it might have held its place, notwithstanding a temporary unpleasant odour, but that another and more serious objection has led the farmer to look on it as a foe to be carefully rooted out of his domain; for he has found that wherever the barberry grows near corn, there the corn becomes specially liable to be affected with disease. Du Hamel treated this belief with scorn, as a mere vulgar prejudice; other scientific writers have followed in his wake; and Dr. Greville, in an elaborate work on *Cryptogamia*, proved satisfactorily enough that the mildew so often found on the barberry (and which, under the microscope, presents an extraordinarily beautiful appearance) is distinctly different from any of the fungi usually found on diseased corn; but, nevertheless, practical agriculturists, both in this country and in America, still maintain the popular notion on the subject to be an incontrovertible fact. A most intelligent farmer assured the

writer that on one occasion, when going over his fields with a friend, they were struck with the odd appearance of a semicircular patch of wheat being all blighted with "rust," while the rest of the field was wholly unaffected by the disease. As it was at the edge of the field, the friend remarked that it would be as well to examine the hedge close by, when a barberry-bush, the only one in the neighbourhood, was discovered growing exactly opposite the centre of the diseased patch. It was grubbed up, and in succeeding years no more "rust" appeared in the field. Had science, instead of denying this singular influence of one plant upon another (testified to, as it is, by many witnesses), addressed itself more carefully to seeking out the cause of it, we should probably not be left now to guesses upon the subject; but as, in the present uncertainty, even a "guess at truth" may be of some interest, the following considerations are adduced.

The barberry is a sensitive plant, endowed apparently with something analogous to the nervous system of animals; for its blossoms offer a noted specimen of vegetable irritability, easily excited by the insertion of a pin—the stamens, if lightly touched at their base, springing forward and striking against the stigma, while the petals at the same time close over them. If the anthers be ripe, this movement causes them to discharge their pollen upon the stigma, and then, if touched again, no result is elicited; but if the blossom be immature, the various parts soon return to their former position, and another touch excites a similar commotion again, so that the experiment may be repeated several times upon the same flower. Nor is this all; for it has been further found that if poison be applied to the plant, should it be of a corrosive nature (such as arsenic), the filaments stiffen into a rigidity no longer capable of responding to the touch which was before so irritating; whereas if, on the contrary, a narcotic such as opium be administered, they equally lose the power of making an active spring, but droop in flaccid weakness, easily bent in any direction. As regards their ordinary condition, however, it would appear that some external force must be necessary in

order to impel the stamens to discharge their office of fructifying the central organ; but as experimentalizing botanists are not always at hand to tickle them into compliance, Nature has provided for their being commonly urged into fulfilling her behests, by making the flowers specially attractive to insects—it may be, even by that very odour so offensive to human nostrils—and the busy tribes thus drawn to settle on them, in pushing their way among the irritable stamens, soon vex them into that violent rush towards the pistil which is requisite to induce its fructification. Further consequences ensue from this peculiar endowment; for just as “where the body is, there the eagles gather together,” so, and for like reason, where insects are, there little birds are sure to flock; and though the fruit is too acid to tempt them into making that an article of diet, singing birds, especially bull and goldfinches, are especially fond of resorting to the barberry-bush to build their nests in its thorn-protected branches, and profit by the feast provided in its swarms of insect visitants. This of itself would suffice to make the plant unwelcome to those short-sighted cultivators who hold the feathered race in deadly hatred as devourers of their grain, hearing in their sweetest songs only the impudent triumph of successful plunderers; but this is a prejudice abandoned by the more enlightened, who recognize the destruction of many insects as a service outweighing the consumption of a few seeds. But however the plant might have been forgiven for harbouring birds—now acknowledged to be harmless or even useful—it is less easy to pardon its attractiveness to the lesser winged guests which allure them, and which are by no means proved to be innocuous to crops; for, indeed, it seems no unpalatable theory that, among the atomic crowd drawn together by the fascinations of the barberry-blossoms, may be some minute agent of a blight in corn, which, when it finds itself in proximity to a more congenial abode, may abandon its first resting-place on the shrub to effect a more pernicious lodgment in the grain. If this theory be correct, the old opinion of the barberry being injurious to corn, scoffed at as a mere superstition

when set forth as the subtle and inexplicable working of a sort of vegetable feud, might be admitted and recognized as the reasonable outcome of a chain of simple natural causes.

By divesting it of its lower branches and carefully removing all the suckers which it so liberally throws up, the barberry may be diverted from its natural bush-like growth, and made to assume a tree-like form; a change which improves not only its appearance but even its produce, since, when its strength is spent in sending up many shoots, the berries are comparatively small and few in number. Those of the ordinary barberry, of a long oval in shape, contain two or even sometimes three seeds; but a variety, more common in Normandy perhaps than anywhere else, entirely devoid of seeds, and more highly prized wherever it is grown than any other kind, is made by the confectioners of Rome into a celebrated sweetmeat known as *Comfiture d'Epine vinette*—this French name for the barberry signifying *acid*, or *sorrel thorn*. As this seedless sort of fruit is found only as the growth of poor soil, or on old plants, and even then it does not seem to be a permanent characteristic—since, though the kind can be propagated by layers or cuttings, suckers taken from such bushes always, it is said, produce the common seeded berries—it is generally supposed that this sterile fruit is only a mark of weakness in the plant that bears it, rather than that its production denotes a distinct natural variety. Another rarer kind has smaller flowers, and bears a scantier crop of smaller berries perfectly white. But there are negroes as well as albinos of this ordinarily red race; and an evergreen sort brought from the Straits of Magellan has round, sweet, black berries, the size of a black currant, which are used in America, whether green or ripe, for baking in pies, and pronounced to be very good for the purpose. Yet another species, which flourishes specially at Nepal, displays large violet-coloured berries, with proportionately large seeds, which in India are dried like raisins in the sun, and then eaten at dessert. The *Mahonias*, or Spiny-leaved Barberries, which bear quite valueless fruit, were at one time assigned to a distinct

genus, but are now included under the general term *Berberis*. The most esteemed of these is the *Aquifolium*, or holly-leaved, whose glossy evergreen foliage, very similar in shape to that of holly, but glowing in autumn with the richest hues of crimson and purple, presents an appearance so attractive that for some years after its first introduction (from N. W. America) in 1823, plants of it were readily bought at the price of 10 guineas each. It is now a common ornament of our shrubberies.

Though so different a plant in many respects, an examination of the flower and fruit shows the barberry to be nearly akin to the vine, which is therefore in the Natural System classed as one of the *Berberidæ*, and the one perhaps most closely allied to the shrub which gives a name to that family. Whence its own name is derived seems to be rather uncertain. It is called by the Arabs *Berberys*, and Du Hamel says the term is derived from an Indian word signifying mother-of-pearl; while others, again, seek its etymology in the Greek *berberi*, or the Phœnician *barar*—the former meaning a shell, the latter the lustre of shells, the allusion being supposed to be either to the hollow shape or to the glossiness of the leaves; though the last-named quality is certainly more apparent in the berries, which, at least in the case of the white-fruited sort, may be compared to some kinds of little shells. The old English name for the plant (still retained, it is said, in Cambridge-shire) is the Pipperidge or Piprage-bush.



CHAPTER XII.

THE CRANBERRY AND ITS ALLIES, THE WHORTLEBERRY AND BILBERRY.

DWELLERS in our great cities, the first stage of whose acquaintance with Cranberries is mostly the discovery of them as inmates of a barrel, the label of which announces that it is freshly arrived from Norway, Russia, or America,

might be expected to feel some surprise on learning, for the first time, that the fruit thus constantly identified with foreign associations is not only indigenous to our own country, but very abundant in many parts of it. The surprise would, however, be mingled perhaps with another feeling, not very complimentary to their rural compatriots, on finding further that our immense imports, amounting, some years ago, to as much as 30,000 gallons per annum, paying a duty of 6*d.* per gallon, are not so much a supplement to native supplies as a substitute for them, and that while Russian boors and American settlers find a profitable employment in collecting cranberries for the English markets, our own poor villagers suffer vast quantities of these berries year by year to rot ungathered on British bushes. In Scotland especially is this the case, and their countryman, M'Intosh, justly deploras that some among the more enlightened class do not direct the attention of the Scotch peasantry to the wastefully neglected advantages Nature has afforded them with regard to this fruit, and incite their industry by pointing out the best markets and easiest mode of transport. How much might be gained in this way may be judged from an old account of Longton in Cumberland, where cranberry-gathering, being undertaken in earnest, the sale of them amounted ordinarily to £20 or £30 on each market-day throughout the season, which extended over five or six weeks, many people there even making wine from them. It is true that cranberries (which, therefore, in Gerard's time bore the name of "fen-berries," and are termed by the Dutch "fen grapes") thrive only in damp and swampy ground, and that in a country where population is always increasing and improvement progressing, bogs and marshes are by no means desirable features, nor yet likely to be permanent ones; but so long as soil of this kind is in existence, there is so much the more reason for turning it to the best account by making use of what it does produce, or, if not brought forth spontaneously, of planting it with what it is fitted to produce; for wherever there is water there cranberries will thrive, and many witnesses depose to the fact that, with very little cost or trouble, a cranberry plantation may be

established on the margin of any pond even in the most barren waste. All that is necessary is to form round its border a bed of bog-earth, kept in its place by a few boards and stakes, for this kind of soil retains moisture longer than any other, and is so indispensable to the cranberry-plant that, though it will sometimes grow in bog-earth away from any pond, not even dwelling beside a pond can induce it to thrive unless rooted in bog-earth. A few bushes planted in such a situation will send out runners, which in the course of a few years will spread over the whole bed, and, never requiring any culture or attention, will year after year bring forth an abundant and regular crop of fruit, unaffected by bad weather and unspoiled by insect ravages. Sir Joshua Banks was the first to try this experiment, near a pond in his grounds at Spring Grove, but though the result was eminently successful, it has been very little followed in this country. In New England, however, many low-lying, rank meadows are turned to very profitable account by being thus planted, for 20 feet of land will yield three or four bushels of fruit annually, the average value being about 1 dol. per bushel (at New York even 3 or 4 dols.), while a labourer can gather, with the aid of a "rake," as much as 30 bushels in a day. They grow wild in great abundance in the neighbourhood of Barnstable, United States, and here the gathering is made an annual festival, a day for it being appointed by the authorities, when the greater part of the population go forth, armed with implements called "cranberry-rakes," to collect the crop, a fixed proportion of which is always made over to the town as a municipal right.

The generic name of the cranberry, *Oxycoccus*, is derived from the Greek *oxy*, sharp, and *kokkos*, a berry, alluding to the acidity of the fruit; and this *genus* includes several species, our native English kind being termed *palustris*, and the common American sort *macrocarpus*, but they do not differ very strikingly, the chief distinction being that the berries of the latter are larger, while the flavour of ours is mostly preferred. That the American kind are thought inferior may sometimes be due to the damaging influence of the voyage, but is not always so, since that species

has been introduced into England and grown here, so as to afford the opportunity of fair comparison. Sir J. Banks, who first planted it, found it easier of culture than even the native cranberry. To be put into bottles or close barrels is all that is required in order to preserve cranberries for winter use, and if a small quantity of more highly flavoured preserved fruits, such as raspberries, be used with them, they make an excellent addition to the winter bill of fare. The ordinary kind abound in Sweden, where, in Linnæus's time, they were chiefly employed as a detergent to clean plate; and another species, called Snowberries, on account of the fruit being white, and which has a flavour like that of bitter almonds, was brought from Nova Scotia in 1760, but has not yet been popularized.

The cranberry-plant is a low, trailing, evergreen shrub, with very small, smooth, unserrated leaves, and bright rose-coloured flowers,* having a four-toothed calyx and a corolla deeply cleft into four segments, which curve backwards like those of the common nightshade, a flower to which, in shape and size, they bear much resemblance, though differing in many other respects. They grow in small clusters at the ends of the branches, one blossom on each long curved flower-stalk; and when, in due course, they are succeeded by the crimson berries drooping at the extremity of these slender bending stalks, like the head of an aquatic bird at the end of its arched neck, the reason becomes sufficiently apparent why our forefathers bestowed on them the name of *crane-berries*. The plant belongs to the natural order *Ericaceæ* or Heathworts, as does also its very near relation the Bilberry or Whortleberry (*Vaccinium*), classed with it by Linnæus, and with which it is still sometimes confused even by writers of some pretensions; but though the fruit of some species of *Vaccinium* is extremely similar to that of the *Oxycoccus*, there is a marked distinction in the flower, the latter, instead of having divided and recurved petals, displaying a corolla which looks, at least, like a quite entire little bell with a large ovary surrounded by 10 stamens in

* See Plate IV., fig. 6.

its centre, and it is not until the fruit is formed that it is seen—by the circle of five little scars upon its surface, beyond the 10 dots * which show where the stamens once were, and a central mark denoting the place of the style—that this globular corolla was really composed of five pieces, though adhering so closely as to seem but one. The nearest ally to the cranberry is the *Vaccinium vitis idæ*, a low-growing evergreen, with foliage very like that of the box used for bordering garden-beds, and flowers with a bell-shaped corolla, rather deeply cleft by four notches, growing in *racemes* at the end of the branches. The berries, too, are crimson, and ripening about August in some parts of England, chiefly in Westmoreland, are often made into tarts under the name of “cow-berries,” but are more astringent and less pleasant than either the cranberry or the common Whortle or Bilberry. In Sweden, however, large quantities are yearly made into jelly, which is eaten as a sauce with all kinds of meat, being even preferred by many to currant jelly. Shut into a close vessel, and placed in a cellar, they keep well for a long time, and the wine-makers of Paris preserve them thus from June until vintage-time, using them then to give colour to their grape-juice—a practice harmless, at least so long as they confine themselves to the use of this species; but it is said they also resort sometimes to the *Vaccinium uliginosum*, a larger, darker coloured fruit, with less flavour, but which, taken in any quantity, causes giddiness and headache, and which is therefore employed occasionally in England also to produce an illegitimate “headiness” in beer. A white-fruited species is also sometimes met with, chiefly in Lancashire.

The kind most often seen is the *Vaccinium myrtillus*, variously named the Whortle, Hurtle, Bil, or Blaeberry, a small, round, purple or almost black fruit, covered with a delicate azure bloom. Growing on heaths or waste places, it is not only indigenous in every county of this country, from the warm Land’s End to the bleak highlands of Scotland, but is actually so peculiarly at home in this

* Plate IV., fig. 5 b.

happy land as to be reckoned one of the plants which, if allowed, would overrun Britain, and form one of the largest elements in its natural vegetation. Many kinds of game resort to it in the autumn, to feed on its berries and find covert among the plants, which, in the pine forests of Scotland, attain sometimes a height of three feet, and bear fruit as large as black currants, which the Highlanders make into a jelly, often mixed with whisky, to be presented to strangers as a special mark of hospitality. The berries, being very astringent, are used medicinally in the Western Isles in cases of *diarrhœa* and dysentery, and in many places are eaten for pleasure, either uncooked, with cream, or made into tarts; and in Poland, where they abound, they are considered a great delicacy when mingled with wood strawberries and new milk. According to Gerard, Bilberries grew once on Hampstead Heath and at Finchley and Highgate, but are not to be met with now in very near vicinity to London, though very abundant in some parts of Surrey, where they are gathered by the cottagers' children, and sold at the nearest market, seldom finding their way so far as to the metropolis. Nor has the plant been yet introduced into gardens, though it will grow in sandy peat, kept moist in any shady place; and M'Intosh affirms that those who are fond of adding to their dessert will find several species of *Vaccinium* well worthy of cultivation; while the editors of the *Nouveau du Hamel* observe, with almost bitter sarcasm, concerning the similar neglected fate of the same plant in France, that had it only had the good fortune to have been brought from China or New Holland, and been only obtainable with great difficulty as a costly exotic, instead of simply growing wild in the forests of Montmorency, it would certainly have been very highly valued, if only for its beautiful little pink blossom.* These charming little wax-like flowers, which appear in May in the form of almost globular bells, narrowed at the neck, and slightly toothed at the edge by five small notches, certainly rival in elegance many foreign heaths. They grow singly

* Plate IV., fig. 5 a.

upon drooping stalks among the small serrated and deciduous leaves ; and, in gathered sprays, the plants interspersed among more showy flowers, would be found to form a very pleasing feature in a bouquet.

CHAPTER XIII.

THE ORANGE AND ITS ALLIES, THE LEMON, CITRON, AND SHADDOCK.

“ O that I were an orange-tree,
That busy plant!
Then should I always laden be,
And never want
Some fruit for him that dresseth me.”—G. HERBERT.

SUMMER'S light fruits have long since fled, and the more substantial stores of autumn, if lingering still, have yet lost much of their freshness and their flavour. Where-with, then, shall we temper the dryness of our dessert? Where seek some natural nectar, pure and cool, which may allay the ferment of young blood heated by winter's festivities, and moisten the parched lip of the fever-stricken sufferer, longing, above all, for the refreshment only to be found in the dewy juice of newly-gathered fruits? A welcome answer is wafted on Atlantic breezes by a myriad white-winged messengers of commerce ; and, plentiful as the most abundant of our home-grown produce, cheap almost as the cheapest berry of English birth, the healthful and delicious Orange is poured upon our shores—a luxury grateful to the highest and attainable by the lowest in the land. With what enthusiasm would the ancient Greek have hailed such a crowning gift of Pomona!—what charming myths would have been invented to account for its origin!—what lore of legends would have gathered round it as ages rolled by!—for, if the dry coarse-husked walnut was deemed golden and god-like, and could exercise so much influence on their vivid imaginations (as shown in Dr. Sickler's Hesperidean hypo-

thesis in the chapter on "Nuts"), what poetic raptures would surely have been evoked, had they been blest with possession of the far more really auriferous orange — so brilliantly tinted a casket concealing such exquisite contents! But the Greek, alas! knew it not, nor yet the Roman; and it is sought in vain in Pliny's ample page or in the records of Apician banquets. It is true that a contrary opinion long prevailed, for when the Crusaders invaded Syria they found this fruit so abundant there that they believed it must be indigenous; and, dazzled by its bright hue, concluded at once that it must be the famous "Golden Apple" of Greek fable and of Hebrew Scripture imposed a name upon it accordingly; and then, with supreme disregard to logical consistency, argued from this very name to prove its identity. It was not until the year 1811 that its history was first carefully traced, when Galessio, in his *Traité du Citrus*, published at Paris — a work of great learning and research — demonstrated that the Arabian, Avicenna, who died in 1036, was the first writer who distinctly mentions the orange. Indisputably a native of India, yet unnoticed by Nearchus among the productions of that part of the country which was conquered by Alexander the Great, Galessio believes that the Arabs found it when they penetrated farther into the interior than the son of Ammon had reached, and in the 10th century enriched the gardens of Oman with this new luxury. In 1002, Leon d'Ostie writes, that a Prince of Salerno sent a present of *Poma Citrina*, interpreted to be a fruit like the Citron rather than the Citron itself, to the Norman princes who had delivered him from the Saracens. Avicenna, however, speaks more plainly, describing unmistakably the oil of oranges and of orange seeds as preparations used medicinally. Jacques Vitry, an historian of the 13th century, who accompanied the Crusaders in Palestine, after describing the Lemon and Citron found there, says that in the same country are seen another species of Citron Apples, of which the cold part (or pulp, in contradistinction to the "hot" or acrid rind) is the least considerable, being of an acid and disagreeable taste. That it was, perhaps, an unripe fruit

which was submitted to the palate of Maître Jacques may account for his pronouncing such a verdict concerning it. "These apples," he continues, "are by the natives called 'oranges.'" Nicholas Specialis, again, who in the 14th century wrote a history of Sicily, in recounting the devastations of the Duke of Calabria in the environs of Palermo, remarks that he did not even spare the trees of acid apples, called by the people "*arangi*," which from ancient times had embellished the gardens of the royal palace. The bitter variety, however, now called by us "Seville Oranges," were at first the widest spread and most known in Europe; for, from the 10th to the 15th century no passage in history refers to the sweet orange, all writers mentioning the fruit as one more pleasant to the sight than to the taste; and Galessio believes that the two kinds, originally distinct, travelled by different routes, and that they were brought by the Arabs through Egypt and the N. of Africa to Spain, while they transported the sweet sort through Persia into Syria, and thence to Italy and the S. of France. Rhind, however, while accepting his statement as to the course of their journeyings, deduces from it that they were probably derived from one stock, and considers Galessio's theory of their transit to be borne out by the fact of the character of the respective fruits coinciding with the probable influence of the ways in which they wandered, and that the one which had been transplanted from one genial climate to another, as in the case of Persia, Syria, and Italy, would be likely to remain sweet, while that which had been borne along the desert to reach Spain might well have become embittered by such a progress; for, according to him, there is no absolute reason for supposing that the sweet and bitter oranges were originally different; and even now they are not so different as two mushrooms of the very same variety, the one produced upon a dry and airy down, and the other upon a marsh. The fruit seems, indeed, to be very susceptible to the influences of soil and climate, its flavour depending greatly upon pure air and a sufficiency of moisture; a very high temperature increasing its size at the expense of its delicacy. Thus

St. Michael's, fanned by cool Atlantic breezes, produces a small, pale, thin-skinned fruit, with deliciously sweet pulp, while Malta, an island also, yet dry and sultry from its proximity to the African coast, affords a large thick-rinded orange, with high-coloured red pulp, tasting slightly bitter. The Chinese claim the orange as a native fruit, and though there being no reference to it in the travels of the accurate and observant Marco Polo has led some to doubt this, yet it is more likely that he may have overlooked or forgotten it, than that it should have spread so widely there, and no record remain of its introduction had it been transplanted thither. So thoroughly, too, was it formerly identified with that country, that the sweet fruit was once universally known in Europe as the China Orange, and it still bears that name in America and even in India.

To return, however, to the history of its progress in this quarter of the globe, it was asserted by Valmont de Bomare, a Portuguese, that the first sweet orange-tree brought to Europe was one till lately still preserved at Lisbon; and some other writers even further particularized that it was brought by Jean de Castro, who voyaged in 1520; and was the only survivor of a number of trees sent as a present from Asia to Conde Mellor, prime minister of the King of Portugal. Gallo, however, who published a work on agriculture in 1569, speaking of the sweet oranges in the neighbourhood of Salo on Lake Garda, says that they had been cultivated there from time immemorial; and even that most decisive personage, the "oldest inhabitant," bringing the weight of nonagenarian memory to bear upon the question, could not remember a time when the trees had not been there, which shows that the Lisbon tree could not have been the first or only one brought to Europe at the time it dates from. To the Italians, and to the Genoese in particular, Galessio gives the credit of having been the earliest importers of these trees from the East: before long they began to cultivate them, and in the territory of St. Remo their number soon became so considerable that in 1520 the municipal council of that city appointed a magistrate specially to superin-

tend this branch of commerce, and laid down rules for its regulation, by which it is found that the annual exportation thence amounted to several millions of fruit, and that nearly all France, Germany, and several other countries of Europe, were supplied from thence. It is at Genoa, in the present day, that these plants meet with the most regular and garden-like culture, so that the orange orchards in that neighbourhood may be said to supply all Europe with trees.

The date of the introduction of the orange-tree into our own country is supposed to have been about 1596, Aubrey, in his *History of Surrey*, mentioning the orangery of Beddington, "where are several orange-trees planted in the open ground,* where they have throve to admiration for above a whole century, but are preserved during the winter under a moveable covert. They were brought from Italy by Sir Francis Carew, knight, and it was the first attempt of the kind we hear of." The *Biographia Britannica*, however, connects the origin of these trees with a more illustrious name, asserting that "from a tradition preserved in the family, they were raised by Sir Francis Carew, from the *seeds* of the first oranges which were imported into England by Sir Walter Raleigh." It has been stated that in 1690 at least 10,000 oranges were gathered from these trees; but after flourishing for above a century, they were all killed by a great frost. Though generally looked on as plants only fit for the conservatory, they have for above 100 years past been grown in gardens in Devonshire, trained like peach-trees against walls, and sheltered only with straw mats in winter, yet producing fruit as large and fine as any from Portugal; and Loudon asserts very confidently that in other localities, "with a little care and without the expense of glass, they could be grown against hollow walls, heated by flues, and protected by straw mats." At present, however, even with the advantage of greenhouses, our gardeners have not been very suc-

* "We know but of one orangery in the open ground at Paris," says the *Bon Jardinier* for 1860, "that of M. Lemichez, where they are propagated with great success."

cessful in this branch of their art, a recent number of the *Gardener's Chronicle* admitting that, "in England we hardly know what a good orange is," *i.e.*, of native growth, yet, it continues, "there is no reason why we should not ripen them as well and as easily as grapes," since heated "orchard houses" are all that are required to effect so desirable a result. The largest trees now known in Britain are those of Smorgony in Glamorganshire, said to have been procured from a wreck on the neighbouring coast in the time of Henry VII., and which, planted on the floor of an immense conservatory, bear regularly and abundantly. Fortunately, though, for "the million," orange lovers as they are every one of them, we are not left to depend upon the efforts of scientific gardeners in an unsuitable climate for our supply of this universal favourite, but can obtain a sufficient response to our largest demands by means of importation. The best oranges as well as the largest quantity are brought from the Azores, where they were originally introduced by the Portuguese; the imports from St. Michael's having in 1859 amounted to £84,123, the produce of that year being 252,000,000 oranges, whereof 49,000,000 were consumed on the island. Spain, Portugal, and other countries, however, contribute their share to swell the mighty tide which pours into Britain, and though it is difficult to ascertain the total quantity with perfect exactitude, as oranges and lemons are reckoned together in the revenue returns, it has been computed that the annual imports now actually exceeds 1,000,000 bushels, and is valued at above £600,000 per annum. A few years ago Carpenter calculated that our receipts, numerically taken, gave an average of nearly a dozen oranges to each individual of the population, but now, assuming each bushel to contain 650 fruits, the allowance has risen to the very fair proportion of 22 for each man, woman, and child in the kingdom. They are brought here in boxes containing 250 or more, and in chests containing from 500 to 1,000.

The various names applied to the orange—the *Citrus aurantium* or *Hesperidæ* of Linnæan botany—have given rise to much discussion. *Citrum* was a name given by the

Romans to a kind of gourd, still called by the French *Citrouille*, and the words *citrinus* and *citrina*, as epithets, were used for many fruits after they had been adopted to express the pale yellow tint proper to the Citron, a fruit known in classic days, having been introduced into Italy 10 centuries before the orange, to which it bears a certain family resemblance. *Aurantium* seems to be formed from *aureum*, alluding to the *golden* colour of the fruit; *Malum aureum* was looked on as a synonym of the *Malum Hesperidum* of the ancients; and the transition from *aurantium* to orange appears plausible enough.* It is rather fallacious, however, to seek in classic language the derivation of the names of objects unknown to those who spoke it. We should rather seek light in the East, and there we find that lemon and orange-trees are known in India by the names of *Lemoen* and *Naregan*, while Hindostanee dictionaries give the word *narendj*, as still being the Hindoo name for our golden-robed friends. From *narendj*, then, must have come the Latin *airangi*, afterwards modified into *Aurantium*, whence the English and French derived their *Orange*, the Spaniards their *Naranxa*, and the Italians their *Naranzo*. The latter people, however, adopt the word *Agrumi* as the family name for plants of this kind—a well chosen title, as it is derived from *agro*, acid—acidity being the dominant characteristic of every species of *Citrus*; and Galessio, after imperatively rejecting the term of *Hesperidæ*, as founded on fable, and objecting to *Citrus* as properly the name of a species, and therefore insufficient to express the *genus* which comprises both that and others as well, expresses his opinion that it would be advantageous were this word *agrumi* or *agrumes* (with its derivative *agronome*, denoting the cultivator of the plants) adopted into every language. From the French, unless we could invent a better name, we certainly might not do ill to borrow the term *Bigarade* by which they

* The district in France which gave its name to the Netherlandish dynasty was known to the Romans under the name of Aransio, afterwards changed to Orange; but why it received the former name, or how this came to be altered in the same way as was the name of the fruit, the writer, after much research, has been unable to ascertain.

distinguish the bitter kind of fruit, for which we have at present no more suitable title than "Seville Oranges."

The most complete treatise on oranges which has ever appeared is contained in a folio volume by Risso, published at Paris in 1818, which furnishes coloured and life-sized illustrations of above 100 kinds, with a full description of every variety grown. This writer was the first to remark the curious fact that a sweet orange may always be infallibly distinguished at a glance from an acid or bitter one, however similar in form or colour; the vesicles containing essential oil being in the former always convex, in the latter concave. In Limes and insipid varieties the vesicles are plane, and they become more or less convex or concave according as the juice of the fruit is sweeter or sourer. The orange tribe, he says, too, is distinguished from all other known plants by several curious physiological characteristics, which appear to depend on a peculiar organization; one of its peculiarities being that the pip often contains several embryos under one integument, as many as three or four being found in common oranges and lemons, while in a Pommeloe Gaertner counted no less than 20, though the majority were imperfect.

The seed, when planted, germinates in about 10 or 15 days, and develops eventually into an evergreen tree with greenish-brown bark, sometimes armed with thorns on the young branches, the full-grown tree often reaching the height of 25 ft. The leaf is technically considered as a compound one with but a single leaflet, being thus not reckoned in the same class with such as the plum or laurel, to which a casual observer would be much more likely to assign it; but, on careful inspection, it may be seen that, instead of the petiole or leaf-stalk being a mere uninterrupted continuation of the mid-rib of the leaf, as with other leaves of similar shape, and which constitutes their claim to be called simple, in the case of the orange it is a separate piece, to which the part therefore called the leaflet is articulated by a distinct joint, which is the special characteristic of what are called compound leaves.* Though in

* See Plate V., figs. 1, 2, 3.

the Citron, Lemon, and Lime this petiole is a bare stalk, in the orange and Shaddock it is winged; that is, it has on each side an expansion of leafy substance, sometimes so broad as to make it look like a second leaf growing below the principal one it supports. The yellow dots upon the foliage indicate the vesicles of essential oil, and if these are bruised by rubbing a leaf between the fingers, the odour becomes much more apparent. The blossom, which is white, sometimes tinged with pink or violet, appears in clusters, and is composed of from three to five petals encircling from 20 to 60 yellow stamens (two or three times as many as are found in the Citron or Lemon), grouped together in several distinct little bundles—an indication that the flower belongs to the Linnæan *Polyadelphia polyandria*. Every part of the surface of the orange-tree, except just these stamens, is covered with vesicles containing an essential oil, and it is a singular circumstance that no sooner do these manifest the least disposition to transform themselves into petals, so as to form double blossoms, than vesicles of oil begin immediately to develop on their surface also. The central ovary is divided into from five to 15 parts, each containing from six to 20 ovules; but, fortunately for orange eaters, at the utmost not more than three or four in each division perfect into pips, and some varieties, both of sweet and bitter oranges, are entirely seedless. The perfect fruit is a large berry, with a leathery rind enclosing a pulp consisting of a number of vesicles containing a fluid which owes its flavour to a combination of the malic acid of the apple with the citric acid of the lemon; and the divisions of the ovary are still apparent in the form of the thin membrane dividing the “quarters” of the fruit. The tough and oil-impregnated skin in which it is enveloped fits it to endure uninjured both extremes of temperature; and the aroma of the rind and acidity of the pulp combining to protect it from insect depredations, it may be procured fresh in every region of the world to which means of transport are available, since, if plucked before it is fully ripe, it will keep good for a considerable time, being indeed a treasure ready packed for travelling

by Nature herself. The gathering of both oranges and lemons for the English market begins in October, and does not continue beyond the end of December, while the fruit would not be perfectly ripe until the following spring. Another advantage gained from this premature harvesting is, that the trees from which the fruit is gathered green bear plentifully every year, while it is found that where the fruit is suffered to ripen they afford abundant crops only on alternate years. The productiveness of the common orange is enormous, Dr. Lindley informing us that a single tree at St. Michael's has been known to produce 20,000 oranges fit for packing, exclusive of the damaged fruit and the waste, which may be calculated at one-third more. In hot countries the essential juice of the ripe orange is reabsorbed by the tree during its blossoming, after which period the fruit becomes sweeter and more succulent than before.

The fruit takes two years to mature, and as fresh blossoms are continually appearing, it may be seen upon the same tree at once in every stage, from the little green globule to the perfect golden globe shining luminous among the rich glossy foliage, all enwreathed with clusters of pearl and amber flowers, sending forth an odour that never cloys. Grateful to every sense, no marvel that the orange-tree is the chosen ornament of courtly halls and palatial pleasaunces, and that, as Dr. Sickler observes, in laying out royal or noble gardens an orangery is felt to be the first necessity, and it is only when this is provided for that even fountains and statues are thought of.

The tree attains sometimes to a very great age; there is one probably still in existence at Versailles which was known by the name of "Francis I.," having been taken during the reign of that monarch from the Constable de Bourbon, on the seizure of his property in 1523, after it had been in the possession of his family for upwards of 80 years. There are some trees, too, at Cordova, which are said to be 600 or 700 years old, but which have begun to decay, and when diseased become encrusted with a kind of lichen supposed to be peculiar to the orange. The tree is liable, too, to take disease from other plants, as was

unfortunately proved when the orange-trees at Fayal were attacked, some years ago, by a new and strange insect, which completely destroyed a large number of them, the only effectual remedy being to cut down the tree as soon as the disease showed itself, leaving only the stump covered with earth, whence new and healthy shoots would then grow up. It first appeared in the gardens of the American consul, immediately after he had had an importation of trees from his native country planted there, and no doubt was entertained of its having been thus introduced; but it spread so rapidly all over the island that the other Azores, in great alarm, placed Fayal in a sort of quarantine, lest it should reach them; and though very strenuous efforts were made to overcome the evil, its effects are by no means yet recovered from. In Florida, too, the orange-trees were almost exterminated some years ago by the ravages of the *Coccus Hesperidum*; but it is said that a specific against these insects has been discovered in the common camomile, when either planted at the root of the tree or even hung in gathered bunches among its boughs.

Accustomed, from what is seen on every table and in every street and shop, to associate with the name of orange only the regular form of that "oblate spheroid" with which geographers delight to illustrate the figure of this our earth, any one to whom they were presented for the first time would be likely to be rather astonished on being called upon to give that title to many of the curious objects which figure in the illustrations to M. Risso's elaborate work. Variegated in colour, and most strangely diversified in form; stained, striped, ribbed like the melon, nipped like the lemon; horned, as it is called, like nothing else in nature; adhering together and growing upon each other like the two "halves" of a cottage loaf; or within each other, and peeping forth like the progeny of an opossum from the mother's pouch; some of the oddest irregularities of Nature are to be found claiming kindred with our simple yellow ball, and turning the common expression "as round as an orange" into a piece of most contemptuous irony. It may not be uninteresting to

particularize a little more minutely some of these vagaries.

The Malta Blood Orange offers no visible peculiarity until it begins to ripen, when a red stain appears within, spreads over all the pulp, and then comes out upon the rind, though rarely extending all over it. It has but few seeds, and these are nearly always barren. Before modern experiments had demonstrated the fallacies of ancient superstition on gardening subjects, a "graft" was as much the matter-of-course solution of any singular vegetable phenomenon as a "spell" was of any extraordinary animal affection; and accordingly it was a general belief that this sanguineous-tinted fruit was the product of an orange grafted on a pomegranate, a notion now ascertained to be quite incorrect, though it is still supposed to be a cross, but only between an Indian and a European species of *aurantium*. The Turkish Orange* has a number of narrow radiating stripes extending from the top of the fruit towards and sometimes quite to the stalk, the predominant colour of the fruit being pale yellow, and the stripes at first green, afterwards red. The Horned Orange† grows out into protuberances of different sizes, sometimes conical, sometimes shaped like the claw of a tiger, giving the normal sphere a deformed and monstrous appearance. The cause of this singular eccentricity is traced by Lindley to a monstrous separation of the carpels, or parts of the ovary; while another yet more extraordinary variation of form—in which but half of the fruit is globular, a number of misshapen prominences completing its figure, and presenting an appearance very like a bird's nest with a number of unsightly young ones putting forth their little heads from it—is considered to arise from the growth of a supernumerary row of carpels beyond the legitimate number which form the ordinary ovary, and which develop into little oranges, deformed, perhaps, owing to not having room to expand within the larger one. Yet another notable variety of the sweet orange is that which is known at Paris by the name of "Adam's Apple," having

* See Plate V., fig. 7.

† *Ib.*, fig. 15.

received this title in consequence of its being eatable throughout like an apple, the skin being soft and melting as the flesh of a peach; and the latest novelty with which the family has presented us, the miniature Tangerine Orange, often not more than an inch in diameter, and which has been too recently introduced to have been included in Risso's list, is also eaten entire; its peculiar perfume pervading the whole fruit, and rendering the rind almost as agreeable as the pulp. Though so small, it is far more expensive in England than its larger brethren (owing to the limited supply furnished from Tangiers), being commonly sold in Covent Garden at 2s. the dozen. But however strange the form assumed by some of the sweet oranges, yet greater singularities are met with when we come to the tribe of *Bigaradiers*, our bitter or Seville Oranges. Trees of this kind are generally less tall than those which bear sweet fruit, the foliage is thicker, and the leaf-stalks have larger wings, while the flower is larger and more odorous, and therefore preferred for the purposes of the perfumer. The fruit has a more rugged rind and a redder colour when ripe, every part of the tree, in fact, being on a sort of stronger scale—"an orange pushed to excess," as Risso expresses it. Among the varieties of the *Bigaradier* are to be found some which are "horned," others which look as though two or three smaller fruits, more or less formed, were growing out of the summit of the larger one; another, the *Bicolor*,* the leaves of which are variegated with patches of white, while the fruit is marked with coloured stripes, first green, then red, and having the further peculiarity that the vesicles of essential oil upon those stripes are concave, while on the other part of the fruit they are convex. The *Bigaradier violette* has some of its leaves and some of its flowers of a rich violet hue, the others being of the ordinary colour, the flowers, which grow from the axil of a green leaf, being white, while those which spring from the base of a violet one are violet also. The fruit, too, which proceed from the latter, partake of this tint, until they have nearly

* See Plate V. fig. 11.

attained their full growth, when they turn yellow and ripen like the others. Plants of this species are now not uncommon at Paris, but they have all been obtained from cuttings from the original, and for a long time the only one of the kind, in the *Jardin des Plantes*; but though as easy to cultivate as the common sort, a high price has been maintained for it by the florists, who reserve it for their choicest bouquets, and sell it under the name of *Herma-phrodite*. An attempt has been made, by nipping the green leaves as soon as they appeared, to force the whole plant to become violet-coloured, but it has proved a failure.

But the most curious of all curious oranges—nay, it might almost be said the most extraordinary production of the vegetable kingdom—is the *Bigaradier bizarrerie*,* the origin of which remained for thirty years a marvel and a mystery, till Pierre Nato, a Florentine physician, who made it the subject of a public dissertation at Florence in 1674, made known that the tree which bore it was simply a seedling, which the gardener in whose grounds it had been raised had forgotten or neglected to re-graft, after his first operation upon it had accidentally failed. Left thus to itself, the fruit it brought forth was so different to anything that had ever been seen before, that ere long it attracted its owner's notice: he gained large sums by selling cuttings from it; but wishing for fame as well as fortune, took credit for having produced such wonderful effects by his own special skill and exertions, until at last Nato prevailed upon him to disclose the whole truth. Trees of this strange variety have some of their branches smooth, some garnished with thorns, violet-coloured or green; the leaves are indiscriminately long and short, smooth-edged or indented, and their petioles naked or winged; the flowers are sometimes all white, sometimes only a portion are white, and the rest pink; while in the fruit which follows no less than four or five species are mingled, the same tree bearing at the same time sweet oranges, bitter ones, Citrons and Limes, interspersed with fruits made up of some or all of these in

* See Plate V., fig. 16.

different proportions, one, perhaps, being half orange and half Bigarade or Citron, another the same mixture in alternate quarters or eighths, and so on in almost endless variety. It seems, in short, as though the elements of several different species were circulating under the same bark, yet remaining, like oil and water, without the power to mix, or at least to blend and unite: each finds distinct and independent development as it can—not at stated times and distances, but apparently quite capriciously. Sometimes branches covered with the leaves, flowers, and fruit of the Citron will all at once change their nature, and produce only sweet oranges or bitter ones, or run through the whole series alternately. Finally, these freaks will often suddenly cease, and a plant which has been sporting away its youth in such coquettish vagaries will sober down into a staid matronly tree, bearing henceforth but a single kind of ordinary fruit.

The *Bigaradier* attains sometimes to a very great age. There is one in the gardens of the convent of Saint Sabine at Rome which is asserted by tradition to have been planted by St. Dominic about the year 1200, and which was certainly spoken of by Augustin Gallo, as far back as in 1559, as a tree which had been in existence from time immemorial. Being looked on as a miraculous prodigy, its fruit is reserved to be given, with great ceremony, to the sick, and some of it was also invariably presented to the Pope and cardinals on their Ash Wednesday visitation of this church. Age did not impair its fertility, for in 1806, according to the assurance of the monks, it bore no less than 2,000 oranges. It was still living a few years ago, and may probably be so now.

Among the minor uses of the orange-tree, it may be mentioned that its wood was formerly much employed in *marqueterie* work, but since so many new varieties of timber have been brought from America, orange-wood has fallen into disuse. The leaves find a place in the *Pharmacopœia*, being sometimes prescribed for hysterical females instead of tea; and from common oranges, cut through the middle while green, dried in the air, and steeped for 40 days in oil, the Arabs, according to Crich-

ton, prepare an essence famous among old women for restoring a fresh black colour to grey hairs.

Oil of neroli and napha-water, two delicious perfumes, are distilled from orange-flowers; but the blossoms find their noblest use in being dedicated to the fair brow of the English bride—the chosen wreath which the maiden wears but once—during that holy rite in which she bids adieu to her maidenhood for ever.

“Each other blossom in its hour
The maid at will may wear;
Once, only once, the orange-flower
Her wreathed brow may bear.”

It is rather singular that the origin of a custom so general throughout this country as that of appropriating the orange-blossom to the bride should be involved in so much obscurity, but nothing positive seems to be known upon the subject. Some years ago a correspondent of *Notes and Queries* made a request in that work for some information upon the point, but all that was elicited, after a lapse of more than a year, was that a gentleman had read “somewhere” that the custom was derived from the Saracens, and it was believed to have been adopted on account of the fertility of the orange-plant. It may be allowed, therefore, to offer the conjecture, since to conjecture we are left, that it might originally have implied a desire that, as the flowers and fruit appear together upon this tree, so the bride might retain the graces of maidenhood amid the cares of married life.

But though the flowers of the ordinary orange are esteemed for their fragrance even more than for their beauty, the former quality is most powerfully developed in a distinct variety of the family distinguished as the Bergamot. The fruit of the common *Bergamottier*, as the tree is called, is occasionally round, but more often pyriform,* and only attains a pale yellow in Paris orangeries, but beams with a bright golden hue in the gardens of Italy, where it is chiefly grown in the neighbourhood of Bergamo, whence the name both of the tree and of the scent

* See Plate V., fig. 12.

is derived. It often retains the style at the summit, but sometimes has, instead, an aperture disclosing six or eight tiny fruits nestling within the large one, each having its vesicled outer skin covering pulp within. The white blossom, though small, is extremely odoriferous, and the essential oil contained in it, and also in the rind of the fruit, becomes in the hands of the perfumer a precious essence, which serves as the base of many delectable preparations. The whole rind, indeed, is often, after being cleared from the pulp, dried, and then softened in water, introduced into a mould, pressed into the form of a box, then adorned with paintings in brilliant colours, and made thus into a very popular *bonbonniere*, gratifying at once to the sight, the smell, and the taste.

The Bergamot, too, like all its other orange brethren, has diversities quaint and queer. One variety in particular has double blossoms, succeeded by a fruit which has a large circular opening at the flattened top, whence proceed a number of irregular prominences.* On cutting open one of these fruits, it is found to be divided into about 20 regular cells around the circumference, besides a number of irregular ones in the centre corresponding with the external protuberances, and in each of the 20, in the midst of the pulp, is seen, instead of seeds, the rudiment of a little fruit covered with yellow rind.

The same season which brings our ordinary orange into such demand claims also special service from two other fruits very nearly allied to it, and which, though not like the former, blazoned *proper* upon our tables, yet appear before us, especially during winter festivities, in a variety of forms, lending such added attractions to many a delicious compound, that we could ill brook their absence, and therefore may well add them to this page. What would be our British palladium, plum pudding, not to speak of Puritan-defying mince pie, were it deprived of the subtle influence of Citron? And how, passing over many a minor use, could wit-inspiring punch maintain even existence without Lemon?

* See Plate V., fig. 14.

The Citron claims priority of notice, as having been the first of the whole family to become known to Europeans, to whom, indeed, it furnished the botanical name for all its tribe. Identified with the "apples of gold," to which Solomon compared the "words of the wise," and with the fruit wherewith the spouse of the Canticles was "comforted," it is considered to have been known to most ancient nations; and being introduced into Europe from Media, under the name of *Malus medica*, Virgil was the first Latin author who mentioned it in his works, and it was first cultivated in Italy by Palladius in the 2nd century, 1,000 years before the arrival of the orange. Reversing the characteristics of the latter fruit, it is the exceedingly thick skin which is the valuable part of the Citron, and of which the well-known sweetmeat is made, the pulp, in which numerous seeds lie embedded, being very small in quantity and sour in flavour, though less so than the Lemon, to which, however, it is more nearly allied than to the orange, it being indeed difficult to decide concerning some varieties whether they should be called Lemons or Citrons. The flowers of both species, similar in other respects to the orange-blossom, are distinguished by being tinged with pink or violet; and the fruit of the Citron is also at first of a reddish purple colour, changing to green as it enlarges, and finally attaining a fine saffron tint, the outer surface being very uneven, and one end projecting into a nipple-like protuberance. About half a dozen varieties have been cultivated in Britain, and the tree being for the most part a native of the woods, is so impatient of sunshine, that it is best grown by being trained on the back walls of orangeries or vineries, and even then requires extra shading during strong sunshine in summer. At Luscombe, the seat of C. Hoare, Esq., are some remarkably large trees, and also at Paisley, where the fruit has been known to measure no less than $18\frac{1}{2}$ in. by $19\frac{1}{2}$. In China they have a variety which attains a very considerable size and is almost solid, having scarcely any pulp or cells, and which is divided at the end into five or six long separate cylindrical lobes, on which account it is called there *Phat thu*, or the Finger

Orange: by Risso, however, this is classed among the lemons, under the name of *Limonia digita*.* The Citron is laid upon fine vessels of porcelain in the sitting-rooms of the Chinese for the sake of its agreeable perfume, and was also carried about by the Hebrew women of olden time to serve the purposes of a scent-bottle and "comfort" the languishing. The Jews in some countries still attend their synagogues on the Feast of Tabernacles bearing these fruits in their hands, a custom mentioned by Josephus, and to which they attach much importance. It is derived from the passage in Leviticus, xxiii. 40, in which they are told, "Take you on the first day the boughs of goodly trees," &c.; and the Citron being the "goodliest" tree with which they were acquainted, is supposed to have been the origin of its being thus appropriated. The wood of this tree was considered so precious during the days of Roman *tablomania*, that Martial says a table of gold cost less in his time than a table of citron wood, and this is confirmed by Petronius mentioning that the Assyrians were astonished at receiving so much gold in exchange for their wood whenever the planks were of a size fit to form tables.

The normal shape of the Lemon, like its last-named larger relative, is that of an ellipse with a protuberance like a nipple at the extremity, but, as with the other brethren of its family, from this familiar figure it offers many diversities, being sometimes lobed or channeled, ovoid, pear-shaped, spindle-shaped, or even round, while l'Ablé Prevost affirms that in the isle of Teneriffe are found lemons which contain another smaller fruit within the outer one which first meets the eye, and which has thence received the name of *Pregnando*. A native of India, the Lemon was brought westward during the invasions of the caliphs, and being found in Syria by the Crusaders, was by them introduced into Italy, though it is believed that it had previously found its way both into

* He says, too, that the same plant often produces still greater monstrosities, Ferraris having figured one which resembled two hands clasped together, and he himself having seen one which was very like a bird in shape, and another like a crab.

Spain and Africa. The Italian "Adam's Apple," really a lemon, whether judged by form or flavour, was particularly noticed by Jacques Vitry, who describes "a tree bearing beautiful citron-coloured apples, on which the marks of a man's teeth could be distinctly perceived;" and the skin is indeed covered with little irregular indented curves, conveying no inapt idea of having been bitten, whence the miracle-mongering Crusaders very naturally concluded that it could be no other than that

"Fruit, whose mortal taste
Brought death into the world and all our woe."

Another variety, the *Limonia laureola*, is remarkable as being the only hardy plant of the whole orange tribe, it being found on the tops of cold and lofty mountains, where for some months of the year it lies buried under snow. The hill people of India fancy that it is by feeding on the leaves of this plant that the musk acquires its peculiar odour. What we call the Lime (*Citrus acida*) is also only a variety of the lemon, according to Risso, who calls it the *Limonier sauvage*, or Wild Lemon, and the name is justified by the very thorny character of the tree, these cruel appendages often distinguishing wild plants and disappearing under cultivation. It has been long grown in the West Indies both as a fence and for the sake of its fruit, which is nearly round, with a nipple at the summit more distinctly raised on one side than on the other, a greenish yellow, very odorous rind, and juicy pulp, extremely acid but of fine flavour. The Lemon in general is equally valued for its rind and its juice, from which the citric acid of commerce is prepared, which, besides its numerous culinary uses, is barrelled in large quantities to be added to ship stores as the most efficacious preventive of sea-scurvy. The tree, which is remarkably knotty and of vigorous growth, though its foliage is less thick than that of the orange, was first grown in England at Oxford, in 1648, and though more tender than other plants of the family, when duly cared for it thrives well in this country, some of the lemons grown at Luscombe measuring from 18 in. in circumference, and weighing as much as 14 oz.

In France the Lemon bears the name of *Citron*, though the fruit which really claims that title is by no means unknown there, and though the words *limonade* and *limonadier* have been adopted into the language ever since they were introduced by the sellers of this drink, who came into France under the ministry of Cardinal Mazarin, retaining the same name which they had borne in Italy. But as French writers would never stoop to use a vernacular term whenever it was possible to employ one derived from the Latin, and which must therefore have a more scientific air, the word *limon*, eschewed in literature, could never establish itself, and, as Risso observes, the people with strange obstinacy persist in calling the fruit from which *limonadiers* make *limonade* "*un citron.*" He himself, however, would not conform to a usage which gives rise to such confusion, and, with the people of the S. of Europe, throughout his work uses the terms *limon* and *limonier* for what genteeler Paris would designate as *citron* and *citronnier*.

The fruits which we call Shaddocks, but which are termed by the French *Pompoleones* or *Pompelmouses*, form another division of the *Aurantium* group, more easily distinguished than any of the other families, being characterized by large leaves, white flowers, similar to those of the Orange, Lemon, and Citron, but of greater size than any of these, and succeeded by large pale roundish fruit, containing a not very juicy pulp of sweetish or insipid flavour, the seeds mostly proving abortive. A native of China, where it bears the name of "Sweet Ball," the larger Shaddock, or *Pompelmouse Chadec*, as the French call it in a rather lame attempt to do honour to our countryman, was introduced by Captain Shaddock into the W. Indies; but the planters propagating it by seeds instead of, as the Chinese had done, by budding, the fruit soon deteriorated and is of little value for eating. The smaller Shaddock, which is but half the size of the preceding, seems to have succeeded better, for it is said that its popular cognomen of "forbidden fruit" was given to it by the inhabitants of Jamaica on the ground of their finding its peculiar flavour so delicious that they could not

imagine anything more tempting could have grown even in Eden.

Two other minor divisions of the extensive Hesperidean family are also distinctly distinguished by Risso, viz., the Lumies—reddish-flowered plants, bearing fruit similar in appearance to lemons, but having sweetish juice—and Limettiers, resembling the preceding, but having white flowers, and showing two or three other slight differences. One variety of the latter bears the name of Goldsmith's Limettier, its juice being used in India for the cleaning of gold-work.

It can scarcely be considered as decided whether the *Aurantiacæ* or Citronworts, as the members of the orange family are called in the technology of the Natural System, are indigenous to the New World, though now superabounding there in many parts. Orange-trees laden with large sweet fruit were found by Humboldt growing wild on the banks of Rio Cedreno, but in his opinion they were but the remains of an Indian plantation. In Cuba they are so numerous that, in the words of the same mighty traveller, "It would seem as if the whole island had been originally a forest of palm, lemon, and wild orange-trees." The two latter, it appears, grow apart, and the planters distinguish the quality of the soil according as either is found in it, preferring that which produces the *Naranjal* to that where grows the Lemon. Humboldt believed this wild fruit to have been anterior to the *Agrumi* of the gardens, transported thither by Europeans, since the best informed inhabitants asserted that fruit of the cultivated trees brought from Asia preserve their size and sweetness when they become wild; and the Brazilians affirm that the small bitter orange, which is found wild far from the habitations of man, is of American origin. Prince Maximilian of Wied Nienwied speaks too of a wild orange of Brazil, called *Laranjas de terra*, but which he thinks must have been introduced. In East Florida, however, a species of orange of very agreeable flavour is extremely abundant, which the testimony of the most scientific authorities pronounces to be decidedly indigenous. Yet again, Garcilassio de la Vega, a descen-

dant of the Incas, born in Peru soon after the invasion of the Spaniards, and therefore an authority of great weight on a subject which must have been so much within his cognizance, testifies most positively in his history of that country that "before the Spaniards conquered Peru it is certain there were no figs, pomegranates, oranges, or several other fruits which are now so abundant." He further adds in explanation of this abundance, that, "among the trees which Europeans have transplanted to America, none have spread so rapidly as the oranges, lemons, and trees of that *genus*. Here are now in some countries woods of orange-trees. Surprised at the sight, I asked the inhabitants in one place, who had filled the fields so full of these trees? when they replied that it was due to chance, for the fallen fruits of the first trees had given rise to an infinity of others, and the seeds being carried farther by the rains, had formed these thick woods."

In Jamaica, too, the orange grows wild so plentifully that no one cares to cultivate it; but the fruit is gathered by the poorer negroes, and brought into town to be sold, as blackberries are by cottage children in England. The perfection attained by these uncared-for wildings—for their fruit is truly delicious—sufficiently proves the truth of Galessio's statement, that in a genial climate grafting is quite unnecessary for plants of this kind, though in many places where they are cultivated the process is persevered in from custom and prejudice. The native cooks not being initiated into the mysteries of marmalade, the Bigarades of Jamaica are looked on as of no value; yet a use at least is found for them, for whenever they happen to be handy the negroes are accustomed to squeeze a few into their pail of water when about to wash the floor of a room, the acid having a detergent property, and the delightful scent thus spread abroad rendering the apartment, for some time after, a very bower of fragrance. Even Irish "Orangeism" could hardly have got into ill odour had it adopted so pleasant a mode of diffusing its favourite symbol!

CHAPTER XIV.

THE POMEGRANATE.

IN days when fortune-telling, so far from being under the ban of a prosaic Police Act, was actually esteemed as a highly creditable profession, a lovely Scythian girl, seeking to know what Fate had in store for her, was assured by the soothsayers whom she consulted that she was destined one day to wear a crown. Happening soon after to be seen by Bacchus, the susceptible god became deeply enamoured of her, and she, thinking that an alliance, even though an irregular one, with an Olympian divinity would assuredly prove the most effectual means of bringing the prophecy to pass, suffered herself to be beguiled by his ready but delusive promises. Too soon, alas! the fickle deity wearied of her and forsook her, and the hapless maid, finding her dreams of love and ambition changed into a sad reality of tarnished name and fading beauty, could not survive the change, and ere long died a victim of disappointment and despair. Even Bacchus has his serious moments, and when at length he heard of the ruin he had wrought, touched with late remorse, he metamorphosed the dead maiden into a tree, placing upon the fruit it bore the crown he had promised but denied to her while living. Such, according to the French poet,* was the origin of the Pomegranate; the persistent calyx of the blossom of this tree not only remaining, as in the case of the apple, gooseberry, &c., but, increasing in size after the petals have fallen, its tube becomes the outer rind surrounding the berries within, while its segments, surmounting the fruit with a circle of sharply-toothed points, form thus no inapt resemblance to a crown. This ensign of sovereignty being, however, a quite useless part of the fruit, led probably to the plant being adopted as the

* Nicholas Rapin, in his *Plaisirs d'un Gentilhomme*, published in 1583.

emblem of democracy, and also to its being chosen by Anne of Austria as her especial device, the accompanying motto proudly announcing "My worth is not in my crown;" while the French in the isle of St. Vincent put their comment upon this fructal diadem in the form of a riddle, asking

"Quelle est la reine
Qui porte son royaume dans son sein?"

The tree seems to have been abundant in ancient Egypt, and to have been a favourite delicacy of the immigrant Jews, their complaint against the desert into which Moses led them having comprised the charge that it was "no place of pomegranates," while the answering promise with which Moses sought to soothe them conveyed an explicit assurance that this fruit would form a part of the delights of the land to which they were journeying. In Canaan, indeed, it proved to be one of the commonest fruits; several places were named after it "Rimmon," in consequence of its specially abounding in their vicinity; and the inspired artists, who made the ministry of the beautiful a part of the service of religion, availed themselves largely of its elegant form, in the ornamentation of priestly vestment and hallowed fane. Nor was it altogether overlooked by the heathen; for in the isle of Eubœa stood formerly a statue of Juno holding in one hand a sceptre and in the other a pomegranate; and it was reckoned, too, among the growths of the Elysian Fields, and invested with tender and sacred associations in the minds of the ancients by the legend which told how the sorrowing Ceres, seeking to win back her beloved Proserpine from the dismal shades whither she had been whirled by the Plutonian "Cœlebs in search of a wife," was forced at last to resign her to her grim ravisher because his victim had for one moment so far forgotten her grief as to eat a few grains of this favourite fruit. By the Romans it was called the "Carthaginian Apple," having been brought to them in the time of Sylla from the neighbourhood of Carthage, where it greatly abounded, and whence, too, it is believed to have derived

its botanical name, *Punica*;* the ordinary appellation, *Pomegranate*, tracing its etymology to the words *Pomum granatum*, or *seeded apple*, alluding to its structure, which is very peculiar, combining the characteristics of several fruits, from each of which it differs greatly in other particulars. Externally viewed, its roundish form and adherent calyx would seem to identify it with the *Pomes*, but this outer case, instead of being eatable flesh, is only a dry leathery coat, something similar to that of the orange; yet is the transparent pulp within not collected into large masses, but a portion of it surrounds each separate seed, as in the case of the gooseberry, only that here a thin enveloping skin is also added, forming each into a distinct little berry, of oval shape, but about the size and colour of a red currant. These are regularly arranged in a double tier of compartments, divided horizontally by a sort of diaphragm, the upper part consisting of from five to nine cells, the walls of which, whereto the seeds adhere, extend from the sides of the fruit towards its centre; while in the lower range, which is smaller and comprises but three cells, irregular processes arise from the bottom. In the wild kind the juice of these berries is very acid, but in the best cultivated varieties it is sweet and of a most agreeable flavour; while a medium or sub-acid sort is also commonly grown in gardens. In Aleppo, where the fruit ripens abundantly in August, the seeds, according to Russel's account of that place, form an important article of culinary use, the first kind being used as verjuice, and the others brought to table in the form of conserve or syrup, or, being taken out of their leathery coats, are served on little plates uncooked, but strewn with sugar and rose-water. Wine, too, is sometimes extracted from them, a use which seems to have been known to the ancient Jews, as the name "Gath-Rimmon," given to a spot in Canaan, means the "*Press of Pomegranates*;" and Solomon explicitly promises the bride he woos, "I will cause thee to drink of the spiced wine of the juice of my pomegranates."

* This name is also thought by some to be derived from *puniceus*, *scarlet*, in allusion to the colour of the flower.

The simply-expressed juice is so refreshing that it is considered superior even to that of oranges in cases of fever, while Lord Bacon recommends it (preferring, however, the wine, if attainable) as very efficacious in liver complaints. It is common in Barbary, where Shaw says it often weighs a pound and measures 3 or 4 in. in diameter; and a famous kind, bearing seedless berries, is grown in gardens near Cabul, where too the natives, as we are told by Royle, employ the bark of the root to expel the tapeworm, a purpose to which it was applied so long since as in the days of Dioscorides. The flowers and the rind of the fruit are also sometimes used medicinally, both being powerfully astringent; while from the latter, it is said, ink can be made equal to that produced from galls; and either from it or from the bark of the tree, according to different authorities, a red or yellow dye is extracted, still in use in some parts of Germany and elsewhere to stain leather in imitation of Morocco.

Early introduced into Southern Europe, it is supposed that Granada in Spain owes its name to this fruit having been planted there when first brought from Africa, and the idea is countenanced by the fact of a split pomegranate being displayed in the arms of that province. About Genoa and Nice it is grown in a bushy form, and hedges are commonly formed of it, though in many places it is trained to a height of 15 or 20 ft., assuming the shape of a tree with a stem 6 or 8 ft. high, surmounted by a spreading head similar to a hawthorn. The slender branches, some of which are armed with sharp thorns, are clothed with opposite leaves, about 3 in. long, of very bright green, and bear at their extremities, either singly or in bunches of three or four together, the large and beautiful blossoms, specially characterized by their thick red calyx and five to seven petals of bright scarlet, surrounding a crowd of stamens. These flowers appear in succession from June to September, the fruit ripening about October, and sometimes hanging on the tree till the next spring or summer.

The plant was introduced into England during the reign of Henry VIII., was cultivated by Gerard, and is men-

tioned among the trees which fruited in the orange-house of Charles I. It will, however, grow well here in the open air, bearing its beautiful flowers in profusion, though rarely ripening its fruit; and the former becoming thus the principal object of the cultivator, the kind most usually grown is the double-flowered variety, which is barren, but bears large red; yellow, or variegated blossoms, and attains sometimes a very great size, one trained against the walls of Fulham Palace being at least 40 ft. high and 50 ft. broad. In France the tree thrives well and lives long, Risso mentioning that some planted at Versailles were two or three centuries old, but there they will not well bear exposure to the open air during early spring.

A dwarf species of pomegranate, bearing very small flowers and fruit, is indigenous to S. America and the West Indies, but the ordinary sort has also been long since introduced there, and in the latter place produces larger and better fruit than in Europe; while in Peru all the hedges in some parts of the country are composed of this plant, and are covered in due season with abundance of beautiful fruit. It has also been introduced into the States of N. America, and, though in the colder provinces it requires to be grown on espaliers and protected in the winter, it flourishes so well in the South that, were it popularized, the Northern markets might be amply supplied thence; but, a taste for it having never been cultivated, no demand has yet arisen.

In the Natural System of Botany the pomegranate is generally placed among the myrtle-blooms, though Lindley is inclined to separate it from them on account of the singular structure of the fruit, which is almost an individual peculiarity. It, however, reckons among its near relatives the delicious guava and the rose-apple of the East, as well as the pimento or allspice and the clove.

CHAPTER XV.

THE RASPBERRY AND ITS ALLIES, THE BLACK-BERRY, DEWBERRY, ETC.

DIFFERING greatly as regards the place they hold in the world's estimation, the several species of plants which bear the botanical name of *Rubus* (derived from the Celtic *rub, red*) are yet all marked by a strong family likeness, linking in bonds of unmistakeable affinity the much-prized garden nursling which furnishes preparations deemed worthy to figure at the most sumptuous banquets, with the wild straggler of the hedgerow whose fruit is only plucked by the cottager or the schoolboy. Not only is the resemblance seen in their lowly growth, their prickly and usually compound foliage, and spiky clusters of blossoms, but as respects their produce, while, in point of size, there is no very great extent of diversity, in shape there is still less, and all betray at the first glance their peculiar formation as being what are called *collective* fruits. The product of Rosaceous flowers, with five-cleft calyx, five always crumpled petals, and numerous stamens and ovaries, the latter develop each into a little distinct berry containing a single seed; while the receptacle, or foundation into which the various parts of the blossom are inserted, swells into a dry spongy mass, round which these little berries crowd in such close contact that the whole group forms but a single fruit, called itself, in popular parlance, *a berry*, while the real berries which compose it are termed its *grains*. Yet though these so-called grains actually press against each other, they are not absolutely united, but remain so far independent that it is possible to pick them off singly one by one, this adhesion without union being the grand distinction between collective fruits, such as those of the *Rubus* family, and *aggregate* fruits such as the Mulberry, between which there seems at the first glance so great a similarity. It is with the Strawberry that the former have really the most affinity, both these fruits being marked by the swelling of the

receptacle; only that in the Strawberry this part becomes juicy and eatable, forming indeed the bulk of the fruit, while on the contrary, in the Raspberry and its allies, instead of becoming pulp it only serves as a support to the pulpy part, remaining itself dry and tasteless, and being withdrawn with the stalk when the fruit is prepared for eating. The *genus* includes several shrub-like plants, and some of even lesser growth, all more or less of a rough prickly nature, whence the produce has sometimes been classed together under the general term of "Bramble-fruit," but, correctly speaking, Brambles form only one of the two grand divisions of the *Rubus* family, Raspberries being separated into the other; the latter being erect and shrub-like, and propagated by means of suckers, while Brambles, all more or less prone and trailing, only need to have their shoots pegged down to the soil, when they will readily take root and throw out other shoots like Strawberry runners: indeed, one writer remarks that they might all "be considered as gigantic Strawberry-plants."

By far the most aristocratic member of the family at the present day is undoubtedly the Raspberry, so called from the *rasp*-like roughness of its leaves and branches. Among the ancients it bore the title of Bramble of Mount Ida, it having first grown in that classic spot, and thence spread over the greater part of the rest of Europe. But though these worthies were acquainted with the plant, the fruit, such as we now have it, was a luxury unknown to them; for we find a French botanical writer stating that in France, where they grow wild in many parts, though even in the 6th century men knew that they were good to eat, it was not till long after that they were introduced into gardens, having been left with other wild fruit to schoolboys and peasants; while in our own country, notwithstanding old Tusser's distich,

"The barberry, *respis*, and gooseberry too,
Look now to be planted as other things do,"

Gerard speaks of the "Respis or Hindberry" as it was then called, though it was planted in gardens, being not

equal even to the Blackberry; and it is therefore entirely to comparatively modern cultivation that its present excellence and the number of its varieties is due. Even so late as in 1729 Langley writes, "We have only three Raspberries in England—the red, the white, and the purple;" but since then not only has the yellow been introduced from Holland, but numerous varieties of all these colours have been originated by our own gardeners, so that a list of about 40 may now be reckoned, which differ considerably in quality.

The native kind, still often found wild in the northern counties and in the woods of Sussex, was first generally replaced among cultivators by a much larger sort called the "Antwerp," because introduced from that place, and which still maintains as high a position as almost any in the estimation of market gardeners, in consequence of its producing an abundance of fruit which ripens early and bears carriage well. The latter quality is a crowning virtue without which any others are comparatively useless, a very fine variety called the "Barnet Raspberry" being almost entirely limited to private gardeners, because, though excellent in every other respect, it is too tender to bear transit uninjured. The very valuable double-bearing kind brings forth a first crop in July and another in September; a double-blossomed sort is grown for ornament; and a specially curious variety called the "Black Raspberry," the fruit of which is of a very dark purple colour, was obtained by Mr. Rivers by means of crossing the Raspberry with the common Bramble. The pale colour is considered by M. Poiteau to be the result of feeble organization and inferiority, a practised eye being usually able to tell in mid-winter whether a Raspberry-bush will bear white or red fruit, the white plant having paler bark, and stalks weaker and shorter than the red, while it is also less fertile.

Our Raspberry has been naturalized in America, but the indigenous varieties taken under culture seem to be preferred there, especially the *Catawissa*, which was first found growing in a graveyard in Pennsylvania, and which is of so prolific a nature that it often bears as many as

50 berries on a single bunch, the fruit too being of very high flavour, and continuing in perfection for several months. In order to have their produce in perfection, Raspberry plantations require to be renewed every three or four years, as the plants after that time begin to degenerate, owing to their having exhausted the soil; an effect which they guard against while in a wild state, by continually changing their situation by means of their "travelling" or creeping roots, which send up shoots at a constantly increasing distance from the spot of their origin. The seeds too afford another means of propagation, and these are so unusually tenacious of vitality that they have been known to retain their power of vegetation after having been boiled with sugar in the process of jam-making; while some, which had been in the stomach of a man whose skeleton was found 30 ft. underground at the bottom of a barrow opened near Dorchester, when sown germinated and grew into plants, though, as they had been buried along with some coins of the Emperor Hadrian, it is probable that they had lain thus for 1,600 or 1,700 years.

In France Raspberries are very generally eaten, mixed with Strawberries, at the dessert, and in England also are sometimes brought fresh gathered to table; but the chief purpose for which they are employed is in processes of cookery, since—unlike the Strawberry, whose delicate charms are almost entirely dissipated by heat—that powerful influence seems only more fully to develop the richness of the Raspberry; its being rather less wholesome than the former while in a raw state being thus fully compensated for by a far more extended range of usefulness, raspberry jam holding a place as the very prince of preserves, and being available anywhere all the year round. This fruit affords too a rich though not very potent wine, considered especially good in scorbutic disorders; and in Poland, where it abounds wild in the woods, it was formerly largely consumed in this form; while in Russia it is commonly dried in ovens for winter use. Raspberry vinegar, too, made by pouring vinegar over successive quantities of the fresh fruit, still main-

tains a place in every good English housewife's store, on account of its medicinal virtues in cases of sore throat, as well as to furnish a peculiarly refreshing summer beverage or fever drink. But though the flavour is not dissipated by exposure to fire, it yields very quickly to time, for, more evanescent than that of almost any other fruit, it is found to diminish if the berries be kept but a few hours, and in a few days to disappear entirely. They should therefore always be used as soon as possible after gathering, nor even be left on the bush when once ripe, as they not only begin immediately to deteriorate, but very rapidly become maggoty and decay.

Though the Raspberry is the only species of the *Rubus* family which as yet has been domesticated by man, that *genus* includes, as has been mentioned, another fruit, which, at present only the nursling of Nature, can yet claim some notice, as being at once the best and most abundant of our wild native fruits; while it possesses the added interest of having a possible future before it, and a chance of "achieving greatness" should it ever be permitted the opportunity of developing, by the aid of careful cultivation, any latent excellences it may possess. There are many varieties of Brambles both here and abroad, for they are denizens of most temperate climes, and some hundreds of different kinds are scattered throughout the world, America especially boasting a *Rubus odorata* with fragrant scented foliage; a *R. spectabilis*, or showy-flowered sort, displaying fine purple blossoms, succeeded by dark yellow fruit, acceptable for tart-making; and a *R. deliciosus*, a native of the Rocky Mountains, which owes its name to its bearing a really delicious fruit.

The most common sorts in England, where, however, many other varieties are also found, are the *Fruticosus* or shrubby, and the *Corylifolius* or hazel-leaved. The former, which most abounds, is a large plant with almost evergreen leaves and dark red or purple stems, the barren ones arching to the ground, the bearing shoots towering upwards with erect spikes of delicate pink flowers, developing into late-ripening, nearly globular, purplish-black berries, composed of numerous grains, and of a sweet but

mawkish flavour, unsuitable for cooking: indeed, Loudon considered their taste to be so disagreeable that he affirmed, "a single berry will spoil a pie." The *Corylifolius* has trailing stems, green in the shade and purple in the sun, and bears large, white, early-blossoming flowers, succeeded by large brownish-black early-ripe fruit, consisting of but few grains, and tasting slightly acid, which fits them well for tarts and preserves. The long bending shoots sometimes take root at the tip, thus forming an arch, through which superstition was wont formerly to recommend children to be passed, in order to cure them of the whooping cough. This sort would probably well repay cultivation, for Brambles seem very susceptible of the slightest attention that may be paid them, M'Intosh mentioning having seen some in Lincolnshire trained against a south wall, which by this simple expedient had been much improved in both size and flavour.

Another common English kind, the Dewberry, or Grey Bramble, offers nothing very peculiar in growth or blossom, but bears a small berry composed of a very few large grains, covered with a grey kind of bloom, and which is by many preferred to any other Bramble produce.

Various parts of the Bramble-plant were formerly supposed to be endowed with great medicinal virtues, but the only property of the kind now attributed to it is that jam made of the berries is considered to be very good for sore throats. In France, where they are called *Mûres sauvages*, they are used to colour wine, and it is said that their juice mixed with raisin wine will give to it not only the colour, but even much of the flavour of claret, while even alone it can be made into an inferior wine, which yields on distillation a strong spirit. The green twigs afford a black dye for woollen, silk, or mohair, and silkworms, it is said, will feed on the leaves when those of the Mulberry are not procurable. Competing here with so many more refined garden plants, the berries of the Bramble tribe are but little appreciated, but in frigid climes, where vegetation is much more restricted, they occupy a vastly more important place, and by the kind dispensation of Providence attain also far greater perfec-

tion. The Arctic, or Dwarf Crimson (*R. Arcticus*), having often been the sole refreshment attainable by Linnæus during his wanderings in those regions, he prefaces his account of it by the kindly remark, "I should be ungrateful towards this beneficent plant, which often, when I was almost prostrate with hunger and fatigue, restored me with the vinous nectar of its berries, did I not bestow on it a full description." But the fruit which is reckoned to be the very best produced by any plant of the species is that highly-valued Cloudberry, or *Rubus chamæmorus*, less exclusively Arctic than the preceding, but which still finds its most congenial home in the far North, in Sweden, Norway, &c. A small plant, with large serrated leaves, it bears at the top of the stem a single berry, at first scarlet, but afterwards yellow, and which Dr. Clarke describes as being as big as the top of a man's thumb, and in taste cooling and delicious, of a flavour like the large American Hautbois Strawberry; while he gives, too, an interesting account of the "blessed effects" he experienced while suffering from a disorder which had seemed to be incurable, when, on eating daily a quantity of these berries, simply gathered by his hostess's children as an offering to the guest, his fever abated, appetite and spirits returned, and he was soon restored to perfect health, the symptoms of amendment, he says, having been "almost instantaneous after eating of these berries." This valuable fruit is found in some of the loftier parts of the Highlands of Scotland, remaining in season about a month, during which period it not only serves to support various kinds of game, but is eagerly collected and preserved by the Highlanders. It became a special object of interest in that country some years ago, owing to a poem written by Mr. Archibald Gorrie in the Ossianic style, which met with many admirers, and which was in the form of a petition from the Cloudberry to the Caledonian Horticultural Society, praying that it might be favoured with the advantages of garden culture, or wedded to the Raspberry, in order that its progeny at least might be elevated to the dignity of a dessert fruit. It has, however, been found very difficult to naturalize, a temperate climate not suit-

ing its hardy growth so well as the bleak air of its native wilds ; though Loudon believed it might be made to grow in England by sowing its seeds for several successive generations in gardens, and perhaps crossing it with some native variety of *Rubus*.

CHAPTER XVI.

STRAWBERRIES.

ADOPTING the style of Baron Cuvier in his famous criticism on the French Academy's definition of the crab, it may be said that there are but two objections to the title of the Strawberry: the one being that it is not a berry, and the other that it has nothing to do with straw ; the theory of botanists establishing the former fact, and the practice of gardeners deciding the latter. It is true that some deduce the etymology of the first syllable, not, as it is generally traced, from the custom formerly adopted of laying straw beneath the fruit to protect it from sully-ing contact with the soil, but rather from the spreading nature of the plant causing it to seem strewn or *strawed* upon the ground ; but in this case the name is founded on a word now obsolete ; or, again, on a corrupted one, if, as is thought by others who adopt this derivation, the title was originally *Stray*-berry. As regards the "berry" clause, whatever dates thus ignorantly from days of ignorance must at least be in itself a proof of antiquity, and who that rejoices in "blue blood" can doubt the superiority of any misnomer indubitably ancient, over the most correct appellation bearing yet on its face the evidence of having been bestowed but yesterday ? The strawberry, however, has something more to vaunt than an English genealogy, however remote, for

the present Latin title of the species, *Fragaria*, derived from its *fragrant* perfume, identifies it with the *fraga* enumerated among the field beauties with which Virgil twines the verses of his "Third Eclogue;" and Ovid's huge Polypheme, too, recounting the advantages which the fair Galatea would derive from a matrimonial alliance with his giantship, does not omit to adduce as one part of the "settlement" he is anxious to make, "With thine own hands thou shalt thyself gather the soft strawberries growing beneath the woodland shade;" though the immediate addition, "Nor, I being thy husband, will there be wanting to thee the fruit of the arbutus-tree," considerably qualifies the compliment to the first-named fruit, in attributing to the latter any comparative power of attraction. It could hardly, however, be expected that the taste which could enjoy supping off shipwrecked mariner *au naturel* could safely be trusted in the selection of a dessert; and at least the Cyclop was not singular in mentioning these two productions in conjunction, for the philosopher Pliny also confuses them, only distinguishing the one as the Tree and the other as the Ground Strawberry, and citing it as the only instance in which we find a similar fruit growing upon a tree and also upon a creeping plant, thus strangely suffering the fact of the two fruits being not very unequal in size, and both being red and round, to outweigh the most palpable differences in every other respect; for neither in foliage, in blossom, nor, indeed, in its tasteless fruit, except in the particulars just named, does the arbutus show the least likeness to the *Fragaria*, though to this day it commonly bears the name of the Strawberry-tree. The ancient botanist does not seem, however, to have been very familiar with the real strawberry, only speaking of it as a natural production of Italy, but making no mention of its being cultivated, or of the fruit being brought to table: yet, if we may receive the testimony of Soyer, it was tended in the gardens of Greece and Rome, and its produce figured at the banquets of both nations.

Indigenous almost throughout Europe, and indeed in most temperate parts of the world, the type of the race,

the wild Wood Strawberry, was accepted probably from the earliest times as a favourite of Nature, needing no culture because already endowed with every charm that could delight the senses. No dye could outblush its crimson glow, no preparation of the perfumer rival its powerful yet delicate scent, no inventions of Apicius surpass its exquisite flavour; and if all this excellence were compressed within an object of very small dimensions, its abundance amply permitted numerical aggregation to compensate for individual littleness. In France, at least, it was found that by transferring the plants to gardens, though the richer soil caused the fruit to attain double size, the fine flavour was diminished in proportion, and for centuries, therefore, not only was this the only kind known, but the preference continued to be given to the little rustics when just fresh from their native wilds. At length, however, appeared the Montreuil Strawberry, in which, for the first time, a spirit of equal excellence was found embodied in a larger frame. The scene of its manifestation was Ville du Bois, a place about six leagues from Paris, which had been formerly covered with woods, beneath the shade of which the fair little *Fragaria* had flourished from time immemorial. But the day came when the spear of the hunter, at least, was to be beaten into the pruning-hook: the trees were felled, and the forest became a plain; yet the strawberries were still preserved, for a village had sprung up in the space cleared by the axe, and many of its inhabitants had devoted themselves to the culture of fruit. Nor had the occupation been adopted without a special incentive. Wood-cutting had naturally been accompanied by charcoal-burning, and near the furnaces used for this purpose it has often been observed that plants grow much finer than elsewhere, and new kinds which had never been noticed before not unfrequently manifest themselves, owing, perhaps, to the soil being stimulated by the salts contained in the ashes scattered upon it. In such a neighbourhood, then, was developed a strawberry much larger than the ordinary one, yet scarcely, if at all, inferior to it in any other respect; and, in order to perpetuate this

improvement and turn it to the best account, the village of Ville du Bois became a village of strawberry-growers. Such is the received tradition concerning the affair, and all that could be elicited, when, at the request of M. Duchesne, the author of the elaborate *Histoire Naturelle du Fraisier*, the curé of the place went through every canton, questioning all the oldest inhabitants as to the particulars; for as to the exact epoch when or locality where the plant originated, nothing positive could be ascertained—a fact not much to be wondered at, seeing that the event took place about 250 years before. The villagers remained constant to their first love for nearly a century, but in 1780 abandoned it, and turned their attention to the vine, to which they have ever since devoted themselves. A taste for strawberry culture had, however, by this time spread through the neighbourhood; adjacent villages adopted the poor plants when thus cast out from their natal place, and it is still to the nurseries in this vicinity that gardeners repair to supply themselves with the finest plants. The demand for them is continual; for, although all old plants are destroyed every third year and replaced by their own runners, even these, too, being always transplanted to a different spot, yet in the ninth, or even sometimes in the sixth, year, it is found necessary to clear out every root and branch, and bring in an entirely new stock fresh from the original head-quarters of the race. It is at Montreuil principally that fruit of this kind is grown to supply the Paris market, and it is therefore from this place that its best-known name is derived, for the system of “Every Gardener his own Sponsor” has been carried in this instance to such an extent that Du Hamel says the number of synonymes for this variety is “terrible;” but the Parisian, who knows that the best strawberry he buys has been brought thence, simply settles the matter by calling it the Montreuil Strawberry. The largest, figured in the *Nouveau du Hamel*, measures little more than $1\frac{1}{2}$ in. in diameter.

The lineage of the next notable French strawberry is less involved in obscurity, for it was not, like that of Montreuil, an ennobled native gradually risen above its

fellows, but a distinguished foreigner, born of an aristocratic race, and arriving in France in 1712 in full-blown honours, and with the additional *éclat* of having survived a long and perilous voyage. The introducer was a most appropriately-named M. Frezier, an engineer who had been sent to America by the King of France, and who had been particularly struck, when in Chili, with the beauty of the strawberries cultivated at the foot of the Cordilleras, which, he said, usually equalled a walnut, and often even a hen's egg, in size. He determined to make an attempt at least to take some of these plants with him when he returned to Europe, and five roots were accordingly selected; but, alas! there were at that time no ingenious Wardian cases in which such delicate passengers could find a safe and easy berth when on a voyage, and during six weary months, and a passage through the torrid zone, fresh water was a limited treasure not to be lightly spent in quenching any less than human thirst, so that the poor parched *Fragarias* would soon have perished had not the kind supercargo taken pity on them, and allowed M. Frezier a few precious drops daily as an extra allowance to bestow upon his plants. On their arrival, two of the rescued five were presented to their preserver, as a meed of gratitude from the owner: of these the fate remained unknown; but of the three which were landed with M. Frezier at Marseilles, one was sent to the Minister, Souzy, of which also no record remains, and another given to Jussieu, and planted by him; but bearing only female, or exclusively pistilliferous blossoms, and this peculiarity not being then fully understood, its flowers were left "withering on the virgin stem," and the unappreciated plant soon died. But the fifth of this little family of pilgrims still remained in M. Frezier's own hands, and destiny, stern sometimes to strawberries as to men, sated perhaps with its four victims, spared the last of the race, the Ulysses of a fragarian Odyssey, and when planted by its owner at Brest, where he resided, it blossomed and bore and multiplied prodigiously, and was introduced thence to other parts of Europe, besides establishing itself throughout the west coast of France,

where it succeeds better than in any other locality. How this came to pass is not known, for the original hero, or rather, perhaps, it should be said heroine, was also what is called a female plant, bearing imperfect blossoms, and M. Frazier was no botanist to discover this fact himself, or to notice with what other kinds it was planted, or whence the fructifying pollen was supplied to its pistils. Though less known in or near Paris, it continues to be *the* strawberry *par excellence* in many other parts of France. The colour is pale red, the shape often deformed, and it is said that it has been grown at Cherbourg so large as to be $7\frac{1}{2}$ in. in circumference.

Another French *Fragaria*, the date and place of whose origin is chronicled with minute exactitude in the volume of Duchesne, is noted for blazoning on its scutcheon of pretence but a simple single leaf, instead of the ordinary triple one; but as this is its chief or only peculiarity, it need not be further adverted to; for though our own fruit may not be able thus to boast a series of biographies, the race has at least a history, and one sufficiently interesting to claim some space for consideration.

That "Strabery rype" was one of the common cries of London, at least as early as in the days of Henry VI., we learn from the verses of Lydgate, who died in 1483; and that it needed no "Society" in those early times to mark out its culture as a fitting part of the "Employment of Women" is shown by the directions issued by Tusser's farmer to his dame:

"Wife, into the garden, and set me a plot
With strawberry roots, of the best to be got:
Such growing abroad among thorns of the wood,
Well chosen and picked, prove excellent good."

Though it may be true enough that in its wild state

"The strawberry grows underneath the nettle,"

yet, since among all the hypotheses as to his original occupation, it has at least not yet been advanced that our greatest poet was a gardener by profession, we may be

permitted to doubt whether the conclusion thence drawn be not somewhat questionable, that

“ — Wholesome berries thrive and ripen best,
Neighbour'd by fruits of baser quality.”

At least, we find that when removed by the farmer's wife, probably rather for convenience sake than with any view to cultivation, then little thought of, it was in far other company that they grew ; for, speaking of their arrangement when thus transplanted to the garden, Tusser says that

“ The gooseberry, respis, and roses all three,
With strawberries under them fitly agree.”

And when we reach those most famous fruits, preserved even unto immortality by Shakespeare in the scene taken almost literally from the chronicle of Hollingshead, wherein the despotic usurper Richard tells the bishop,

“ My Lord of Ely, when I was last in Holborn,
I saw good strawberries in your garden there,”

we find that at least the loveliest of the three companions assigned them by Tusser was still associated with them, for this said garden at Ely Place was famed for its roses as for its strawberries.

In 1593, Thomas Hyle informs us that strawberries “ be much eaten at all men's tables in the summer, and they grow in gardens unto the bigness of a mulberry ;” nor was open garden cultivation found in England to deteriorate their quality, while thus materially increasing their magnitude from the mere currant-sized growth of the shady woods. A naturally larger kind, too, was introduced before long ; for Parkinson, in 1624, speaks of the “ Scarlet,” the native Wild Strawberry of North America, then already common in this country, and still valued by gardeners as being the earliest to bear fruit unforced, and by confectioners as making the finest carmine-coloured preserve. He mentions also, as the only other kind then known, a “ Bohemian ” Strawberry, considered to be identical with the *Haut-bois* of the present day, which is believed to have been

originally a native of Bohemia, and brought to us, as its name indicates, from France, though in that country it is now called the *Capiton*, and its fruit, which is not much esteemed, the *Capron*. The characteristic from which it derives its "high-wood" title, is the peculiarly lengthy stem, which lifts the fruit above even the long-stalked leaves. Its flowers, like those of the Chili, are considered to be of different sexes, for though seldom quite imperfect, some have so few stamens, and others so few pistils, that unless great care be taken to balance the kinds, many blossoms wither unproductively, and scanty crops inevitably result. In days when this kind of floral structure was less understood than at present, the *Hautbois* soon gained a bad character as a scanty bearer, and fell irrevocably into disrepute, except so far as its name is concerned, for that at least is as regularly appended in the street cries to strawberries of any and every kind as the title of "St. Michael's" is indiscriminately applied by the same popular authorities to all varieties of oranges. The real *Hautbois*, the first of our larger varieties, is of very high flavour, has particularly solid flesh, with no central cavity, and adheres firmly to the calyx.

In 1766, the Alpine or Everlasting Strawberry had been cultivated for three or four years past near London, and it was believed that the King of England had received the seeds first from Turin. Though sold at a guinea a pinch, many purchasers were found anxious to obtain the novelty, and it soon spread so prodigiously that in the course of a few years beds of it were to be seen in almost every garden. It went from our shores to Holland, and thence to France, where, to this day, it is preferred on the whole to all other kinds. The royal table was always furnished with it, from the Versailles kitchen garden from June to October, and during the greater part of the rest of the year from hotbeds; but this hardy and indefatigable bearer, even in the open garden, never stops yielding an ever-renewed harvest until actual frost, with a voice that must be obeyed, cries sternly, "Hold, enough!" The reason is to be traced in the fact of its runners taking root, and then at once blossoming and bearing fruit even

more freely than the parent plants, whereas, in other kinds, this usually does not take place until the next year.

It was about the close of the last century that the latest and best of all our foreign settlers, the Pine Strawberry, made its appearance. Some affirm that it came originally from Virginia, some from Louisiana, and Miller received some plants of it from "a curious gentleman of Amsterdam," who assured him they were sent from Surinam; but it is not to be found among Madame Mérian's famous illustrations of the natural history of that place; and Stedman, in his account of Surinam, distinctly affirms, "It is well known that no thin-skinned fruit can ever come to perfection in a tropical climate, such as grapes, cherries, *strawberries*, &c." But whencesoever it may have been brought, no fruit could better deserve a welcome, or be more worthy of the proud title it bears, named as it is after the royal pine-apple, not only on account of its conical shape, but from a degree of similarity to that fruit both in its taste and perfume. Since the beginning of this century great attention has been devoted to Strawberries, and great results attained, about 60 good varieties being now in cultivation, besides many of lesser worth. Yet, among them all, the Pine stands unquestionably pre-eminent—not, it is true, in the state in which it originally came to us, but as it appears after the careful education it has received at the hands of British gardeners, in the perfected form of "Myatt's British Queen," of which it may be fairly said, that

"All that's rich, and all that's bright,
Meets in her *flavour* and her form."

Neither tantalizing the appetite by concentrating its excellence within atomic dimensions, nor yet deceiving and disappointing it by presenting fair proportions and proving a mere mass of watery distension, this delicious strawberry offers all that is exquisite in taste, while in magnitude often reaching to 7 in. in circumference, and weighing at least 2 oz. Not that this is the greatest bulk that the strawberry can attain, for "Myatt's Mammoth" has been known to weigh nearly twice as much, but then

this overgrown giant is so greatly inferior in other respects as not to admit of comparison with the former; and the "British Queen," therefore, characterized by the further virtue of being an immense bearer, reigns still, unrivalled as her namesake. High-bred fruit like this, however, compares with the original kinds much as the high-bred cattle of scientific farmers do with the hardy little herds of the Welsh or Scottish mountains, depending little on human care, and thriving almost spontaneously; for the creatures, whether animal or vegetable, which have once been fostered to an extraordinary degree of perfection, require a continuance of the most unremitting attention in order to maintain not merely their excellence, but almost their existence. The little rustic of the woods is therefore by no means superseded by these pampered aristocrats of the garden; and though not the handsomest, is still far from being the worst of the sorts now cultivated, while it will flourish under circumstances which would be fatal to more delicate kinds; and, nurtured by richer soil and a sunnier situation, matures not only larger but better berries than can be found in forest growths; for sunshine seems essential to sweetness, and fruit grown in the shade is generally acid.

Had we never known the luscious outgrowth which follows them, the strawberry might still have been welcomed in our gardens, were it only for the sake of the fair flowers which so profusely adorn it. Rising from within a pale green 10-cleft calyx, its five white petals and ring of numerous stamens—numbering three or four to each petal in European kinds, and five or six in those of America—surrounding a little central mound formed by the ovaries, it presents an appearance very similar to that of the common buttercup, but on examination proves to differ from it in the circumstance of the stamens not rising directly from the receptacle beneath the ovaries, but seeming rather to grow out of the sides of the calyx, a fact which distinguishes it from the often poisonous *Polyandria* of Linnæus and *Ranunculaceæ* of Lindley, and classes it with the ever-wholesome Linnæan *Icosandria* and Lindleyan *Rosaceæ*, or rose-like flowers. The

little convexity occupying the centre consists of a number of distinct ovaries, sometimes amounting to 100, and Duchesne had even counted as many as 300, not adhering, but pressed into close proximity, and all inserted into a common receptacle. When the snowy petals have fallen off and the stamens shrivelled away, the nest-like calyx closes round this cluster of tender fledgelings, while the receptacle on which they are pillowed begins to swell beneath them, gradually bearing them up and apart, wider and wider as it distends, till they lie scattered in the form of seeds all over the surface of what has now become a soft, crimson, juicy mass; like a band of brethren carried by the force of changing circumstances far from the common house of their infancy, and severed to meet no more till the whole fabric of their world shall dissolve. The pressure of a human lip can re-unite them, and who can say that the fulfiller of the tender office is not "twice blessed"? Though termed in common parlance a "berry," the strawberry therefore, botanically speaking, is merely "a fleshy receptacle studded with seeds," the green calyx still remaining at the base, at once an ornament and protection to the fruit, which, bending downwards with its own weight, finds the same leafy cover stretched above it as a shelter which was spread beneath the light upward-turned flower as a support.) The pulpy mass into which this receptacle has grown is covered with a thin epidermis or skin, pierced under each ovary to afford a passage to the vessels which nourish it, and which stretches as the fruit enlarges; but as the vessels do not elongate in proportion, the seeds lie each embedded in a little niche, with the soft substance of the voluptuous cushion on which they repose swelling up between and around them. These seeds (as they are commonly called, though really seed-vessels) are irregular oval grains, enveloped in two skins, and divided vertically into two lobes, between which, at the point, is the embryo, in a reversed position, with the radicle, or future root, pointing upwards, and the plantule, or future stem, downwards.

The above description refers of course to the perfect flower, in which every part essential to fructification is

fully developed; but, as has been mentioned before, in some tribes the blossoms are of different sexes upon different plants. They are not considered to be so decidedly distinct as in the case of the palms, a careful study showing that one part of the organization in the respective flowers is only rudimentary or imperfectly developed, rather than entirely absent, though the practical result is the same as though there were complete deficiency; and it is easily to be distinguished by an ordinary observer that some blossoms present a numerous assemblage of long, yellow, pollen-bearing stamens, but without the appearance of ovaries in the centre to be fecundated by them, while in others a cluster of ovaries, looking like a minute green strawberry, is seen in the middle, with no surrounding stamens to shed upon them the golden dust of fertilization. The growers of Cincinnati, according to Downing, divide all strawberries into three classes: the male or staminate, in the blossoms of which the stamens are chiefly developed; the female or pistillate, in which the ovaries form the principal feature; and the hermaphrodite, in which the blossoms are perfect. The latter are given up to those who are content with a supply of inferior fruit at the cost of little care or skill in culture. The first class, to which belongs Myatt's British Queen, usually in that climate bears very uncertain crops, only a portion of the blossoms developing into perfect fruit; while the pistillate kind do not set fruit at all when planted by themselves, but when grown near a proper number of staminate plants, so as to be duly fertilized by their pollen, bear larger crops of much finer berries than can be there produced in any other way. The market of Cincinnati, where a few years ago Mrs. Trollope specially noted the poor condition of the strawberries, but in which 6,000 bushels of that fruit are now yearly sold, is supplied with them more regularly and in greater abundance than perhaps any other in the world, except our own hydra-mouthed London, and such a result could only be obtained by this mode of culture.

In our own country the largest quantities and finest sorts are grown in the neighbourhood of Isleworth and

Twickenham, an enduring memorial of this being their chosen haunt remaining in the name of Horace Walpole's far-famed Strawberry Hill. Our consumption of them may be judged by the circumstance of one market gardener at Enfield having been known to send out 1,200 gallons of one kind alone, the Elton Pine, every morning through the season.

A strange fragarian freak is the Plymouth Strawberry, so named because first noticed at Plymouth. In the quaint words of Parkinson, "The flower, if it have any, is green, or rather it beareth a small head of leaves thickly set together like a double ruff, in midst whereof stands the fruit *—when ripe, soft and somewhat reddish, like a strawberry, but with many small harmless prickles, which may be chewed without offence, and is somewhat pleasant." Though no strawberry eater of the present day could find the least "pleasantness" in such a vegetable stickleback, this strange abortion has been of service to Science in throwing light on the metamorphosis of plants, for it is found that in it the five petals of the ordinary flower are changed into five distinct leaves with regular lobes, the stamens become little irregularly-shaped leaves more or less lobed, while the ovaries elongate and do not change colour, so that the fruit when ripe resembles a common strawberry stuck with thorns, for instead of seeds lying on the surface, it has these green buds standing up thickly all over it, "like quills upon the fretful porcupine." It still continues a great rarity.

The strawberry belongs properly to cold climates, and though well known is comparatively little valued in the south of Europe; indeed, if soil and situation be properly adapted to it, the more cold, or even bleak, the climate, the more delicious is the berry. It has one quality, however, which tends to give it a wide geographical range, namely, a great power of adapting itself to circumstances, and we find it accordingly spread over a great proportion of the globe, languidly existing where other fruits are most abundant, and luxuriating in healthy vigour where

* See Plate III., fig. 5.

it reigns almost unrivalled; its hardihood being so great as to brave even Arctic temperature, and furnish a rosy fragrant dessert even amid the snows of Lapland—the chief fructal blessing left in Nature's *cornucopia* when nearly all the rest have dropped out of it as she has passed on her way to the barren Pole. They are much eaten there fresh, as a part of the frugal fare of the inhabitants, and enter also into the composition of "Kappatialmas," formed of fruit and reindeer cream, mixed together and dried like a sort of sausage, which as the national dainty may be called the plum pudding of the Polar regions.

If strawberries be laid in a heap and left to themselves, it is found that they decompose and pass through the various stages of decay without undergoing the acetous fermentation, nor can their kindly temperament be soured even by exposure to the more powerful action of the stomach, where, being composed almost entirely of peculiarly soluble matter, they dissolve, and "leave not a wreck behind" to cause internal commotion or hinder digestion. There are few conditions, therefore, of the human frame in which they are not positively salutary, fewer still in which they can possibly produce any evil effect. They promote perspiration and temper hot blood in the healthy, and offer such advantages to the diseased that it is almost wonderful there has been no system of *Fragariopathy* yet established, or that they should not at least have had such a "tide in their affairs" as bore nauseous brandy and salt, or yet viler tar-water, on the flood of public favour for a time, as universally-tried specifics. Taken internally, they relieve the agonies of gout, and prevent it also, for Linnæus kept himself almost free from his "old enemy" by always eating plentifully of this fruit whenever it was in season. From their action on calcareous secretions, they are likewise beneficial to patients suffering from stone; and finally, Abercrombie bears witness that "Hoffman has known consumptive people cured by them," and assuredly the process must have been vastly pleasanter than a course of cod-liver oil. Nor are they less potent as a cosmetic than as a medicine, for it

is a well-known fact that they are a natural dentifrice, dissolving the tartareous incrustations of the teeth and sweetening the breath, while Du Hamel affirms that their distilled water clears and embellishes the skin. It is evident, therefore, that they only need some enterprising individual to bring them properly before the public, by a due amount of advertising, in order to supersede half the nostrums now in vogue, and make at once the pills of Parr, the oil of Cabburn, and the Odonto and Kalydor of Rowland, hide their diminished heads before the glories of all-healing, all-beautifying strawberries. We feel, however, when Parkinson assures us further that "the water distilled of the berries is good for the passions of the heart, caused by the perturbation of the spirits, being either drunk alone or in wine, and maketh the heart merry," that "drunk alone," the prescription might not prove quite so efficacious as when taken with the other ingredient named, especially if mixed according to the celebrated Van Dunck proportions.

But the fruit is sufficiently attractive to need no knowledge of its more occult virtues to recommend it to all within whose reach it may come. Even the adjuncts commonly associated with it are but an observance descended from days when strawberries, less mellowed than those we now gather, almost required the addition of some blander influence, and may easily be dispensed with now; although to some their ruddy charms still gleam more alluring than ever from beneath the traditional dairy accompaniment which furnished Herrick's luxuriant imagination with a moral addressed to ladies too lavish of their beauties and forgetful of the power of a veil to enhance them.

Even the leaves of the plant have not passed unhonoured, having been chosen to adorn the coronets of our own highest nobles, yea, even to figure on the royal crown of Spain and the diadem of the once mighty empire of Germany. The reason, if any there were, why this leaf in particular was advanced to such dignity, the heralds have not vouchsafed to inform us, but the ornament is not the less prized by its possessors from ignorance of

its derivation; and the lower 10 million whose ignobler heads it can never wreath, may console themselves for the deprivation by the reflection that none who can secure the fruit to eat need envy those who wear the leaves.

CHAPTER XVII.

THE MELON.

ITS HISTORY AND GROWTH.

LARGEST of all fruits, yet growing on the lowliest of fruit-bearing plants, the huge and heavy Melon, attached to a stem which actually trails upon the ground, must abase itself to the very earth during the period of growth, though destined, perhaps, when gathered, to be exalted to the table of princes. In this country, indeed, it may be looked on as a more aristocratic kind of luxury than even the pine-apple, and is likely to remain so, for though certainly inferior to that most delicious fruit, this very inferiority tends to keep it exclusive; since while none, perhaps, would taste the ananas once without desiring to partake of it again, comparatively few are partial to the peculiar flavour of melons, and being, therefore, only required by a select few, the fruit is not common because it is not popular, while it is only by becoming common that it could have a chance of attaining popularity.

The melon is a native of the milder regions of Asia, but was introduced into Europe before the time of Pliny, as that writer, when treating of gourds and cucumbers, after mentioning that "When the cucumber acquires a very considerable volume it is known to us as the 'pepo'" (supposed to be the pumpkin), adds—"Only of late a cucumber of an entirely new shape has been produced in Campania, having just the form of a quince. The name

given to this variety is 'melopepo.' This fruit, it is concluded, must have been the melon, which still bears the botanical name of *Melo cucurbita*. The melon had been known, too, to the Greeks, who were accustomed to soak the seeds in milk and honey previous to sowing them, and even put them into the earth surrounded with rose-leaves, believing that when thus cradled in sweetness the fruit to which they gave birth could not but be mild and fragrant. The great Baber has the credit of having introduced it to his subjects in Hindostan, where it now abounds, it having been indigenous only to the milder parts of Asia. How early it was brought to this country is not known with certainty; for though Gough, in his *Topography*, says that it was grown here in the time of Edward III. (having only gone out of cultivation, along with the cucumber, during the troubled time of the Wars of the Roses which followed), it is generally supposed that the object to which he refers was really the pumpkin, which was called the "melon" by old writers, the fruit to which that name is now restricted having formerly been distinguished by the title of Musk Melon. It is most probable that it was really only brought to England from Italy in the time of Henry VIII.; for, in 1526, Gerard, though he had not himself grown it, yet mentions having seen it at "the Queen's hothouse at St. James's," and also at Lord Sussex's house at Bermondsey, where, he says, "from year to year there is great plenty, especially if the weather be anything temperate." Parkinson, in 1629, says that before his time "melons have been only eaten by great personages, because the fruit was not only delicate but rare, and therefore divers were brought from France, and since were nursed up by kings' and noblemen's gardeners;" but they were then becoming more common. Subsequently, the melon became an article of great though never of very general consumption, the costliness incidental to artificial production putting it beyond the means of the majority of people; but it was not unusual for market gardeners to tend 300 or 400 "lights" of melons, producing from week to week large quantities, which were easily disposed of at high prices to

the wealthy. Now, however, as Glenny in a recent work deplures, "it is rare to see any quantity grown; and the foreign melons, though unfit to eat, seem to usurp at the market the places of their betters, at a price that would scarcely pay an English grower for cutting them and bringing them to market, even if they cost nothing to grow;" for the facilities afforded by steam communication have caused a large supply to be imported from abroad, chiefly from Spain and Portugal, where they can be grown in the open air, and also from Holland, where large quantities are raised by artificial means for the London market. The general public being thus provided for, home-grown melons, though much preferred to imported ones when available, are seldom enjoyed except by the rich employers of highly-paid skilful gardeners; for the authority just quoted adds further, that the melon "is not worth forcing by those who have but small means, as it has many chances against it."

A native of warmer climates, and provided by Nature with a rind of such thickness that only extreme heat can penetrate to ripen the pulp within, when grown in this country it needs, in addition to the artificial heat applied by the cultivator, as much as our summer sunshine can supply of a more genial kind of glow, and therefore is seldom obtained before May or after October; though modern improvements in greenhouses, and the introduction of thinner-skinned varieties, have somewhat extended their season, and in time will probably still further lengthen it. Occasionally grown from cuttings, as a surer method of securing an unchanged perpetuation of the parent plant, the usual mode of propagation is by seeds, which are tested, like witches of old, by being thrown into water, when floating on the surface ensures the condemnation of a melon-seed as certainly as it once did that of an old woman. Age, too, has much to do with the choice of them, for, unlike most other seeds, perfect freshness is so far from being a *desideratum* that it is not until they are two years old that they are considered fit for sowing, since seed in which the exuberant vitality has not been checked and enfeebled by age would give birth to plants too luxu-

riant in growth for the small space which is all that can be allotted to them where artificial culture is required. Due limits, however, must be observed; for though seeds 40 years old have been known to vegetate and grow into fruitful plants, their germination becomes doubtful if they are kept for more than three or four years. Though sometimes grown in the south of England under hand-glasses, like cucumbers, they cannot generally be reared in this country in the open air, since 65° is the least temperature at which the seeds will germinate, and from 75° to 80° is needed before the fruit can be ripened. A sheltered hotbed, therefore, becomes here essential to their existence.

An annual plant, destined only to exist for the space of a few months, yet to attain large dimensions in all its parts, the growth of the melon is very rapid, the newly-quickened seed soon sending forth tender succulent shoots, which, as they speedily lengthen, develop numerous large, alternately-disposed, lobed leaves, accompanied by spiral tendrils; and, in the course of the third month after sowing, the pale yellow flowers begin to unfold their soft, limp, five-cleft corollas, the males encircling three stamens, on which appear the curiously arranged anthers, in the form of serpentine lines waved up and down near their summit, while the females are easily distinguished by the green ovary swelling out below the blossom, the centre of which is occupied by a short style with three thick stigmas. The male flowers generally appear first, but Dr. Carpenter affirms that this matter is entirely governed by the degree of warmth to which the plants are exposed, and that if the proportion of heat greatly exceeds that of light, male flowers are produced, whereas if these conditions be reversed only female ones appear. In fine summer weather, when glasses can be left almost constantly open, the breeze may waft pollen from this blossom to that, or honey-seeking bees, brushing past the anthers of one, may bear off the golden dust to deposit it again just where it is needed, as they plunge among the stamens of another; and thus the flowers become fertilized, and the fruit will "set" naturally. Our melon-growers, however,

rarely trust to Nature the fulfilment of so important a work, but mostly adopt the process imparted as so wondrous a secret by Crabbe's "Peter Pratt:"

"View that light frame where *Cucumis* lies spread,
And trace the husbands in their golden bed,
Three powdered anthers; then no more delay,
But to the stigma's tip their dust convey;
Then by thyself from prying glance secure,
Twirl the full tip, and make your purpose sure;
A long-abiding race the deed shall pay,
Nor one unblest abortion pine away."

A sunny day is usually chosen, if possible, for this operation, and between 10 and 12 o'clock in the morning is the time prescribed as fittest for its performance.

When it becomes apparent, by the rapid swelling of the ovaries, that as many fruits are secured upon a plant as is consistent with its bearing powers,* the future blossoms which it may put forth are destroyed as soon as they appear, in order that all its energies may be concentrated on the perfecting of the embryos, while tepid water is liberally supplied both to roots and leaves, in order to supply the drain upon the plant caused by the maturation of so large and juicy a fruit. If grown upon the ground, a piece of slate or tile is put under the tender nursling, to keep it from contact with the damp earth; and as it increases in size, the stalk is supported so as to elevate it into the air and sunshine, which otherwise might be shut out by the surrounding leaves, though when trained up a trellis it needs no aid in securing a sufficiently exposed position. In the course of five or six weeks after the setting of the blossom, the ponderous produce may be expected to have finished its rapid course, and reached maturity, evidenced by its having attained its full size; in some sorts, by the gaining also of a yellowish tinge, but most certainly by the exhalation of a powerful but pleasant odour; though many kinds give likewise the unmistakable sign of the stalk cracking in a little circle close to the fruit. Winter melons, however, do not display this

* Four at one time are usually considered a sufficient progeny.

crack, and their ripening can therefore only be known by their size and scent: indeed, it is acknowledged that in general it is rather difficult to discriminate the last stage of maturity, and that only experience can enable any one to determine with certainty the exact moment when a melon has reached, yet not passed, its perfection.

Such experience is sometimes much valued, an anecdote in proof of which is related of a certain monastery into whose fraternity no one was admitted who could not, by some special qualification, minister to the enjoyment of the rest of the community. A visitor staying there for a few days was so struck with the stolid demeanour and seeming utter stupidity of one of the monks, that he could not refrain from hinting to the prior his surprise at finding that such a one was allowed a place to which, according to the rumoured bye-laws of the society, he seemed so little entitled, when his doubts were at once dissipated by the satisfactory reply—"Oh, he is not without his talent: he is a capital judge of melons!"

When perfectly fine, a melon should have no vacuity—a fact ascertainable by the sound given forth on gently knocking the exterior; and when cut the juice should not run forth in a stream, but only gently exude to gem the flesh with dew-like drops of moisture. Small melons, too, are generally better than large ones, as the treatment which fosters increase of size tends also to impair flavour; and the bulky giants of the race, produced by excessive manuring, are, therefore, rejected by good judges, who desire rather to gratify the palate than to please the eye. The fruit should always be cut from the plant in the morning, and the majority of the finer sorts should be eaten the day they are gathered, though, if cut a day or two before they are ripe, they may be kept for a week in a cool *dark* room, and some sorts will even keep for weeks under these conditions; for light has a great influence in facilitating the chemical changes on which maturation depends, and its deprivation, therefore, tends much to retard decay. They should also not be laid down, but suspended in nets, so as to avoid pressure on the surface. The careful and expensive method of culture required in

England for the production of melons is not necessary in the warmer parts of Europe; for though near Paris they are raised equally artificially in hotbeds of dung, tan, or other fermentable material, and under glass or frames of oiled paper, yet in the south of France the ground where they are grown is merely ploughed, the seed thrown in, and "Heaven does the rest." Thus much of care seems to be necessary even in their native East, for Niebuhr mentions that though several sorts of pumpkins and melons grow naturally in the woods, serving to feed camels, "the proper melons" are planted in the fields, where a great variety of them is to be found, and in such abundance that the Arabians of all ranks use them for some part of the year as their principal article of food.

The fact of the male and female flowers of the order *Cucurbitæ* growing apart from each other, though upon the same plant, causes great care to be necessary in order to preserve purity of breed, and Gourds and Cucumbers especially must be banished from the vicinity of melons, since if plants of the same *genus* as the latter, however differing in *species*, should be growing in their neighbourhood, the pistilliferous melon-flowers are as likely to become impregnated with pollen from their blossoms as with that of their own stameniferous ones, and thus some hybrid, and most probably far inferior kind, be produced. It is thus that so many varieties have been created as to have now become almost innumerable, so that, though the broad distinctions of widely different varieties are easily recognizable, it has been found quite impossible to reduce sub-varieties to any sort of order, or give determinate descriptions of them. The French writer, Noisette, devoted himself for some years to the cultivation of every kind of melon he could procure, with the intention of publishing drawings and descriptions of them, but was forced at last to give up the attempt in despair, acknowledging that the further he advanced, the harder he found the task. A work of the kind, entitled, *Monographie complète du Melon*, has indeed been since published in France by M. Jacquin, but the constancy of the characteristics assigned can never be reckoned on with certainty.

since, even should the outside of a number of fruits resemble that of the parent from which they sprang, it is very common for the interiors to present great differences, one perhaps having white flesh, another green, and a third red. Noisette regrets that a passion for novelty should have induced growers to encourage a multiplicity of varieties, since, were the culture limited to about twelve varieties, this number would include every important diversity, while consumers could then much more easily identify whichever kind they might have learned to prefer.

Melons are now generally divided by English cultivators into four sections: the thick-skinned, soon-perishing sorts, grouped together under the general name of Cantaloupes; the longer-keeping Winter Melons; Persians; and Water Melons. The type of the first-enumerated class was probably the original old-fashioned Musk Melon, characterized by the thick network of grey lines over its surface, and by possessing very little scent, varying in size from 1 lb. to 40 lbs. weight, but being so uncertain in quality that out of half a dozen fruits but one perhaps would be found good. This earliest-known sort was almost banished from good gardens on the introduction of superior kinds. One of the first to supersede it, and still one of the most esteemed throughout Europe, though reckoned in America but second-rate, was the melon which claims in a more restricted sense, as the original owner of that name, the title of the Cantaloupe, having been so called from a town of that name, situate about 15 miles from Rome, and where this fruit has been cultivated ever since the Mithridatic war, having been brought, it is said, by Lucullus in the last century B.C. from Armenia to Italy, and thence taken by Charles VIII. into France. Usually nearly round and of middling size, though not constant even in these particulars; its exterior, always remarkably rough and irregular, varies much in colour, being sometimes orange mottled with green, sometimes green and black, or some other variegation, the darkest colours being generally preferred; while the flesh also assumes different tints, nearly white, orange, or pinkish. The diversity of

size among melons classed as Cantaloupes is very great, but all are characterized by a more or less rough and thick rind, which considerably reduces the eatable proportion of the fruit; a defect which seems to increase in the larger-growing kinds, as in the old Black Rock Melon, for instance, which often attains a weight of 14 lbs., about three parts of it, however, being composed of a rugged wall of rind studded with carbuncles, and a mass of seeds within, embedded in the fraction of eatable pulp, small indeed in quantity and very poor in quality.

The Citron, or Green-fleshed Melon, was brought into France by a monk from Africa in 1777, and has thence spread into many countries and given birth to numerous varieties. Frederick the Great was so passionately fond of a small melon of this sort, that he could not conquer himself sufficiently to abstain from them even when his health was in danger; for Zimmerman, who attended him in his last illness, finding him suffering severely from indigestion, discovered that he ate three or four of these fruits daily for breakfast, and on remonstrating with him, the only reply he could get from the despot was an attempt to make them their own apology, by promising to send him some the next day, that he might taste for himself how excellent they were. It is this Citron Melon, too, which is the greatest favourite in America, being one of the finest grown there, and yet peculiarly easy of culture, the climate of the Middle and Southern States suiting it better than even any part of Europe, so that it is raised as a field crop by market gardeners, and sold in August, in the markets of New York and Philadelphia, at the price of half a dollar for a basket containing nearly a bushel, proving even then one of the most profitable of crops. The warm dry climate of Long Island and New Jersey is specially suited to the culture of melons of any kind, but many other sorts require greater care than the green-fleshed favourite, without compensating for it by any superiority, and it therefore has few rivals. Melons flourish too in California, where, however, they command far higher prices, selling throughout the season (from July to November) at from 75 cents to one dollar each. "To

those who have never seen melons grown," says the author of *California and its Resources* (published in 1858), "it will seem simply absurd to say, that confident hopes are entertained of realizing from 15,000 to 20,000 dollars from one patch of two acres, belonging to Major Barbour, this present year. But we were assured that 200 to 300 dollars' worth of melons per day were sold during the first week of the season."

The distinction which assigns Winter Melons to a separate class seems due rather to the fruiterer than the botanist, since, irrespective of other peculiarities, any melon which will keep long after gathering must belong as of right to this class. Melons which can be kept till the winter when hung in a dry room are common in Spain, and the name of one of our best winter fruits, the Green Valencia, points to a Spanish origin.

A very distinct variety, comparatively recently introduced into Europe, is the Persian Melon, the seeds of which were sent here direct from Persia by our ambassador there, Mr. Willock, in 1824, and when sown produced at once 10 different varieties. Though requiring in their native country no further attention than a regular and abundant supply of water, mostly obtained by irrigation, the meadows in which the plants are grown being flooded so that the roots are kept absolutely under water, yet elsewhere they need great care. In England it is by no means easy to secure the requisite combination of a wet warm soil and a dry air, the covering used to confine the heat tending also to cause general moisture by producing evaporation; but in spite of these difficulties, our gardeners contrive to rear them in great perfection, and as some may be eaten as soon as gathered, and others must be kept for months, even quite into winter, they are obtainable during a great portion of the year. In Persia they attain such magnitude that, according to Malte Brun, three or four of them form as heavy a load as a man can carry; but though their dimensions here are far more moderate—the Sweet Melon of Ispahan, which is one of the largest varieties, seldom exceeding 10 lbs. in weight—their skin is so much thinner than that of other kinds

that they afford nearly twice as much flesh, even when no larger in size, besides being peculiarly rich in flavour. Not needing such powerful sunshine as is required to penetrate the thick hides of their pachyderm brethren, they can be ripened much later than the latter.

The plant which produces the Water Melon is of a different species (*Melos citrullus*), and may be easily distinguished from the varieties of *Melos cucurbita* by its deeply-cut leaves, while the fruit itself shows an equally marked distinction in its smooth green surface. Roundish or oval in form, it is usually rather large sized, sometimes measuring $1\frac{1}{2}$ ft. in length; the flesh is white, shading into red or yellow towards the centre, and the seeds are very dark brown or black. As it could not be raised in this country except artificially by the aid of glass, and Parkinson, who wrote in 1629, is the first English writer on such subjects who gives directions for its culture by means of hotbeds and bell-glasses, it is not supposed to have been introduced very long before that time; and in a climate where heat rarely becomes very oppressive, its watery insipidity has never been very highly appreciated; but though far inferior to other melons in flavour, it is yet more prized in very sultry climates on account of its abundant flow of deliciously cool juice, the central pulp being, when ripe, almost in a fluid state. Identified with the "melons" mentioned in Scripture, Water Melons are said to have originated in the Levant, but are found abundantly (and are probably indigenous) in India and China; and, requiring very little care or attention, immense fields of them are raised annually in the warmer States of America; in Southern Europe they are both common and popular; and in Africa, in the words of Hasselquist, "This fruit serves the Egyptians for meat, drink, and physic. It is eaten in abundance during the season even by the richer sort of people; but the common people, on whom Providence has bestowed nothing but poverty and patience, scarcely eat anything but these during their season, and are obliged to put up with worse fare at other times." It is one particular and rather rarer kind, the juice of which, when the fruit is full or almost over-ripe,

is administered in fevers as the only medicine the poorer Egyptian has within his power.

Later travellers give similar accounts of their great abundance and utility in Egypt, one recent writer in particular stating that "Water Melons hold the first rank among Egyptian fruits," and that, though constituting a chief item in the diet of the poorest classes, they are also usually seen at the table of people of rank, it being the custom to eat slices of Water Melon at dinner in the intervals between each different dish. He adds that "they certainly come to great perfection in this country, and, as I myself experienced, may be eaten freely in any quantities without danger." This, however, is by no means the case in cooler climates, for they are said to cause worms if indulged in constantly, and more serious consequences have occasionally ensued from eating them to excess, sudden death having even been known to follow an imprudence of this kind. The whole melon tribe, indeed, are scarcely to be reckoned perfectly wholesome, some constitutions being quite unable even to taste them with impunity, though on the majority of people they produce no bad effect when partaken of with moderation. As a general rule, it has been found that the hotter the weather the better are melons, and the less danger is there in indulging in them freely. In Paris, where they rarely appear at the dessert, being mostly eaten as a *hors d'œuvre* with salt, which facilitates their digestion, as the temperature of the season becomes lower towards the 20th of September, the sale of them is forbidden by the police. They are less used than perhaps any other fruit in any culinary process, but in the south of France, preserves, more or less good, are sometimes made of them, the best being that known as *Ecorce verte de citron*. The seeds—reckoned cooling, diuretic, and anodyne—were formerly used in medicine for purposes for which sweet almonds are now preferred; and, pierced and strung on wire or thread, they may be formed into pretty bracelets and other ornaments.

A near but very humble relative of the aristocratic melon is our common Pumpkin (*Cucurbita pepo*), more

familiar to many as the fairy chariot of Cinderella than as an article of consumption; and, as it sometimes attains the size of 4 ft. in circumference, it may, on the memorable occasion of having been thus appropriated, have needed at least very little enlargement to fit it for the accommodation of so slender a sylph. A far hardier plant than the melon, in a rich soil and warm situation, the Pumpkin, or, as it was formerly and, we are told, still ought to be called, the Pompion, grows luxuriantly and ripens its fruit perfectly in the open air in England; and in its favourite situation, trailing over a manure-heap, it is not only useful in assisting to decompose crude material, but, veiling the unsightly mass with its large handsome leaves, can turn an eyesore into almost an ornament. Remarkably rapid in its growth, when well supplied with water it will form shoots 40 or 50 ft. long, so that a single plant may extend in one season over an eighth of an acre of ground. The fruit occupied, says Soyer, "a prominent place in the precious catalogue of Roman dainties, being stewed or boiled in oil or water, and served with various seasonings;" and growing abundantly in the warmer parts of each quarter of the globe, it is still much used as food in many countries, though mostly as furnishing an article of sustenance to the poor, rather than of pleasure for the luxuriant. It seems to have been earlier introduced into this country than either of its allies, the Cucumber or the Melon, and it is indeed credibly supposed that it was the "melon" of early English writers, to whom the true fruit of that name was unknown, or who were accustomed to distinguish it as the "Musk Melon."

Gerard, however, speaks of "Pompions," which are never eaten raw, but mixed with apples in pies—a use which he justly condemns—or boiled in milk or fried in butter. To the latter process it is still often subjected on the Continent, where too it is yet more commonly made into soups and stews, a system we should do well to adopt here, where the worst method of disposing of it is now almost the only one prevalent; since *soupe à la citrouille*—very easily made by merely stewing sliced pumpkin in milk, enriched with a little butter or gravy, and seasoned

with pepper and salt*—is a dish few would not relish and find vastly preferable to the insipid preparation known as pumpkin pie. Perhaps the best mode of obtaining that delicacy is the one followed by the villagers in some parts of England, who cut a hole in the side of their pumpkins, scoop out the seeds and stringy part, then stuffing the cavity with apples and spice, bake the whole, and eat the case and its contents together. Plainly boiled in water, the Pumpkin may be eaten, like its relative the Vegetable Marrow, as a vegetable, but the tender tops of the shoots of the plant, boiled like greens, are superior to the fruit for this purpose. In judging of the latter, mere size and weight carry the day, for there being very little difference of quality in a fruit having as its best so little pretensions to flavour, quantity becomes the chief consideration. In this respect the Mammoth Gourd, or large American Pumpkin, towers supreme over the mightiest of its brethren, weighing sometimes over 200 lbs., and which, exceeding in its vast dimensions the requirements of any single family consumption, is mostly sold in London shops in slices at the price of about 2*d.* per lb.

In France a ceremony is yearly observed in which the "King of the Pumpkins," *i.e.*, the largest which has been brought to market, is promenaded in state like the *Bœuf gras* on Shrove Tuesday. In 1861, His Majesty had attained the gigantic dimensions of 10 ft. in circumference and weighed 242½ lbs.—a mass beyond anything ever attained by English growers.

Clumsily bulky in its huge growth, yet offering but few charms to the taster, the Pumpkin early furnished a comparison for persons whose heads were larger than their intellects; and which, it would seem, "the world would not willingly let die," since it has survived from the time of Tertullian to the present day, the initial letter only slightly hardening when we now apply to a thick-headed clown the appellation of a *bumpkin*.

* The most economical recipe for this excellent soup is as follows: 1 lb. pumpkin sliced and boiled in water till soft enough to pulp through a colander into a half-pint of hot milk; season, stir till smooth, give one boil and then serve.

CHAPTER XVIII.

THE MULBERRY.

WHEN every other tree in garden, wood, or wold has donned the green vesture of spring, one still remains in "naked majesty," an Adam of the Eden. The cold night winds, nipping so many tender buds which had been too easily lured forth by transitory noontide sunshine, beat harmlessly upon the Mulberry's sapless bark, and not till the last spring frost is over, and cold has finally yielded to the mild persuasions of approaching summer, does it abandon its bare-branched security and suffer its young leaves to venture forth, gladdening the watchful gardener with an unerring token that his hitherto sheltered nurslings may now be safely trusted in the open parterre. Nor has this peculiarity escaped the poet's observant eye, for Cowley describes at length how

"Cautiously the Mulberry did move,
And first the temper of the skies would prove,
What sign the sun was in, and if she might
Give credit yet to winter's seeming flight.
She dares not venture on his first retreat,
Nor trusts her fruit and leaves to doubtful heat;
Her ready sap within her bark confines
Till she of settled warmth has certain signs;
Then making rich amends for the delay,
With sudden haste she dons her green array."

But though the leaves display such singular reticence as regards appearing in spring, they might make the same kind of apology which was tendered by Charles Lamb, when, on being remonstrated with for coming to business so late in the morning, he replied, "But then remember how early I go away in the afternoon!" for though the last to put forth in spring, they are the first to leave in autumn, the least frost bringing them all to the ground.

Its cautiousness earning for it from the ancients the title of the wisest of trees, the mulberry was dedicated by the Greeks to Minerva, while, to account for the fact of there being both a white and a black-fruited species,

they wove the fanciful legend of Pyramus and Thisbe, more familiar perhaps to many from the burlesque of Bottom than from the pathetic original of Ovid, who in sad seriousness celebrates how, when the lover deemed his lady slain, he threw himself upon his own sword, when she, returning only to find him dying, slew herself also, and this Romeo and Juliet of the ancient world thus expired together at the foot of the mulberry-tree where they had been accustomed to meet, crimsoning its roots with a sanguine stream, till

“The berries, stained with blood, began to show
A dark complexion, and forgot their snow,
While, fattened with a flowing gore, the root
Was doomed for ever to a purple fruit.
The prayer which dying Thisbe had preferred
Both gods and parents with compassion heard:
The mulberry found its former whiteness fled,
And rip'ning, saddened in a dusky red.”

A native of China; of Syria, where in very early times we find David smiting the Philistines under the mulberry-trees; and of Persia, this tree is supposed to have been brought from the latter country into Greece and Rome, where it was more esteemed than almost any other fruit, even in the Romans' most luxurious times. Spreading thence to other parts of Europe, it is believed to have been brought to England by the monks, arriving in 1548, and is said to have been first planted in the gardens of Sion House, where very recently the original trees were still living, much decayed, but still bearing luxuriant leaves and fruit. A great impetus was given to the culture of the mulberry in England at the beginning of the 17th century, in consequence of James I. having conceived the idea that we might become a silk-growing nation, and, in consequence, doing all in his power to encourage the planting of this tree, not only expending his eloquence in exhorting his subjects to give their attention to it, but even offering packets of the seed to any who might choose to apply for them. This seems, however, to have been but a temporary crotchet of the royal brain, which, though exciting much enthusiasm during 1605, was in the course of a few years quite forgotten; but while it lasted it had

the effect of establishing mulberry-trees in the gardens of most of the gentry of that period, many of which still survive, having probably in part owed their preservation to the fact of their regal patron not having been sufficiently well versed in botanical distinctions to discriminate between the White Mulberry, which is best fitted to feed silk-worms, but is good for little else, and the Black Mulberry, which, though less welcome to the caterpillar, yet furnishes fruit acceptable to man; whence it happened that most of the plants which he had caused to be planted with a special view to insect nurture, turned out to be of the latter species, and were therefore still valued even when the practice of silk-worm rearing had ceased to be a fashionable pursuit.* This mistake respecting the two species may, however, have helped to render James's scheme abortive; but that the failure of his plan was not entirely due to it is evident from its having been proved in later days that, however even the White Mulberry may seem to thrive in this country, its leaves will not in our climate acquire that juicy tenderness which in warmer lands so eminently fits them for the spinner's nutriment; for, in the language of the *Journal d'Agriculture des Pays Bas*, "The mulberry, to produce the best silk, requires the same soil and exposure as the vine does to produce the best wine." The dreams, therefore, of minor enthusiasts who, since King James's period, have from time to time taken up his idea of introducing silk-growing as a branch of our national industry, have always resulted in equal disappointment.

Though devoured with such avidity by silk-worms, mulberry-leaves are eaten by no other kind of insect (although the fruit is peculiarly liable to the attacks of a very voracious worm) and its unmolested ample foliage of large, heart-shaped, serrated leaves, sometimes more or less lobed, yields therefore during the hot months a very

* Shakespeare's famous mulberry-tree, which was planted in 1609, belonged to the black or common species. A slip from it was planted by Garrick in the garden of his villa near Hampton Court, and became a tree, which probably still flourishes.

grateful shade, on which account it is commonly grown in France in the corners of courtyards, where accumulations of rubbish furnish it with a congenial soil; and as it never requires any pruning, beyond disembarrassment of the dead wood when it becomes aged, a process which mostly quite rejuvenates it, it gives no trouble to its owner, and supplies during some months a continual feast to his poultry, even if he himself be indifferent to the charms of its fruit. Its leaves too are readily eaten by cattle, but the wood, which is very light in weight, is fit for little else than fuel, though the bitter root is sometimes used medicinally as a vermifuge.

The blossoms,* which appear in June, are not very ornamental, the male flowers, closely set together in a drooping catkin an inch or two long, consisting only of a four-sepaled calyx surrounding four stamens; while the female ones, comprising 40 or 50 tiny flowers arranged in the form of an upright spike, present also no gay corolla, but only a similar calyx encircling an ovary with two styles. It is this mass of cohering calices and ovaries which, gradually becoming fleshy and juicy, form eventually the fruit, each ovary maturing in its two-celled interior a single seed; and as these seeds are therefore "embedded in pulp," the appearance of the whole fully answers to the popular description of a "berry," and has therefore earned for it the title of Mulberry. A modern botanist, however, would no more let this suffice to give it a place among berries than he would consider that a butterfly must be classed among birds because both have wings; and though at a first casual glance it may seem to bear a great resemblance to some of the berry fruits, especially to the similarly complexioned blackberry, a moment's examination will show the great difference there is between them. The latter being the outgrowth of a single flower, the numerous ovaries of which form each a distinct and separable little berry, the whole number of these little berries adhering round a common receptacle, forming together a single

* See Plate VI., fig. 1

fruit; whereas in the mulberry numerous flowers cohere to make one fruit; yet, instead of its divisions being more distinct, as might have been supposed, their union is, on the contrary, so complete that, though dividing markings appear upon the surface, they do not extend much deeper, and the parts therefore are not separable. The real class-mate of the mulberry is the pine-apple, which is formed in a similar way by numerous succulent calices cohering into a single fleshy mass, and different as are these two fruits in size, colour, and mode of vegetation, traces of their one great point of affinity may soon be detected on comparing their external surfaces, marked as both are with such well-defined but non-separating divisions.

The mulberry when first formed is green; it then becomes red, and finally black, whence the generic name *Morus** (from *mauros*, "dark"), is derived; a fact rather opposed to the romantic Ovidian theory of all mulberries having been white until after the death of Pyramus and Thisbe; and involving, too, a little absurdity in the surnames by which the species are distinguished, that of *nigra*, affixed to the black-fruited kind, meaning the same thing, and being therefore but a pleonasm, while *alba* or white, the special title of the silk-worm-feeding sort, though justified by its snowy fruit, is as evidently a paradox. When fully ripe, so readily does the inky juice of the Black Mulberry burst through its tender skin that it can scarcely be touched without leaving a sable stain on the fingers; a circumstance which it appears is sometimes rather prejudicial to its position in society, a French writer remarking concerning the fruit that "though many people are very fond of them, they are more often consumed in the country than at city repasts, where elegance ought to exclude them, as, if not eaten with great care, they stain the clothes." When they are partaken of in France, they are served at the beginning of the meal, instead of forming part of the dessert.

* It is believed that this word has itself furnished an etymology, the peninsula of the Morea being, it is said, so called on account of its shape resembling that of a mulberry-leaf,

Like the strawberry, the mulberry does not undergo the acetous fermentation in the stomach, and may therefore be safely eaten by the most delicate. Among the Romans it had further a great medicinal reputation, especially with regard to diseases of the throat and windpipe, and its syrup is still thought to be good for sore throats. It affords an excellent preserve, though not put to this use so often as it might be; is capable of being made into wine, which, however, is never found to keep long; and brandy, but of a very weak sort, has also sometimes been distilled from it. As it falls from the tree (mostly during September) as soon as it is ripe, it is usual to have a grass-plot beneath, in order to furnish a carpet on which the fruit may descend without soil or injury; but as bare earth, offering a dark surface, causes a greater radiation of heat, and thus promotes the ripening process, a superior plan is to sow cress-seed thickly under the tree a few weeks before its produce is matured, and thus provide a temporary covering for the ground at the time when it is needed; or, better still, a net may be suspended among the branches, to catch the luscious shower as it drops. The harvest is usually abundant, and an instance has been known of as many as 80 quarts a week having been gathered during the season from a single famous tree at Greenwich.

The plant ordinarily becomes more prolific as it increases in age, while the fruit also improves in quality; a good compensation for its barrenness in youth, for (unless grafted) it does not usually bear at all until it has attained a rather advanced age, since, like most plants which bring forth distinct male and female flowers, only the former are produced at first, and it is not until Nature's "prentice hand" has been "tried" for some years upon these, that she proceeds to fashion her vegetable Eves. Recent experiments, however, have shown that it is possible to make the mulberry bear fruit when only three years old. Its propagation is by no means difficult, for a branch torn off and thrust at once into the ground readily takes root, and becomes ere long a tree, while so tenacious is it of life, that roots have been known to send up shoots

to the surface after having lain dormant in the earth for 24 years. It rarely reaches a height of 30 ft., and though of a much-branched spreading character, does not usually attain a very large size. The bark is always rough and thick, but the leaves are subject to so much diversity of size and shape as to have given rise at one time to the idea of there being several distinct varieties from the common sort. Only one, however, is now reckoned, and that differing so little in essentials that it need scarcely have been separated; so that the remark is still applicable which was made so many centuries ago by Pliny respecting the mulberry, that "it is in this tree that human ingenuity has effected the least improvement of all: there are no varieties here, no modifications effected by grafting, nor, in fact, any other improvement, except that the size of the fruit by careful management has been increased."

In America the mulberry will scarcely grow farther north than New York, and it is in no part much cultivated, since even where apparently fine fruit is abundantly produced, it is not found equal in flavour to what is grown in England. A native variety, the *Morus rubra*, very common in both North and South America, and which has larger leaves than *M. nigra*, bears red fruit, tolerably palatable, but far inferior to our black.

In common with its near relative the fig, which it also resembles in the circumstance of its *aggregate* fruit being formed by the union of numerous flowers, the mulberry contains in every part of the tree a milky juice, which will coagulate into a coarse sort of India-rubber; and as this specially abounds in the white species, it has been surmised that the tenacity of the filament spun by the silk-worm may be due to this element of its food. It is rarely that this White Mulberry, originally a native of China, is seen in England, its very inferior fruit being only fit to feed poultry, but it may be readily distinguished even in winter from its negro brother, by its slender upright shape and more numerous white-barked shoots. In general it grows faster than *M. nigra*, its leaves are less rough as well as more juicy, and its bark, macerated and

prepared like flax, may be spun into a very fine fabric. Having become naturalized in many parts of Asia and Europe, numerous varieties have originated, some of which bear very tolerable fruit, but none, perhaps, are equal to the black in this respect.



CHAPTER XIX.

THE FIG.

SOFT prelude to the mighty swell of crinoline, immortal Fig-leaf! eldest-born of Fashion's countless progeny, and first page of *Le Follet's* now innumerable tomes! In the tree that bears thee fruit is, indeed, a merit of supererogation, for would not such foliage have sufficed to secure it undying renown, even had nought else ever graced its branches? Yet, had verdure alone adorned it — since leafage, however glorious, delights not our palate — we could not have invited its presence in pages dedicated inalienably to Pomona; and it is, therefore, to the luscious dainties which lurk amid those leaves, albeit less honoured in the record of history, that we must look to find its title to admission here. Sole plant which is known to have flourished in Paradise, the fig-tree is the first vegetable production specifically mentioned in the records of creation; for the "Tree of Knowledge" and the "Tree of Life" were existences of too supernatural an order to be reckoned as within the scope of botanical disquisition, or to be submitted to the identification of a Linnæus or a Jussieu. Of the estimation in which it was held by the descendants of Abraham we may judge by the fact that it being "no place of figs" was one complaint of the Israelites concerning the desert where Moses led them; that "the fig-tree shall not blossom" indicated

a misfortune occupying a similar place in a list of national calamities to that which the "lifting" of the cow did in the domestic disasters of Auld Robin Gray's beloved; and that the spot overshadowed by "his own fig-tree" seems to have been, to the dweller in Judea, just what "his own fireside" is now to an Englishman. Probably indigenous, not only in Asia, but also on both the European and the African shores of the Mediterranean, it was known to most of the nations of antiquity, though the Athenians flattered themselves that it had been first called into existence in their country and for their benefit, affirming that it was originally presented by Ceres to their compatriot Phytalus as a recompense for the hospitality with which he had entertained the goddess, and it was accordingly planted in the centre of the public square at Athens, and considered to hallow the spot where it grew. Unwilling that the fruit of so divine a tree should be degraded to the level of barbarian palates, its exportation was strictly forbidden—a piece of protectionism which naturally gave rise to a race of smugglers, who in their turn, equally naturally, called forth a race of excisemen, designated, from the special nature of their occupation, *syko phantai*, or *discoverers of figs*, a name perpetuated in the word *sycophant*, which in our language meant originally *talebearer*, and which is still used by the French to denote a cheat or liar, rather than the mere flatterer signified by our modern uses of the term. Nor was this the only way in which the goddess-given plant became a fruitful source of evil, for it was said to have been the fine figs of Athens which tempted Xerxes to undertake the invasion of Greece. In Lacedæmonia it seems that even the luxury-condemning Lycurgus looked tenderly upon this fruit, pardoning its deliciousness perhaps on the ground of its wholesomeness; for we find that the few items he bade each Spartan send monthly to the public dining-hall, as his share of the common consumption, included $2\frac{1}{2}$ lbs. of figs. The *athletæ*, too, following the traditionary example of their patron Hercules, made it their staple article of food while "in training," until, in later days, a flesh diet was introduced in its stead. At

Rome it became a sacred symbol on account of the legendary tale that the wolf-suckled twins had been first found reposing under a fig-tree; and beneath its shade, therefore, the Romans were accustomed to offer an annual sacrifice to the shepherdess who had discovered and reared their founder. Saturn, to whom was attributed the honour of having first taught agriculture in Italy, was represented crowned with new figs, and a large fig-tree grew before his temple in Rome, on the removal of which, to build a chapel in its place, it was held necessary for the Vestals to offer an expiatory sacrifice. Another famous tree had sprung up spontaneously in the centre of the Forum, on the spot where Curtius consummated his patriotic self-sacrifice. Finally, in Bacchanalian processions a basket of figs was carried next to a vessel of wine, the jolly god who presided over both fruits being thought to owe his jolliness as much to the figs on which he fed as to the grape-juice which he imbibed. Pliny, who enumerates 29 varieties of the fig as known in his day, relates with much force the anecdote of Cato one day bringing a ripe one into the senate-house, and asking the assembled council how long ago they supposed it to have been gathered. Seeing its perfect freshness, it was unanimously pronounced to have been very lately taken from the tree. "Know, then," was the rejoinder, "that it was plucked at Carthage but the day before yesterday: so near is the enemy to our walls." Where "*Delenda est Carthago*" had been reiterated till every one was weary of the sound, yet the words had been heard in vain, a single glance at this fruit sufficed to prevail, and the third Punic War was immediately begun, and ended not until Carthage was no more. "Thus," as Pliny observes, "did this fig effect that which neither Trebia nor Thrasymenus — not Cannæ itself, graced with the emtombment of the Roman renown — not the Punic camp, entrenched within three miles of the city — not even the disgrace of seeing Hannibal riding up to the Colline gate — could suggest the means of accomplishing. It was left for a fig in the hands of Cato to show how near was Carthage to the gates of Rome." When dried, the fruit was extensively used at Rome in-

stead of bread, and, indeed, as a general article of provision, sometimes taking the place of all other kinds, and probably proving no ineffectual substitute; for it is said that on one occasion the army of Philip of Macedon owed its preservation to the figs brought to it, when nought else was available, by the Magnesians.

Nor is it only in Scripture or in mythologic lore that the fig-tree has met with honourable mention, for in later days the Mussulmans have not been behindhand in rendering their tribute of respect to it, one chapter of the Koran being entitled "The Fig;" while Allah himself is represented as swearing by it and by the olive, because, say the commentators, of the great uses and virtues of these two fruits.

In our own country the records of fig cultivation might almost pass for a page out of ecclesiastical history, so intimately, and almost exclusively, are all early notices of it connected with clerical names. A couple of trees, which long enjoyed the credit of having been the first grown in England, are said to have been brought here from Italy by Cardinal Pole in 1548, when they were planted against the walls of the archiepiscopal palace at Lambeth, where they were still flourishing so lately as in 1817, and though destroyed soon after, during some repairs of the palace, cuttings from them are said to be now growing in the archbishop's kitchen garden. Another very aged tree, now also destroyed, but growing a few years back in the garden at Mitcham, the private estate of Archbishop Cranmer, was said to have been planted by that prelate's own hand; and the dean's garden at Winchester was graced by another veteran, trained against a stone wall, on which was an inscription testifying that, in 1623, James I. "tasted of the fruit of this tree with great pleasure." Again, the first tree of the kind known in Oxford was a "White Marseilles," brought there by the great Oriental traveller, Dr. Pocock, and planted in the garden of Christ's Church College in 1648. It is related of Dr. Kennicott, the celebrated Hebrew scholar, that being passionately fond of figs, and seeing on this tree a particularly fine one which was not yet fully ripe for gathering, to secure

himself, as he thought, from any chance of being deprived of the promised treat, he appended a label to the twig on which it grew, bearing the words "Dr. Kennicott's Fig." A gownsman, however, who had observed the proceeding, and who loved a joke even better than the doctor loved figs, found the opportunity for making one quite irresistible, and carrying off both fruit and label, replaced the latter with another, inscribed "A fig for Dr. Kennicott." Fruit from this identical tree gained a prize as the best white figs exhibited at the Oxfordshire Horticultural Society's meeting in 1838.

The fig-tree is generally trained against walls in this country, for the sake of warmth and shelter, but in its native clime assumes the standard form, and in the most noted plantation of the kind in England, the "Fig Garden" at Tarring, near Worthing, the trees are left to their natural mode of growth. This fig orchard in 1821 contained above 100 trees, about the size of large apple-trees, and the proprietor informed an inquirer that he gathered about 100 dozen a day during the season from August to October. Nor had these trees a less orthodox origin than the clerically-connected celebrities already mentioned, for the author of *Pomarium Britannicum* records that the two oldest were raised in 1745 from some ancient trees in an adjoining garden, near the ruins of the palace of Thomas à Becket, and that tradition asserted these to have been brought from Italy, and planted there by the saint himself—a genealogy which reduces Cardinal Pole's Lambeth plants, generally supposed to have been the first in England, to the rank of mere *parvenus*. The glory of Tarring, however, seems in a great measure to have departed, for Rhind, describing the Fig Garden in 1855, not only reckons but 80 trees, only about 15 ft. high, but adds that their origin is quite unknown even to the proprietor, who "believed they had been planted about 50 years ago;" so that the legend associating them with the blessed Thomas would appear to have died out in its own neighbourhood.

The name of the fig varies but little in any language: some derive the Latin *Ficus* from *fœcundus*, on account of

the tree's abundant bearing, while others seek its etymology in the Hebrew name, *Fag*. Its Greek title *Sykos*, derived by Dr. Sickler from *Sicyon*, is perpetuated in our Sycamore, a near ally of the fig. The *Ficus carica*, our common fig-tree, and the only one which will grow in the open air in England, is sometimes a mere shrub, sometimes (though rarely) a tree 30 ft. high. Its large leaves are deeply lobed, sometimes into three, sometimes into five divisions, and are rough on the upper surface and hairy beneath, the branches also being clothed with short hairs. As to the blossom, in describing it the fruit is also described, for they are, in fact, one—the fig we gather being at once both flower and fruit; and if we would even see the former we must explore the latter. No bloom of delicate petals ever appears to deck the branches of this tree with floral beauty, yet is it not left flowerless, though its blossoms flourish and fade all unseen by mortal eye, in-urned within those fleshy green protuberances seen springing from the axils of the leaves, bearing the appearance of an unripe fruit, and which, if cut open, disclose a whole cluster of small unisexual flowers inserted into the inner surface of this rind-like receptacle, as the florets of the dandelion are into the part which forms the base of that flower. A few male blossoms are at the upper part of the cavity, while numerous female ones fill the remainder of the space below, each ovary of the latter becoming eventually a seed surrounded by pulp, which, together with the succulent receptacle, forms, when ripe, what may be called an admirable imitation of a true berry, though formed in so very different a manner. It may, perhaps, give a clearer idea of so singular a growth to recur to the familiar dandelion, and imagine the round white cushion which supports that flower to spread and rise around it, until the yellow star should be quite closed over, the florets thus entombed still flourishing on in their dark cell, and maturing seeds, surrounding them, however, with a glutinous pulpy substance, filling up the configuration, in the place of that light feathery down which forms the airy mass of the dandelion's rounded head. The shape of this fructal flower or floral fruit is very

similar to that of a pear, more or less rounded; and if the opinion deduced from experiments by Mr. Monck be correct, the external figure is a clue to the internal arrangements, for he came to the conclusion that figs are never produced containing both kinds of florets in an efficient state; that those in which the male flowers only are perfect, never become eatable; and that, finally, these male figs may be known by their being rather squat-shaped, while the superior female fruit is characterized by the more elegant form of the pear.* Neither can boast very brilliant hues, for the colour is always some rather neutral tint, the commonest being a brownish purple. One great peculiarity of the fig-tree consists in the fact of its bearing several crops in succession during the same year. On the shoots formed by the first flow of sap in the spring, figs appear at every eye, which ripen during autumn; but in July and August, as the sap begins to flow again, "midsummer shoots," as they are called, are formed, and these put forth figs also, which remain immature through the winter, and ripen not till the next year, earlier or later according to the warmth of the climate, forming the first crop of the season. Not only do these vernal figs often differ both in form and colour from those of autumn, but the midsummer shoots, being to the spring ones only as one to six or eight, and the produce in proportion, in warm countries this first crop is held in little esteem, as is seen by the expression in Hosea, ix. 10, where it is said disparagingly of the Jews, "I saw your fathers as the first ripe in the fig-tree." In England, however, at least in the open air, the contrary is the case; the fruit usually requiring the whole year to mature, and the later growth mostly perishing at the approach of winter, though at Tarring the second crop has occasionally ripened, when the fruit, though smaller, has been very sweet. In Barbary and some other parts a third crop appears, which often hangs and ripens upon the trees after the leaves are shed; and when grown here in stoves three and even four

* See Plate VI., figs. 3 & 4.

successive harvests are not unfrequently obtained. A warm climate, however, does not seem to be sufficient of itself to bring the fruit to perfection, for in China, where it is called "the flowerless fruit," it seems to be held in very little estimation; a Chinese treatise on husbandry, after stating that "it grows in the hills and wilds, and at present is also planted in gardens," only adding, with regard to its qualities, that "it may be gathered and eaten." Sir J. F. Davis, too, says respecting it that "from my own experience the native fig of China is very poor, and hardly advanced beyond the wild state. It would be a real benefit to send some of our European figs to Hong Kong."

Not very many kinds of figs are found in this country, where the climate does not allow of its being generally naturalized, but the varieties of the common fig in some parts of the world are almost innumerable, though man has done little towards producing them, the flowers being too difficult of access to permit of much experimentalizing upon them; yet a botanist, who undertook to catalogue merely those growing in the south of France, found them to amount to several hundreds; and Bosc observed, too, that all he met with in America differed from any he had known in France. The prison-like enclosure in which the blossom is confined, tends also to the exclusion of the influences it most needs, a circumstance which has given rise to a singular method, followed from very ancient times, of promoting fig-ripening by a process—partly natural and partly artificial—called caprification, thus described by Pliny: The wild fig, which bears a small disagreeably tasting fruit, nourishes a sort of gnat, one of the *Hymenoptera*, and when this wild fruit begins to decay, the insect generated within it wings its flight to the kindred cultivated kind, and, beginning to feed on them, makes apertures, through which air and sunshine penetrate also, and thus the fig is speedily ripened. Branches of the wild fig were, therefore, sometimes brought from a distance and tied upon the cultivated trees, but more usually a single wild tree was planted among the others to windward of them, so that the breeze might readily bear the insect guests to their banquet. He adds, that on

a thin soil or a site exposed to the east wind, the skin of the figs would dry, and thus forming cracks spontaneously, dispense with insect aid, which was also sometimes replaced by planters pricking their fruit with a quill, or, in the case of Egyptian figs, by making incisions in them with iron hooks, a plan which acted so effectually that the fruit would be ripe in four days after submitting to the operation, and the tree being so speedily relieved of its produce, would bear no less than seven crops in one year, though it only bore four if left to nature. Tournefort gives a similar account of caprification as carried on in modern days in the Greek Islands, except that the cultivators there themselves collected the flies and transferred them to their trees. "I could not," observes he, "sufficiently admire the patience of the Greeks, busied above two months in carrying these flies from one tree to another. I was soon told the reason: one of their fig-trees produces between 200 and 300 lbs. of figs." This process was formerly thought to improve the size and flavour of the fruit, as well as to hasten its ripening, but is now considered by many to have the very opposite effect; M. Olivier, the botanical traveller, concisely stigmatizing adherence to the custom as "a tribute paid to ignorance and custom," while Bosc significantly inquires, "Who would take it upon him to advise rendering apples worm-eaten, in order to enjoy the advantage of eating them a fortnight sooner?"

In Italy and Greece the fig-trees are left to grow, according to Nature's promptings, as tall upright stems with branches, but in France they are made to assume a stunted form. Loudon saw them at Argenteuil, on the road to St. Denis, cultivated like the vine, and often mixed with it in the open fields, being only low bushes 6 or 7 ft. high, the branches divided into bundles, which are bent down in winter and covered with earth. To bend and retain them on the surface with stakes, as is done with the vines in the south of Germany, would be quite sufficient protection; but human muscle being cheaper here than anything else, it is preferred to bury them, since that costs nothing but labour. It was even said that it

would not pay to be at the expense of so much as a bundle of straw to protect the centre of the plant. In spring the branches are disinterred and the bundles untied, when the figs on wood of the past year ripen well, but those on shoots of the current year are thought to require artificial aid, afforded them by an old woman with a phial of oil at her apron-string, and in her hand a wheat-straw about 5 in. long, which she places in the bottle, pressing her thumb on the other end of the tube when full, to prevent the contents flowing out; then withdrawing it, inserts the tip into the eye of the full-grown fig, and lifts her thumb for a moment to let one drop of oil descend, taking a fresh supply into her tube after 10 or 12 figs have been thus treated. This is considered the least objectionable mode of caprification; yet, though rendered eatable, the figs are far inferior to those ripened naturally. About Marseilles the plants are left to grow for two years, then cut down, and the shoots which spring forth after this, form, in the third year, a bush which the next year ripens fruit.

In order to reach perfection, the fig-tree requires so plentiful a supply of water that it might almost be said to be partly aquatic; its large leaves and very porous bark, with but a small epidermis, favours transpiration, so that extreme heat is as injurious to it as frost. An author of the 16th century in the S. of France mentions a very ingenious method adopted in that locality to quench this plant's perpetual thirst: "We place," says he, "small cisterns under the fig-trees, and into them we put the ends of a quantity of worsted threads, and then conduct them among the branches, bringing the other ends down to the ground, a little lower than those in the cistern; and by this means the capillary attraction is set to work, diffusing moisture among the branches and also dropping down upon the roots."

Though only cultivated in the northern provinces of France to be brought fresh to table, in the south figs are also grown for drying, though sufficient care is not devoted to this operation except just about Marseilles and a few other parts, so that French figs, excellent when just

gathered, are often useless for keeping, or sell at very inferior prices, owing to not having been properly prepared. When fully ripe, a state it is ascertained to have reached by the appearance of a sugary tear in the eye of the fruit, it should be gathered, and spread out on wicker hurdles or boards, exposed to the full heat of the sun on a roof or against a wall, housed during the night or whenever rain may threaten, and turned at first twice a day and afterwards once; finally flattened with the hand, and packed in rush baskets or in boxes intermixed with layers of laurel-leaves. In some parts of France, in order to harden their skins, they are dipped, before drying, into a hot ley made of the ashes of the fig-tree, which are remarkably rich in alkaline salts. All unsound ones must be carefully excluded, and the different varieties should also be kept apart, as some dry more quickly than others. In rainy or foggy seasons recourse must be had to artificial heat; but this so deteriorates the flavour of the fruit that its value, when thus dried, is diminished by at least one-third; and the inferiority of the Greek figs is in a great measure accounted for by this method being ordinarily employed in their preparation, though, where the system of caprification has been followed, the heating process has at least the good effect of killing the eggs deposited by the insects which had been invited to make their home in them, and which, if suffered to mature into worms, would injure the fruit even more seriously than does the oven. In most places where they are plentiful they form the principal part of the food of the poorer classes during a great portion of the year. It is in this dried form, too, that the fig, which when fresh finds but few admirers in England, is most familiar to us, forming a favourite dish at the winter dessert, as is sufficiently proved by the fact of our imports, principally sent from Turkey,* amounting a few years ago to 20,000 cwt., though the duty then imposed amounted to a guinea per cwt., or rather more than 100 per cent. addition to the price of figs

* The figs from Smyrna are considered the best: the word "Eleme," often prefixed to these, is sometimes mistaken by the uninitiated for the name of a place, but it is really a Turkish term meaning "choice" or "selected."

in bond. It was prophesied by Mr. M'Culloch, that were this duty reduced the import would soon be more than tripled; and after the revision of the tariff, fixing the rate of customs paid on these fruits at the low sum of only 7s. per cwt., our consumption of figs had risen by 1862 to 95,414 cwt., valued at £123,728.

But the indifference of the British public to fresh figs is far from being shared by the nations of the Continent, and throughout the south of Europe they are eaten with avidity by all classes during five months of the year, not only at the dessert, but in some places forming part of the dinner as well, being introduced along with the melon after soup; showing a taste in accordance with that of the ancients, among whom, as Soyer informs us, figs were served at aristocratic tables with salt, pepper, vinegar, and some aromatics. The same great culinary authority also observes that the Greek love for this fruit amounted to a sort of gastronomic *furor* which knew no bounds, and that the wise Plato himself ceased to be a philosopher when presented with a basket of figs. Zeno the Stoic is said to have lived exclusively upon them, and by the Pythagoreans, too, they were highly esteemed; but we need not entertain the discreditable suspicion that the partiality of sages like these was prompted only by a desire to please their palates, since the authors of antiquity have left on record their opinion that the fig being so easy of digestion as to tax very lightly the powers of the stomach, it was a food of all others peculiarly fit for the studious, since, by adopting such diet, the greater amount of vital force was left to supply the needs of the active brain. That nevertheless it was not a "caviare" unappreciated by the multitude is shown by Cato's recommendation to employers to diminish the amount of food supplied to agricultural labourers whenever ripe figs were in season, since, whatever else might be given them, they would be sure to take their share of this fruit. To descend from Plato to the poultry-yard, Bosc affirms that all birds and beasts have a passion for figs, whether fresh or dried; and indeed, with regard to domestic fowls, the taste of the fruit would seem to have a like effect upon

them to that which the taste of human blood is said to have upon the lion; for if once they have been suffered to fly upon a fig-tree and help themselves to its produce, the only way, says he, to prevent their attacking the trees again is to kill them. But the most delicious form in which the fig can possibly be partaken of is when it becomes itself animated, for though a feathered flying fig may seem rather a startling notion, it is nevertheless a fact, realized, to the great felicity of *gourmands*, in the *Becafico*, a mere animal assimilation of the *ficus*, described by Viellot as "like a small lump of light fat—savoury, melting, easy of digestion, and, in truth, an extract of the juice from the delicious fruits it has fed upon." In the southern parts of France and in Italy almost all little birds with slender beaks are indiscriminately called *Becafico*, because in the autumn they attack and eat the figs, whereby even their flesh becomes very fat and well-flavoured; but the bird to which that name really and peculiarly belongs, and which, it would seem, seldom stoops to any other food, surpasses all in its exquisite delicacy, and has been prized in all ages as the daintiest morsel of the *bon vivant*, having been reckoned by the ancients among the most refined of dishes, and forming at Rome the sole exception to that gastronomic theorem which pronounced that nothing was worth eating in birds but the leg and lower part of the body, the fig-pecker enjoying the exclusive privilege of being eaten entire.

To return, however, to the fig proper. In former times it gained an evil notoriety as a common vehicle for poison, probably on account of its being so generally a favourite fruit; and the "fig of Spain" alluded to in Shakespeare is supposed to have referred to the popular belief in the prevalence of this custom in the Peninsula; while, in classic days at least, the "Livian Fig" owed its name to the assertion that it had been used by Livia, the wife of the Emperor Augustus, to convey to her husband a fatal and infallible notice of divorce. It was in a basket of figs, too, that the asp reposed whose next resting-place was on the throne that kings had coveted—the fair bosom of the doomed Cleopatra, with whom this fruit is said to

have been a special favourite; a taste easily accounted for if the enchantress of the Nile were aware of the property attributed to it by Pliny of "retarding the formation of wrinkles." The same authority informs us that the juice of the tree imparts a fine flavour to meat, by being steeped in vinegar for the purpose, and then rubbed upon it. This passage has rather puzzled commentators, but it may possibly have some connection with a fact which cannot be accounted for, but which nevertheless has been ascertained to be indisputably true, viz., that fresh killed meat hung for a few hours in the shade of the fig-tree will become as tender as if kept elsewhere for weeks. A gentleman who had lately made the experiment, assured the author of the *Pomarium Britannicum* that a haunch of venison, hung soon after killing among the leaves of a fig-tree at about 10 o'clock at night, was found, when removed before sunrise in the morning, to be in a perfect state for cooking, and would evidently in a few hours more have been in a state of putrefaction. Judging by this, it would certainly be an advantage to the community were every butcher, at least, able on occasion to "sit under his own fig-tree;" and it might materially promote the digestion of the lieges, were the rival plans for the disposal of Smithfield market to be harmonized—the dead meat market established, and the ground permitted to be planted also, only on condition that the trees selected should be of the species *figus*.

The virtues of the fig in a medical point of view are well known, it being most useful externally as well as internally, having furnished, indeed, the first poultice on record, applied under the direction of no meaner a physician than the princely prophet Isaiah, whose prescription of "a lump of figs" cured the boil-smitten Hezekiah. The juice of the tree, too, has a similar property to rennet, a twig of it put into milk causing it to curdle. The wood is of little special use, except to form whetstones for sharpening smiths' tools, its softness and porosity fitting it to retain the oil and emery required for this purpose. It was formerly said to have been used by the Egyptians for their mummy-cases or coffins, on account

of its supposed indestructibility; but this is now proved to have been an error.

The fig-tree chiefly spoken of in the New Testament, sometimes under the name of the "sycamore," was the *Ficus sycomoris*, the trunk of which, according to Norden, shoots out little sprigs, at the end of which grows the clustered fruit. This tree is always green, and bears fruit several times in the year without observing any certain seasons, which accounts for the Saviour visiting the one by the roadside, "lest haply He might find fruit thereon," notwithstanding "the time of figs was not yet." The sweet yellow produce of this tree in shape and smell resembles the fig of the *carica*, but in taste is far inferior. It is the kind most prevalent in Egypt, where it often forms the entire food of the common people, and where the fruit is made to ripen in half the natural time, without diminution of size or flavour, by means of cutting a slice off the end, when it has attained a third of its growth, deep enough to remove all the stamens of the male flowers before they have had time to mature their pollen, a process by the adoption of which the annual produce is considerably increased.

The fig, being nearly allied to the mulberry, which bears also a *compound* or *aggregate* fruit, is included with it in the Natural System of Botany, under the title of *Moraceæ*, or *Morads*; but it has many kindred, which, sharing yet more closely in its nature, partake with it the common family name, one of the most remarkable being the *Ficus Indica*, or Banyan-tree.* It is to this tree that Milton assigns the honour of having been the clothing emporium of Paradise:

"Both together went
 Into the thickest shade; there soon they chose
 The fig-tree, not that kind for fruit renowned,
 But such as at this day, to Indians known,
 In Malabar or Deccan spreads her arms,
 Branching so broad and long that in the ground
 The bended twigs take root, and daughters grow
 About the mother tree, a pillar'd shade
 High over-arched, and echoing walks between."

But the poet offers no reason for endeavouring thus to

* See Plate VI., fig. 5.

deprive our familiar *carica* of this glory, ascribed to it by common tradition, in favour of one quite foreign to us; and when we read of Banyan-trees being of such magnitude that a single one will cover an area of 1,700 square feet, it seems questionable whether in the limited space between the four Edenite rivers a tree would have been included which required so very large a field for its single self; while the shape of the leaf—a simple oval, 5 to 6 in. long and 3 or 4 in. broad—seems less fitted for the purpose intended than the spreading lobes of the broad-leaved common fig-tree. The Banyan Figs, which grow in pairs, are about the size and colour of an ordinary cherry; and, being useless as food, except to birds, the tree seems in every respect less likely than the common species to have been favoured with a place in Eden. A more formidable rival might be found in the *Ficus religiosa* (or Pippul-tree), so called because sacred to the idol Vishnu, and the singular leaves of which are shaped like a heart, but with the tip drawn out into a slender attenuated point several inches in length,* an appendage which would certainly favour their being sewn or interwoven to form a connected web. While the Banyan is to the Brahmin much what the oak was to the Druid, being called the “priest’s tree,” and always planted in the vicinity of temples, while to cut or break a twig from it is reckoned a crime equal in enormity to that of breaking a cow’s leg; in Ceylon, the stronghold of Buddhism, the *Ficus religiosa*, called there the Bo-tree, is the tree of trees. It was while reclining under a tree of this species that Gotama, the Messiah of the Cingalese, received Buddhahood; “hence,” says Tennent, “its adoption as an object of reverence by his followers;” the unceasing tremulous motion of their slender-stalked foliage being attributed to an awed reminiscence of this supernatural scene, as the aspen’s quivering was to the tradition of its having been the wood selected for the “true cross.” A branch, said to be self-detached from this identical tree, was fetched to Ceylon by special embassy 288 B.C., and, believed to

* See Plate VI., fig. 7.

be the parent of all the numerous trees of the kind now growing in the island, is still flourishing there under the title of "The Supreme Lord, the Sacred Bo-tree," probably the oldest historical tree in the world; "for," says Sir Emerson Tennent, "its identity is not matter of conjecture, but of authentic record, its story being preserved in continuous chronicles." None have ever dared to pluck so much as a single leaf from what is almost a vegetable divinity, its leaves or fruit, as soon as they fall, being collected and treasured as hallowed relics by pilgrims from all parts.

The other most notable variety of the fig is the *Ficus elastica*,* which furnishes us with caoutchouc; indeed, the possession of a milky juice is one of the characteristics of the whole *genus*; and Lindley is of opinion that India-rubber might even be made in England from our common fig-tree, the sap of which possesses like properties. In the ripe fruit the secretion is decomposed and becomes sweet and harmless, but, if eaten unripe, the milky juice makes its presence known by corroding the lips and tongue, causing a burning sensation in the throat, and even producing dysentery. Yet in some varieties this milk is perfectly bland and wholesome, most of what are called "Cow-trees" being really varieties of the fig. The *Ficus dæmona*, however, as might be inferred from its name, yields a virulent poison; and the famous Upas-tree of Java is another *enfant terrible* of the family, whose claim to cousinship yet cannot be denied.

The most curious specimen in the New World is the *Ficus nymphæfolia*, or American Fig-tree, described by Humboldt as encircled by ligneous excrescences or ridges, which surround the trunk to a height of about 20 ft., and sometimes separating from it near the base, when the tree looks as if supported by flying buttresses. The larger roots creep along the surface of the ground, and seem to have a plethora of sap to their very extremities, for, if cut 20 ft. from the trunk, their milky juice gushes out immediately.

* See Plate VI., fig. 6.

The various members of the *genus Ficus* form a very striking feature in most tropical scenery, and travellers reckon the colossal fig-trees of the torrid zone among the greatest blessings with which Providence has favoured these burning climes, the shade of their dense foliage affording an almost impervious shelter. The tenacity of life, with which some are gifted to a most remarkable extent, provides against the world being easily deprived of them, for it is recorded that a specimen of *Ficus Australis* lived and grew, suspended in the air without earth, in a hothouse for eight months without suffering any apparent inconvenience.

But while fig-trees of every kind, by their powerful properties for good or ill, have universally commanded the respect of mankind, it is curious that the name of the fruit should have become a very synonym for indifference, and be generally associated with ideas of insolence and contempt. When Shakespeare's Charmian says, "I love long life better than figs," the expression only indicates how very much the lady really coveted length of days; but its being thus used is a concession to the spirit of the age in which the scene is laid—those "good old days," when philosophers feasted on figs and conquerors contested for them: and when the word occurs in other parts of his works, it is always with far other meaning, showing that though the fruit itself was at that time probably but a newly-arrived stranger in the country, yet it had already become a familiar practice thus to take its name in vain. The word may not, however, always have been used in an ill sense when employed figuratively, for in the case of the first collection of satires in the English language, published anonymously in 1595 under the name of *A Fig for Momus*, the title seems merely to imply an offering, and no disrespectful one, to the laughter-loving god. Some have thought that the fig was rather held in horror in this country, because looked on as a sort of fellow to the stiletto, as a common means of murder abroad; while others imagine that the word became a term of contempt simply on account of the fruit itself not being generally pleasing to the English

taste, perhaps because it is the only one we possess which is quite free from acidity. To "make the fig," however, "*faire la figue*," is a general mode of insult in many parts of Europe where figs themselves are held in high esteem, and is traced back to rather distant times, though its origin seems involved in obscurity. It consists in thrusting the thumb, inserted between two closed fingers, into the mouth, and was once a common usage in this country also, but is now modified into "snapping of fingers," after having passed through the transitional stage of "biting the thumb," alluded to in *Romeo and Juliet*, where the quarrelling servants adopt this mode of venting their angry feelings towards each other. To show that this thumb-biting was identical with "fig making," Knight quotes a passage from Lodge's *Wit's Miserie*: "Behold, I see contempt marching forth, giving me the *fico* with his thumb in his mouth!"

But, however sanctioned by the custom of centuries, it is really so great an injustice to our honourable friend the fig to make use of its name in any way but respectfully, that it may be permitted to divert one sentence at least in which it occurs from the original sense intended to be conveyed; and therefore, in the words of Shakespeare, but with meaning far different to Shakespeare's, we present to the reader, "Figo for thy friendship."



CHAPTER XX.

THE PINE-APPLE.

"THE king never dies," is an axiom no less true in the fructal monarchy than in the monarchy of Britain, for a fruit of no season, or rather of all seasons, is the regal Pine, on whose head the crown, held indeed by right

divine, has been deposited by the all-ordering hand of Nature herself. Even yet more than the orange is this fruit entirely a delight of modern days, a joy with which the ancients intermeddled not ; for it was guarded in a Transatlantic Hesperides by dragons of the deep, far beyond the power of any classic Hercules, till the Genoese ocean conqueror fought his way through all opposition, and won for the denizens of the old continents all the treasures of a new world, and among them this sovereign glory of all fruitdom. The pine-apple is indeed now so plentiful in some parts of Asia, and in Africa, even in the most uncultivated places, that some have thought it must have been indigenous to the tropical parts of the three continents, but this idea is negatived by the fact that no mention of it appears in the works of any author who wrote before the discovery of America. According to Beckmann, who dedicates a chapter of his *History of Inventions and Discoveries* to this subject, the first who described and delineated the fruit was Oviedo, who, in 1535, was Governor of St. Domingo, and who published a general history of America. This enterprising Spaniard made great efforts to introduce the new dainty into Europe, but it could not sustain the long uncertain voyages of that period: the fruit was always spoiled long before arrival, and the shoots or slips of the plant also perished by the way. A French monk, who had resided for some time in Brazil, next described it under its Peruvian title of *Nanas* ; and Jean de Lery, a Huguenot chaplain—who remarked, on its exhaling so strong a scent, resembling that of strawberries, that it could be smelt when afar off in the woods, and being so delicious in taste as to take rank unquestionably as the best fruit of America—was the first to use the word *Ananas*, its present botanical cognomen. The prefix *Bromelia*, given to it by Linnæus, was derived from Olaf Bromel, a Swedish naturalist, who died in 1705. Transplanted from Brazil to the West Indies, it was thus brought a little more within reach of the longing palates of Europe, and by the middle of the 17th century the interesting stranger reached our shores. In 1661 Evelyn records that he “ saw the famous Queen

Pine brought from Barbadoes and presented to his Majesty; but the first that were seen in England were those sent to Cromwell four years since." In 1668 he says again, "I was at a banquet which the King gave to the French Ambassador. Standing by his Majesty at dinner, in the presence, was that rare fruit called the King Pine, growing in Barbadoes in the West Indies." His Majesty, after cutting it up, was pleased, in Eastern fashion, to give a piece off his own plate to this worthiest of his courtiers, that he might taste as well as feast his eyes upon a novelty he had never seen before; but this further acquaintance only induced disappointment; for, "in my opinion," he continues, "it falls far short of those ravishing varieties of deliciousness described in Captain Ligon's history and others; but possibly it might be, or certainly was, much impaired in coming so far." This was a distressing discovery for the *blasés gourmands* of Charles's court, in search of a new sensation, for the boldest of them would hardly have dared to undertake a voyage to the West Indies for the sake of getting fresh pine-apples; and the need therefore became pressing that some other means should be tried to secure the enjoyment of charms so exquisite, yet so fleeting as to be thus dissipated by a few weeks' voyage. A Dutchman, Le Cour of Leyden, was the magician who, after many laborious and costly efforts, succeeded in first devising a spell potent enough to compel the royal foreigner to bloom beyond his native tropics, and present himself to European admirers in all the fulness of his attractions.

A picture at Kensington Palace, in which Rose, the royal gardener, is represented upon his knees presenting a pine to Charles II., has led some to think that he was himself the grower of the fruit; but it is more probable that he was only its purveyor, for one of the Sloanean MSS. distinctly affirms that the *Ananas* was not introduced into this country until 1690, in which year it was procured from Holland, as a botanical plant for the Royal Gardens at Kew. The memory of the first that bore fruit in England is preserved in a landscape in the Fitzwilliam Museum at Cambridge, in which one is intro-

duced for which this honour is claimed. It is stated to have been grown in the garden of Sir Matthew Decker, at Richmond, where fruit-bearing *Ananas* were certainly to be seen flourishing in 1726. Ten years before this date, Lady Mary Montague had recorded in one of her lively letters her introduction, at the dessert-table of the Elector of Hanover, to this noble fruit, but the allegation, often repeated by careless writers, that she had never even heard of such a thing before, is an error palpable enough to any one taking the trouble of referring to her own words on the occasion. After expressing her surprise at the superiority in number and beauty of the orange-trees in the garden at Herrnhausen to any she had seen in England, she continues: "But I had more reason to wonder that night, at the royal table, to see a present from a gentleman of this country of two large baskets full of ripe oranges and lemons of different sorts, many of which were quite new to me; and, what I thought worth all the rest, two ripe *Ananasses*, which to my taste are a fruit perfectly delicious. You know they are naturally the growth of Brazil, and I could not imagine how they came here, but by enchantment. Upon inquiry, I learnt that they have brought their stoves to such perfection they lengthen their summer as long as they please, giving to every plant the degree of heat it would receive from the sun in its native soil. The effect is very near the same, and I am surprised we do not practise in England so useful an invention." The deficiency was soon supplied, for by 1730 pine-stoves were established in all the principal gardens of Europe. Many, however, were capable of appreciating pine-apples who were quite unable to indulge in a luxury so costly as these stove-grown nurslings of art, and an effort was therefore made to extend their importation, for a pine might be bought in the West Indies for sixpence which costs the English grower almost as many pounds. Phillips, writing in 1821, mentions that even while his pages were in progress the fruit had just been imported, for the first time, as an article of commerce, from the Bermuda Islands, the consignment consisting of about 400; and the Oxford Street fruiterer

who had purchased them informed him that about two-thirds of the number arrived in good condition, and that a regular supply might therefore be expected for the future. This author was, however, in hopes that forcing would soon reach such perfection that there would be "African gardens" on the banks of the Thames, and looked forward, therefore, to the speedy arrival of the time when pine-apples would be "cried through our streets two for a crown"—a hope whose fulfilment is as much exceeded in one respect as it is fallen short of in another, by the supply at the present day, street-sold at a half-penny a slice, but, alas! of insipid imports, instead of full-flavoured home growths. These come chiefly from the Bahamas, where they are grown as turnips are in our fields, and with so little care that excellence can hardly be expected, though probably the great demand excited by this abundant importation may cause more attention to be paid to them, and thus eventually improve the supply; for Dr. Wynter in his *Curiosities of Civilization* informs us that no less than 300,000 are brought yearly to London, principally from these islands, nine-tenths of the number being still consigned to Messrs. Keeling and Hunt, the original importers. A whole fleet of clipper ships is appropriated to the carriage across the sea of this single fruit.

The leaves of the *Bromelia ananas* are very like those of the aloe, but less thick and succulent, and are mostly armed with thorns, though in the variety called the King Pine the foliage is quite smooth and without prickles. Though the first leaves of seedling pines are very small and tender, much resembling the smallest blades of grass, when full grown they are from 2 to 3 ft. long and from 2 to 3 in. broad, and of that dusty bluish-green colour which mostly characterizes sea shore vegetation. In the centre of these leaves rises a stem, varying in height from one to several feet, on which are clustered numerous small close-sitting flowers, consisting of a three-cornered calyx and a corolla of three petals, within which are seen the pistil and six short stamens. Lilac, purple, or bluish in colour, these flowers, with their accompanying bracts,

are scattered upon and half buried in the substance of the common thick fleshy receptacle which supports them, and which, after the flowers fall off, increases in size; and the calyces, the bracts, the axis itself on which all are arranged, distended with the same juices, combine to form a succulent mass denominated the fruit, the points dividing the surface into triangular spaces, called by gardeners the "pips." It is, on a large scale, what the mulberry is on a small one, and, equally with that, is termed by botanists an "aggregate fruit," being formed of a number of ordinarily distinct parts, all grown together and fused into one another, forming a single head or cone. In the species called the "Pinguin" the walnut-sized fruits into which the flowers develop remain detached, though so close together that at a little distance the cluster looks much like an ordinary pine-apple. The "crown" is, in fact, merely the end of the stem or branch on which the flowers are arranged, finishing in a terminal cluster of leaves, which, from their position, being thus above the fruit, form for it a natural diadem. In one species, never cultivated in England, but which abounds in China and the Indian Archipelago, each flower on the spike has a separate branch growing through its centre, and bearing a pine surmounted by a crown, so that a whole cluster of separate fruits is thus produced upon a single stem, and, as an old writer expresses it, "the whole plant together looks like a father in the middle, and a dozen children round about him." This plant is grown very commonly in Jamaica as a fence for pasture lands, on account of its prickly leaves, which also, when stripped of their pulp by soaking in water and beating with a wooden mallet, yield a strong thread, used for twisting into ropes and whips, and which was also made by the Spaniards into a very good cloth. Even muslin, of beautifully fine texture, is sometimes manufactured from the fibres of pine-apple-leaves, but this is a costly curiosity rarely met with. Within some at least of the conglomerate group of united berries or capsules which compose the cone of the *Ananas* may perhaps be found its small oblong and numerous seeds, about the size of a grain of

wheat, which are plentifully produced in the wild fruit, but are rare in cultivated specimens, owing to the extreme succulence attained by every part. When present at all, it is found that the cells which contain seed lie near the centre of the fruit, while the abortive seed-cells are mostly situate close to the rind, a fact which led Professor Martyn to conclude that some of the flowers might be male and others hermaphrodite.

In the West Indies the *Ananas* has been commonly grown from seed, but the ordinary mode of propagation in this country was by means of planting the crowns, which, however, are now less in repute than formerly, the suckers or shoots from the middle of the stem being preferred. The first great improvement which took place in their cultivation was the substitution of hotbeds of horse-dung and tan for fire heat, an increase both in size and excellence following the adoption of a system recommended also by the comparative cheapness. The plant, however, was still looked on as a triennial, a date of duration rather arbitrarily assigned to it, since, though it is certainly its nature to bear fruit once only and then to perish in its native tropics, this aim and end of its existence is not unfrequently accomplished within the course of a single year, while all the care bestowed upon it by our gardeners often failed to obtain the desired consummation before the lapse of four years. Of late, however, so great has been the progress of the craft both in knowledge and skill, that fruit is now produced in fifteen months or less, and with a comparatively small amount of care and labour, which a short time ago cost three or four years of continual toil and expense. Formerly, too, it was considered impossible to "swell off" a pine in winter, so that if a plant showed fruit late in the autumn, it was forthwith consigned to the rubbish-heap, cast out and trodden under foot as a useless bringer of untimely births. Now, however, they are at liberty to bear and bring forth when they will, sure of a glad welcome at any time for the tender progeny, for it has been found that the grand secret of fostering them into perfection consists more in the proportioning of heat to light than the unvarying amplitud

of either, and that by lessening the temperature of the pinery at night, or in dark sunless days, these children of a land where winter is unknown may brave his frowns with impunity, and their growth, though it may be retarded, will still steadily continue, and an uninterrupted succession of heirs to the crown keep up the glory of the family through every change of season. They make most progress, however, in spring and autumn, for, accustomed in their native climate to grow beneath the shades of loftier vegetation, they shrink from the unmitigated glow of even an English summer sun; and, except when the nearly ripened fruit requires just a few finishing touches of powerful solar influence to bring out its fullest tones of colour and taste, loves best that the bright rays should gleam into its greenhouse abode only through a leafy screen of vines trained over the rafters. Too much air, however, can hardly be given, for though fruit will swell to an unhealthy corpulence when grown in close pits, the flavour proves far inferior to that borne by plants more happily situate in light and airy houses. As regards vegetable as well as animal life, "the worth of fresh air" is only now beginning to be generally understood; but the appearance of the denizens of such different abodes pleads powerfully as plainly in favour of the attendance of "the Cheap Doctor;" for when grown in pits, the leaves of the pineapple are long, thin, narrow, and flabby, and the tall slim fruit-stalk so weak that it cannot without support stand upright under the weight of its watery tasteless fruit; while plants that have been reared in houses ever rejoicing in the surrounding light and air have short, thick, and broad leaves, stiff as those of an aloe, and sturdy unbending fruit-stalk, proudly upbearing its luscious load of sweet well-flavoured fruit, crowned with a well-proportioned coronal of short vigorous leaves seldom exceeding half the height of the fructal cone, for an over-luxuriant crown would only betoken an undue drain upon the wearer. Some of the finest pines, indeed, in point of flavour, that have ever been grown beneath an English sky, matured their fruit beneath its full influence, in the free open air. This experiment was tried in 1847, at Bicton, in Devon-

shire, where some plants in pots, to which no fire heat had at any time been applied, were placed out after they had blossomed, in the month of May, in beds of leaves in the open garden; a bank was thrown up around them to keep off currents of cold wind, and the whole surface of the ground, for some distance, covered with charred hay, the black substance so increasing the heat-absorbing power of the ground as to repel night frosts and maintain a healthy growth during the day-time. Though the temperature of the immediate spot was occasionally below forty degrees, —some nights had been frosty, and some days quite sunless—the fruit matured to an average weight of 4 lbs., and in one instance to 6 lbs., and its flavour was perfect—a result which could not be attributed to high temperature or long-continued sunshine, and, therefore, could only be traced to the free access of air constantly passing over the plants to nourish and invigorate them. So bold a system could, however, be hardly relied upon as generally applicable, and the special advantage it offers is combined with others in one of the newest modes of culture, which consists in heating the pine-pit with pipes of hot water under its beds of tan, while other pipes, communicating with the outside at some distance from the pit, keep up a continual supply of pure air.

So delicate a feeder, subsisting principally upon the lighter elements, can afford to be very indifferent to the grosser aliment derivable from soil, and the *Ananas* is therefore content to root in the poorest substance that can form a vehicle for its delicate nourishment. Sandy soil, taken from heaths or commons, is much used, on account of its porosity, and one famous pine-grower recorded that he had made the experiment of planting it in mere moss mixed with broken pots, when the plant made quite as much progress as those in rich compost, an evident proof that water and air constitute the principal food of the pine-apple. Dr. Lindley yet further asserts, that all the *Bromeliaceæ*, as plants of this family are termed under the modern nomenclature, are capable of existing in a hot dry air without even contact with the earth, on which account, he says, they are favourites in South American

gardens, where they are suspended in the buildings or hung to the balustrades of the balconies, situations in which they flower abundantly, filling the air with fragrance. In accordance with this great botanist's statement is the testimony of the practical gardener, Spechley, who wrote a very complete treatise on the pine-apple, in which it is mentioned that a large sucker will vegetate after having lain six of the hottest months of the year exposed to the sun in the hothouse, whereas almost any other plant of the same size and substance would in that situation lose its vegetative powers in less than one-tenth of that time. Successful culture, however, depends greatly upon a proper degree of humidity, and the hygrometer should be considered as indispensable an instrument in the pinery as the thermometer; for, according to the learned author of the *Theory of Horticulture*, "the skilful balancing of the temperature and moisture of the air constitutes the most complicated and difficult part of the gardener's art." It affords a pleasant prospect, however, of future increased popularity for a luxury still only to be enjoyed in perfection by the comparatively wealthy, to find a professional pine-grower bearing witness that "this incomparable fruit is more easily brought to maturity than an early cucumber. Though liable to the attacks of insects, it is less so than the peach, and is less speedily injured by them than the common cabbage. It is also subject to very few diseases;" the writer's testimony as to the ease with which it may be cultivated being finally summed up in the expressive dictum, that "every one that can procure stable dung may grow pines." Whatever difficulties there may have been in its management have certainly only sufficed to call forth all the more energy in contending with and overcoming them, for to be a successful pine-cultivator has long been the acme of the British gardener's ambition. He might be great in grapes and admirable in asparagus, his flowers might be faultless and his strawberries superb, but he still held but a second-rate position if with all this he were still unable to produce a perfect pine, since in proportion to his ability in this respect were his services valued by the rich and the noble of the land. Thus in-

cited, the triumph has been complete, and gardening art can now boast that the pine-apple can be procured in Britain in as high perfection as in almost any tropical climate, and nearly as rapidly, most kinds being brought to maturity in from 15 to 18 months, some sorts even, such as the Queen, being ripened within a year of their setting. The Providence Pine still requires two or three years, or even longer if the largest fruit be desired, but in this case flavour will be sacrificed to size, for the best fruit rarely weighs more than from 4 to 8 lbs; and the tediously ripened 12 or 14-pounder—for even this weight is sometimes attained—may, as a showy ornament, please the eye, but must never be expected to afford much delectation to the palate. These giants are, however, quite the growth of modern days, for in 1821, when a Providence Pine grew to such magnitude as to weigh $10\frac{1}{2}$ lbs., the monster was thought a marvel so unique as to be worthy of being formally presented by the Horticultural Society to his Majesty the King, at whose coronation banquet it was served up in state.

Miller, writing in 1737, enumerates but five varieties of pines, yet a table compiled a few years ago mentions no less than 52; but the Queen (believed to have been the first sort introduced here), the Providence, and one or two others, are still the most usually grown and the most esteemed. One of the most curious is the Striped Surinam, which has leaves beautifully variegated with stripes of dark green and delicate white, tinged with a fiery red, and a cylindrical fruit variously marbled with red, green, yellow, and white. Both leaves and fruit are very beautiful, but the latter is worthless save as a curiosity, for it has little flavour, and is not produced until the plant is at least eight or nine years old—nay, sometimes 20 years elapse, and still it “lives and makes no sign.” The Blood-red Pine, an import from Jamaica, has purplish-red leaves, lilac flowers, and fruit of a reddish-chocolate colour; while the variety called the Green Pine, unfit to be eaten while it remains green, is of an olive colour when fully ripe.

As regards cultivated pines, reared in countries where

they must be regarded as exotics, France stands next to England in the successful management of her pineries: the fruit may be obtained in the shops of Paris through every week of the year, and at Versailles they are equal in excellence to any that John Bull can produce. In one or two of the southern provinces of Spain they are grown in the open air; but the Italians prizing the *dolce far niente* beyond any other sweet in nature, even the nectareous pine cannot compete with it, and Loudon, in his tour through continental gardens, found this fruit quite a rarity in their country. A few there were in the royal gardens at Portici, and a few again in the Pope's gardens, but even these were but sickly, yellow-leaved monuments of neglect. Energetic Sardinia, indeed, in this as in all other things, has been ahead of its fellows, for as long ago as in 1777 its king sent a gardener to England to study the culture of the *Ananas*, who on his return published a tract detailing what he had learnt, and giving the plan of a pine-pit; but the climate is so dry that an extra supply of water becomes necessary, and sufficient attention not being paid to this, the plants do not thrive so well, and the fruit is but small.

In Prussia, most of the best fruits now grown there were introduced by the Great Frederic, who was passionately fond of them, as may be judged from his letters, when Crown Prince, to Voltaire, in which he speaks of his "dear garden," and says, "I burn with impatience to see again my vineyards, my cherries, my melons." The pine being his special favourite, he had large numbers grown in pits, to keep up a continual supply, and the state of his pinery was one of the last subjects that occupied his ever-busy mind before he was himself gathered by the great Reaper, for on his dying bed he inquired after the ripening of one of the fruits from which he had promised himself a farewell feast. In Baden there are pines on the Grand Duke's table every week throughout the year, and besides 400 cut annually for the dessert, about 300 more are used every year for the purpose of making wine, which is of a very delicious quality. "*Cardinale*," too, which figures at high festivals in some parts

of Germany as fit nectar to associate with ambrosial *Marsipan*, is composed of Champagne mingled with other delicate liquors, and poured upon preserved pine-apple.

On the other side of the globe the States of America derive their chief supplies of pines from the West India Islands, whence they can be imported at so cheap a rate that they can be bought in New York for 3*d.* each. In our antipodean colonies home-production has been tried with such good success that in the northern parts of the occupied portion of Queensland pine-apples are grown in the open air for the supply of the Sydney market.

In a natural state, the *Ananas* is peculiarly abundant in Sierra Leone, where, battenning on moist and decayed vegetable matter, it attains extraordinary size of foliage, destroying every other plant except the timber trees which overshadow it, and forming an almost impenetrable thicket, obstructing the traveller's progress in every direction. Yet the fruit it matures, even in this savage state, is, in a climate so suited to it, equally delicious with that which may have been reared in England at royal cost, under the watchful care of the most scientific gardener. In Surinam, says Stedman, *Ananas* grow spontaneously in such plenty that they are common food for hogs; a regale sufficient, one might imagine, almost to reverse the charm of Circe, and endow these privileged porkers with a super-porcine nature. At Trinidad they are said to attain the largest size, and at Burmah their greatest excellence; the British army, who found them growing wild in the woods in the latter country, having passed this encomium upon them, but they have never been brought thence to England. That high authority, Humboldt, however, pronounced in favour of quite another locality; for, after mentioning that there are certain spots in America, as in Europe, where different fruits attain their highest perfection, and indicating what various places are famed for, he proceeds to add decisively, that "the pine-apple should be eaten at Esmeralda [in Guiana] or in the isle of Cuba," where, growing in parallel rows like agricultural crops, they are "the ornament of the fields." There is hope then still for the "used up." When all else hath palled by repeti-

tion ; when steaks beside the very gridiron shall be insipid, and whitebait be flavourless even at Blackwall ; when not even the nearest murmur of the stream whence it was drawn can give savour to Scotland's trout, and the effulgence of Italy's sunshine fails to gild Neapolitan macaroni with a relish ; even then the world holds still one charm untried, and it cannot be said that all life's pleasures are exhausted while a voyage to Cuba may secure, in the fragrant bowers of the "lone star of the sea," the yet unknown felicity of tasting *a perfect pine* !

Should dull imagination be able but faintly to conceive the bliss, it may be aided by that unsurpassable description of one of our early voyagers, which caused poor Evelyn such woeful disappointment, when not even the touch of royal fingers could impart to the morsel vouchsafed him of a long-kept sea-spoiled import more than the mere ghost of a flavour thus glowingly depicted. An old writer had already observed that the *Ananas* was "a fruit of such excellence that the gods might luxuriate upon it, and which should only be gathered by the hand of a Venus ;" but this is mere vague panegyric. The worthy Captain Ligon tries to tell in what this excellence consists, and not quite in vain, for surely if words can convey the idea of a taste these do so. "Now," says he, "to close up all that can be said of fruits, I must name the pine, for in that single name all that is excellent in a superlative degree for beauty and taste is totally and summarily included. When it comes to be eaten, nothing of rare taste can be thought on that is not there, nor is it imaginable that so full a harmony of tastes can be raised out of so many parts, and all distinguishable. When you bite a piece of the fruit it is so violently sharp as you would think it would fetch all the skin off your mouth, but before your tongue have made a second tryal, upon your palate you shall perceive such a sweetness to follow as perfectly to cure that vigorous sharpness ; and between these two extremes of sharp and sweet lies the relish and flavour of all fruits that are excellent : and those tastes will change and flow so fast upon your palate as your fancy can hardly keep way with them, to distinguish the

one from the other, and this at least to a tenth examination, for so long the echo will last." Not ambrosia itself could more than merit such poetry of the palate as this, and if the object which inspired can indeed realize it, then surely the fabled land of the Lotos-eaters could have been no other than a place of pine-apples.

CHAPTER XXI.

NUTS.

PLEASANT are the fresh fruits that deck our Christmas dessert: the golden-juiced orange, the late lingering pear, and sturdy apple with its glowing cheek. Pleasant, too, are those of which Art has preserved the flavour, though she has failed to retain the beauty—the dried fig, the raisin, or the date. But who would not forego them all, rather than spare the standard but ever-welcome dish of Nuts?—welcome at all seasons, but most of all at this. The former are procured so easily, and disposed of so quickly, that they afford but a momentary pleasure; but these cost time and trouble to obtain, must be wooed ere they are won and earned ere they are eaten; and therefore, when, in Homer's favourite phrase, "the rage of hunger is appeased," and only something is wanted as a pretext for protracting a little longer the rites of hospitality, is their aid so gladly evoked to fill up the pauses of conversation, to cover the silence of the dull, and enhance the merriment of the lively, as they crack their jokes and their nuts together. Genial nuts! whether it be the husk-hid Filbert or bare brown Barcelona; the eye-shaped Almond, enshrined in yellow walls of soft porous sandstone, or the sterner Brazil in its granite fortress; the kingly Walnut in its coat of mail, or the

glossy Chestnut in smooth shining suit; we love ye all, and gladly address ourselves to gather up some fragments of your history.

First and foremost, because commonest and most popular, attention is claimed by what are usually called "Nuts" *par eminence*; i.e., the various members of the Hazel tribe, rejoicing together in the gentle name of *Avelana*, or Avelan, which, as Evelyn informs us, was the ancient orthography of his name also, and was originally derived from Avellano, a city of Naples, where this fruit was very largely cultivated. The primitive Northern mind devised a more descriptive name, the word *hæsil* in Anglo-Saxon signifying a *head-dress*, in allusion to the covering with which all of the family are more or less capped; such of them as have a short calyx being generally called Nuts, while those with long enveloping husks are termed Filberts. To the former class, of course, belong those wildings of the wood connected with so many tender reminiscences of youthful years, when the most delightful of all holidays was that which was spent in "going a nutting." Does not the very naming of them recall the setting forth on some joyous autumn morning—girls with baskets on their arms, boys with bags slung round their necks; the preliminary search for fit branches to afford hooked sticks, and the careful cutting and preparing of these by the way; and then, on arriving at the scene of action, the glad shout of some open-hearted boy on coming first to a well-laden bush, or the cunning silence of the selfish one, who only gathered on all the more quickly in order to secure as many as possible before his comrades arrived to share the spoil. And what perilous stretching was there over deep ditches to reach an opposite hedge; and what an anxious upward strain after those particularly fine clusters, growing so very high up as to be almost beyond even the hook's attainment! We little thought, by the way, with what magic might we were trifling when using such a hooked stick merely as a means to get at our nuts more easily; all ignorant how, in other days, it was deemed, "by its spontaneous bending from a horizontal position, to discover not only mines and subterraneous

treasure and springs of water, but criminals guilty of murder, &c., made out so solemnly, and the effects thereof, by the attestation of magistrates and divers other learned and credible persons who have critically examined matters of fact." Well may the author of *Sylva*, who tells us all this, add, that it is "next to a miracle, and requires a strong faith," yet it seems to have been very generally believed in his day. Possibly the extraordinary result said to have been attained by the patriarch Jacob, by means of the use of hazel rods, may have tended to invest the twigs of this tree, in the popular opinion, with special and mysterious virtues. Sometimes, however, a reason could be assigned for their producing more effect than the similar branches of other trees, as, for instance, when Parkinson informs us that "if a snake be struck with an hazel wand it doth sooner stun it than with any other strike; because it is so pliant that it will wind closer about it, so that, being deprived of their motion, they must needs die with pain and want; and it is no hard matter in like manner, saith Tragus, to kill a mad dog that shall be struck with a hazel stick, such as men use to walk or ride withal." So then, though it be proverbially easy to "find a stick to strike a dog with," it seems that *the* stick for the purpose may yet be matter of selection.

However disputed may be their special adaptation for some of their assigned uses, rods of hazel are unquestionably handsomer and more durable than those of any other wood for such purposes as the construction of rustic houses, garden-seats, &c., and, when dyed and well arranged, may be formed into very varied patterns; a Berkshire carpenter having even so combined them as to form a landscape in a sort of mosaic, the effect of which was very striking. In Staffordshire they are used to make crates for the potters, and in Durham they form the "corves" or large baskets used in the coal-pits. They produce also a very light charcoal, specially excellent for gunpowder, and when charred in closed iron tubes, furnish the artist with crayons for sketching his first inspirations.

It was not the branches alone of the Hazel that were

supposed, during the reign of superstition, to be endowed with mystical powers; for a belief was once prevalent that the ashes of the burned nut-shells applied to the back of a child's head would turn its eyes from grey to black. Many, too, were the nuts that were committed to the flames in the course of incantations, especially on All Hallows-eve, sometimes called "Nut-crack night," from the general custom of setting fire to the fruit in couples on that evening, in order to divine the destiny of human pairs. The mode of augury is well described in some verses by Charles Graydon, in a collection of poems published at Dublin in 1801:

"These glowing nuts are emblems true
Of what in human life we view:
The ill-matched couples fret and fume,
And thus in strife themselves consume;
Or from each other wildly start,
And with a noise for ever part.
But see the happy, happy pair,
In genuine love and truth sincere,
With mutual fondness while they burn
Still to each other kindly turn,
And as the vital sparks decay,
Together gently sink away,
Till, life's fierce ordeal being past,
Their mingled ashes rest at last."

Could the momentous choice be in anywise influenced by the sight of so lively an illustration of its importance, we might be glad to see nut-burning revived, and become as common a Christmas pastime as nut-cracking.

It is a beautiful plant, the nut-bush whence these rural treasures are derived, and maintains its beauty, moreover, for the greater part of the year, blushing rosy in earliest spring with the crimson tufts of its female flowers, and lingering in the golden glory of its autumnal array long after most of its woodland brethren have lost their less faithful leaves. The tree is indeed never quite bare, for before the fall of the leaf the male catkins, in greyish pendulous clusters, like groups of caterpillars hanging loosely by their heads, have made their appearance on the previous year's shoots, and coming into full bloom by the end of October, remain thus throughout the winter, in patient waiting for their rosy brides, for the female

flowers, all blushing with their crimson stigmas, emerging from oval scaly buds,* do not come forth to meet their mates until the beginning of February. Sometimes it happens that Nature has not duly attended to the balance of the sexes, and the spring flowers come out in all their gay attire to find that no sober-suited partners have been provided for them. In this case, as when nobler beings are similarly situated, it is by immigration that the equilibrium must be restored. The discovery of this expedient is due to the Rev. G. Swayne, who, possessing a number of Filbert-trees which for 20 years had borne scarcely any fruit, at length suspected the reason of their unproductiveness, and gathering a number of male catkins from wild Hazel-trees, suspended them in the upper branches of his trees, a plan which proved so effectual that he gathered more fruit from them in that one year than he had during the whole 20 previous years, even though a few which had been left untouched, in order to test the experiment, had produced but their usual scanty harvest. This system has been found to produce crops even from old stunted trees which for many years had never borne a single nut.

The Hazel is a native of all the temperate climates of Europe and Asia. It develops but slowly, the germination of the seed not taking place until the second year after it has been planted, and when its full growth is attained, if left to Nature, is but a bush. Art, however, has found means, by confining it to a single stem, to elevate it into a tree; but the force of example is needed to induce this, for it does not take place unless the young scion be planted among other trees of naturally taller growth, when, thriving beneath the shade of its more eminent companions, it is drawn up by them to emulate their loftier proportions, and attains a height of even 30 ft. with a trunk a foot in diameter. The fruit, though, in such cases, is sacrificed to the timber. The spreading habit of its roots was early noticed, and drew upon it the ill-will of the Romans, manifested in a way which seems

* See Plate I., fig. 1 a.

almost to savour of petty malice; for believing that its subterranean incursions made it injurious to vines, the entrails of the goats which were sacrificed to Bacchus on account of their vineyard depredations were always roasted upon Hazel spits. If the jolly god had ever tried Filberts with his Falernian, and they had harmonized but half as well as they do with sherry, so far from countenancing such an indignity being offered to the plant, he would surely have

“Abhorred the sacrifice and cursed the priest.”

The Hazel Nuts brought to our tables are mostly of foreign growth, the common “Spanish,” or superior “Barcelona.” The latter, however, do not come exactly from the place whose name they bear, but are mostly shipped at Tarragona, a port a little to the south of it. An enormous quantity are annually imported to this country, and a still greater impetus having been given to the trade some years ago by the reduction of the duty to only 1s. per bushel, in 1862 nuts were imported here to the value of above £170,000. Nuts of this kind have sometimes been made into bread, and into puddings, little if at all inferior to those composed of almonds, and a sort of chocolate has also been prepared from them.

The home-grown fruit of the species which is in most esteem is the long-calyxed Filbert, a name supposed by some to have been derived from “full beard,” in allusion to that appendage; while others incline to the more poetical etymology assigned by Gower in his *Confessio Amantis*:

“Phillis
Was shape into a nutte-tree
That all men it might see,
And after Phillis, Philberd
This tree was cleped.”

One variety, however, is called “Lambert Nut,” a name considered to be a corruption of the German “Long-bart Nuss,” or long-bearded nut. The Filbert is a thoroughly English fruit, and grows to greatest perfection about Maidstone, where it is sometimes planted between rows of fruit-trees in orchards; but when grown for the sake

of the nuts it thrives best by itself. The fruit should not be gathered until fully ripe and brown, quite late in the autumn, when they can be preserved for some months by keeping them on dry floors or in sand, the fruiterers restoring their colour, when the husks become dingy, by fumigating them with sulphur. They cannot, however, stop the ravages of one enemy, who has been beforehand with them. "Bah! a bad one!" exclaims many an unlucky nut-seeker, hastily dropping the shells, as, instead of the delicate kernel he had expected, a soft, fat, white maggot rolls wriggling on the dessert-plate. The plump fellow was deposited here by his mother in the form of a single tiny egg, while the nut was so young and tender that the wound soon healed, and the hole by which he had entered became invisible. In about a fortnight he emerged from the egg, and began to exercise his appetite on the soft lining of the nut-shell; then with jaws grown stronger attacked the kernel; and had his abode been left undisturbed until that was all dispatched, would by that time have acquired sufficient strength to gnaw a little hole through its hard shell, then, contracting as much as his luxurious living would allow, would have squeezed through this narrow portal and let himself out, leaving his late home filled with the black powder of his excrementitious matter. Having no feet wherewith to support himself (for what should he have done with such appendages when he had no room to travel, and nothing to do but to eat?) he would have fallen at once to the ground, where, having already eaten enough to last for the rest of his life, he would merely burrow a cell in the earth, change into a pupa, and then soon after assume his final and handsomest form, that of a brown beetle about $\frac{1}{4}$ in. long, and characterized by a long slender black beak with a pair of elbowed antennæ inserted near the middle, so that the insect looks as though it had half swallowed Britannia's trident, leaving the forked end sticking out of its mouth. Such, when successful in life, is the biography of a *Balaninus nucum*.

But could the intruding *balaninus* and its progeny be banished for ever from the Filbert, the claims of that nut

to be the best accompaniment for the decanter would even then be rivalled, if not surpassed, by those of one other; for "wine and Walnuts" are as harmoniously wedded as ever was "music to sweet song."

"The fruit which we a nut, the gods an acorn call:
Jove's acorn,"

says Cowley, for the generic name of the Walnut, *Juglans* has been supposed to mean Jove's *glans*, or acorn; the Greeks, too, dignified it with the name of *Basilicon*, or the Royal Nut; while the learned Dr. Sickler has even tried to prove that the golden apples of the Hesperides were no other than this same Walnut. This fruit, says he, in his *Geschichte der Obst-cultur*, was a gift brought by the Earth to Juno, on the occasion of her marriage with Jupiter, and by her order planted in the garden of the gods, not far from Mount Atlas, a place which seems to have been to the Greek poets something like what Paradise was to the Hebrews. The daughters of King Atlas, called collectively the Hesperides, were appointed to take charge of it; but, seeing the abundance of the fruit, they neglected to cultivate it, till Nature, thus left to herself, became less productive, whereon they were punished for their unfaithfulness by the angry divinities sending a hundred-headed dragon to drive them out of this Eden, and prevent them from re-entering it. At last, however, Hercules came to the garden, killed the dragon, and triumphantly bore away the golden apples. This fable may be translated thus: viz., that one of the descendants of the Hesperidean exiles, who had settled in Greece, but still preserved a tradition of the fruitful land whence he had emigrated, undertook to seek this happy soil, and bring away some of its delicious growth to their adopted country. After long travel he discovered the place he sought. The convulsion of the earth, typified by the dragon, which had driven away the original inhabitants, was either over, or else the obstacle was overcome by his daring, and the fruit was successfully transplanted. We find too that this hero travelled towards the west, and returned eastward to his native land. But what was the fruit thus obtained? Various indeed have been the

conjectures, some considering it to have been the orange or lemon, others the pomegranate, and some even deciding finally on the quince; but all these guesses have been determined by fixing on the appellation "golden," and connecting it with the idea of a yellow colour in the fruit, without considering that the ancients (like the modern Germans) applied this poetical term to whatever was excellent of its kind, Venus even being called by Homer, "Golden Venus;" so that in fact the word is only used to express that Hercules brought to Greece some very superior kind of fruit. Being regarded as the patron of agriculture, and more particularly of fruit culture, it was the custom to offer to this divinity the tenth of all fruits, but the white poplar, the quince, and *a certain kind of acorn*, were peculiarly consecrated to him. Now, in all probability this *acorn*, so specially devoted to him, was merely a fruit with a hard shell—a nut, in fact; for we learn from Theophrastus that the Greeks classed nuts and acorns together as of one family, from their similar nature, each having a kernel within a shell. One of the best of this family bore the name of Jupiter's Acorn, and was also termed the Nut of Hercules, a conjunction which fairly leads the German scholar to the supposition that the former name may have been bestowed because it was brought to Greece from the garden of the gods, and the latter because Hercules was the bringer; while the description given of it by Theophrastus and other ancient writers sufficiently, he thinks, identifies it with our modern Walnut. The notion of its being the same fruit which had been presented as a marriage gift to Juno, is certainly countenanced by the universal classical custom of strewing the nuts at weddings, though this use for them is thought by some to have been derived from the fact of the tree itself being dedicated to Diana, the nut-strewing therefore having been an allusion to the bride's taking her leave of the vestal goddess. The opinion entertained of the tree fully justified its being consecrated to celibacy, for it seems to have been considered only fit to grow by itself, since, according to Pliny, nothing else could thrive near it, its shade being as baneful to man as to vegetation,

causing headache and other ill effects. This, however, is flatly contradicted by Evelyn, who held the Walnut in peculiar honour, and after asserting that it was doubtless looked on as a symbol consecrated to marriage, for the amiable reason that it protected its offspring in such manifold ways—alluding to the coverings of the nut—declares further that so far from causing headache, it is rather a specific against it; while to show the fallacy of the other part of the libel, he adduces Burgundy as an instance where these trees may be seen standing amid thriving crops of wheat. Noisette, on the other hand, says that “everybody knows one cannot long bear the influence of its leaves without headache, if at all nervous or delicate,” and that “vegetation never prospers near it;” admitting though that this may be due to its large leaves shutting out the light, instead of to any peculiar emanation from it. Other later writers seem also rather to side with the classical authority upon the subject as to the influence of the tree being noxious, but qualify the verdict by agreeing that whatever injurious effects may be produced by it, arise, in all probability, chiefly from the decaying leaves, and that if these be carefully removed as they fall, no harm will then ensue. Travellers on the Continent, especially in Germany, have many opportunities of testing whether its shade ought to be shunned, though it would sometimes be no easy matter to avoid it, since it is often found bordering the road for many miles; and in the neighbourhood of Frankfort it was held in such special esteem that the young farmers there were formerly not allowed to marry until they could produce a certificate showing that they had planted a certain number of these trees. They are doubly valuable on account of the timber, the wood being noted both for beauty and durability, and combining so many good qualities—softness, flexibility, easiness to work, fine colour, and elegant veining, that from the humblest *sabotier* to the most artistic wood-carver there is no workman who does not gladly use it; and also for the nuts, the latter perhaps chiefly on account of the oil expressed from them, which for the special purposes of the painter and copper-

plate engraver is of peculiar worth, while it is so much employed abroad for culinary and domestic purposes, that nearly half the people in France use no other kind, whether for food or for burning in lamps, it having been computed that three times as much of it is consumed in that country as there is of olive oil. Yet a recent writer, M. Gasparin, laments that the Walnut is disappearing from France, no fresh trees being ever planted, while many are yearly cut down. Not till after 20 years does the Walnut afford a tolerable gathering, not till after 60 does it yield a full crop—a delay which discourages planting, while the value of the wood often proves an irresistible temptation to fell existing trees; for 20 fine Walnut-trees represent a value of 3,000 francs, often more than that of the land on which they grow, and the prospect of being put in immediate possession of such a sum sometimes makes men forget that the same trees bring in a safe revenue of 500 francs per annum, and leads them too hastily to sacrifice the growth of centuries, not easily to be replaced, even were every effort made to do so.

The shells of the larger kinds of nuts make pretty trinket-cases, and in Limerick, the delicate kid gloves for which that place is famous are often thus enclosed, in order to give a pleasant surprise to the opener. A far more wonderful deposit was that once effected by one Peter Eccles, an Englishman and a clerk in Chancery, who, as recorded in the Harleian MSS., wrote out the whole Bible within so small a compass that, when finished, he enclosed it complete "in a large English walnut, no bigger than a hen's egg: the nut holdeth the book, as was seen by many thousands." To the durable stain afforded by the green outer husk many a fugitive has been indebted for the very effectual disguise of a changed complexion, while for dyeing the hair it has been employed ever since the days of the Romans. When it is wished to remove the discoloration from the skin, this may be partially effected by the application of moistened salt, but time alone can entirely efface it.

As an article of diet, the nuts are considered wholesome

so long as the skin can be easily detached, but when, as they dry, this ceases to be the case, they become indigestible, and, from their acridity, are also injurious to the gums. The home-born ones are in England esteemed the best, and as our walnut wood is now mostly imported* from abroad, the tree is generally grown here for the sake of the fruit; but, as the supply of natives is by no means sufficient for our appetite, it is supplemented by large quantities of foreigners: more than 100,000 bushels were admitted in 1862, chiefly brought from France, Spain, and Belgium, and valued at over £36,000.

Hickory Nuts (*Carya alba*), sometimes seen in London, and the "Butternut" (*Juglans cinerea*), often alluded to in American works, are both species of the Walnut tribe of Transatlantic growth, many varieties of the family being native to America. These kinds are common in the forests of the New World, and are mostly characterized by a very hard shell and a very small kernel; but accidental varieties are sometimes found in the woods which are much larger than the ordinary sort and of finer flavour, being thought by some even to surpass in this respect the European Walnut. It has been suggested that such would be highly worthy of culture, as, no doubt, by a little care in reproducing them by seed, they might be trebled in size and rendered still more agreeable to the taste.

The Walnut traces its noble genealogy back to classic times, but the ancestors of the Almond were well known as far back as in the days of the patriarchs. This fruit formed part of the offering with which his brethren sought to propitiate the unrecognized Joseph, when their father bade them "carry down the man a present." It afforded a model for one of the earliest works of art, for the bowls of the golden candlestick in the Tabernacle was fashioned after its form, and a branch of the tree had the honour of being the subject of a miracle, when

* During the Peninsular War we too improvidently cut down more Walnut-trees than were ever replaced, in order to supply the great demand for musket-stocks, which are made of this wood. The timber of a single tree would at this time often sell for £600 when cut into gun-stocks.

Aaron's dry and sapless stick was made to blossom and bear. The Romans do not appear to have been very intimate with the fruit, Cato only mentioning them as "Greek nuts," and some believe that even this supposed allusion refers rather to Walnuts. The tree is indigenous to Barbary, where it grows so abundantly that its delicate fruit is not even reserved exclusively for the human palate, the Moors, it is said, being accustomed to drive their goats under the trees as they gather it, when the animals carefully nibble off the skins as it falls, and then greedily feed. In that, its native land, it furnishes the first fruits of the year, the blossoms appearing in January and the produce being matured by April. Its generic name, *Amygdalus*, is derived from a Hebrew word signifying vigilance, because its early blossoms announce the coming of spring, preceding even its own leaves, a fact which the fanciful Greeks invented a myth to account for. "Phyllis," said they, "the beautiful Queen of Thrace, had not long been the bride of Demophoon, son of Theseus, who had been cast upon her shores when returning from the siege of Troy, and whom she had kindly received and at last married, when the newly-wedded husband, hearing of the death of his father at Athens, left her to proceed thither, promising, however, to return in a month. Happening to be detained beyond this time, his disconsolate wife wandered daily by the sea to watch for his return, braving even the coldest blasts of winter, until at length grief and exposure so wrought upon her that she one day fell dead upon the shore, when the pitying gods, admiring her constancy, saved her from corruption by changing her into an almond-tree. Not long after, Demophoon at last arrived, and, overcome with grief on hearing the mournful fate of his lately blooming bride, rushed wildly to the lifeless-looking tree and clasped it in his arms. The soul of his Phyllis, changed as was her form, responded to him still, and, quickened by his warm embrace, the tree burst forth into a joyous flush of blossoms, though even the time of leafing had not yet arrived." Surely it would be little less than impious to suppose that a bloom thus born of love could possibly have ripened into deadly poison; yet so

little respect do the botanists pay to the memory of the gentle Queen Phillis, that they decline to determine between the Sweet and the Bitter Almond as to which is the original type and which the variety, since both are found growing wild; and even the same individual plant, it is said, will bear the one or the other kind of fruit, according to variation of culture. Had our Attic friends noticed this circumstance they would probably have added a chapter to the history of Demophoon, and traced the change in the fruit to his forgetting his first faithful love and contracting some second marriage. The difference between the two trees is very trifling, and even the kernels are exactly similar in appearance, but in the case of the Bitter Almond the nut is strongly impregnated with prussic acid, of which there is no trace in those of the Sweet kind, although it is found in the bark, leaves, and flowers of both. Efficacious as a medicine, or pleasant as a flavouring when employed in minute quantities, very injurious effects sometimes result from inadvertently using in excess so powerful an ingredient; but these would probably occur far more frequently if any credence were still given to the singular virtues once attributed to it, for Bitter Almonds might, perhaps, be as regularly taken by one class of indulgers as dinner pills are by another, were the tale believed as told by Pliny, that if five of them be taken by a person before sitting down to drink, he will be proof against inebriation; in confirmation of which is cited the account given by Plutarch of Drusus, the brother of Tiberius, and one of the greatest drinkers of his time, who used them effectually for this purpose. Whether it may have been that the jollity-loving monks of old put any faith in this notion, or for some less cogent reason, it is at least known that Almonds were held in special favour by them; almond milk, too, something very similar to our modern custard, having been always a standing dish at their festivals.

There is a pretty allusion to the blossoming of the Almond in one of Moore's verses:

“The hope of a future happier hour
That alights on misery's brow

Springs out of the silvery almond flower,
That blooms on a leafless bough."

But why the epithet "silvery" should have been selected seems hard to tell, since white flowers are scarcely characteristic of the species, the blossoms being generally more or less tinged with pink. The same objection might apply to the metaphor of Solomon, when, as illustrating one sign of old age, he says, "And the almond-tree shall flourish" (Eccles., xii. 5); but that there is one variety, the *Orientalis*, or Eastern Almond-tree, which is noted for the peculiarly white and glistening or silvery appearance of the *leaves*, and which, therefore, the sage may very probably have had in his mind when he selected this tree to symbolize the hoary hairs of old.

Although it will ripen in England, as the fruit never attains perfection here, the tree is only cultivated for the sake of its appearance, and the unproductive kinds are generally preferred, since their flowers are more showy than those of the fruit-bearers. When grafted on a plum-stock, the usual mode of treatment, the Almond will grow to a height of 20 or 30 ft., but it attains far loftier proportions in the S. of Europe, where it bears freely, though probably never subjected to the singular dressing recommended by Pliny, who informs us that if a hole be made in the tree and a stone introduced, its fertility is much increased—a statement which a modern manure-monger might take advantage of to insist that this philosopher's stone must have been a coprolite! It is very closely related to the peach, resembling it not only in growth, blossom, and foliage, but even in being attacked by the same insects and liable to the same diseases, and they were accordingly ranked in the same *genus* by Linnæus, but have been separated in the Natural System on account of the difference in the fruit, the stone in the one case being surrounded by a juicy pulp, in the other by a dry hairy covering, though both are really *drupes*. There is, however, scarcely any other difference between the trees, and even this may be only owing to variation of soil or circumstances, since some have been found quite in a transition state, with almonds upon them

that were almost peaches, and Mr. Knight produced a tolerable fruit by introducing the pollen from peach anthers into an almond blossom, so it is believed a deeper insight into fructal physiology will one day reunite the divided *genera*. As Mr. Loudon expresses it, "We have little doubt in our own mind that the Almond, the Peach, and the Nectarine are as much varieties of one species as the different varieties of cabbages are of the wild plant *Brassica oleracea*." They all belong to the natural order *Rosaceæ* (or Linnæan *Icosandria*), the blossoms being formed upon the same model as that of the queen of flowers; therein differing most widely from all our other nut-blooms, every variety of Hazel, Walnut, or Chestnut appearing in the catkin form, with the male and female flowers distinctly apart; so that the Almond appears to form a sort of link between a nut and a stone-fruit. Practically, however, it is to all intents and purposes a nut, since it appears at our tables in that form, the kernel alone being eaten; and therefore, however classed by botanists, is likely to retain popularly the name which usage has bestowed, and to justify its being treated of here under that head.

In 1862 our imports of Almonds amounted to 44,645 cwt., valued at £117,940, the best kind, the Jordan as they are called, coming really from Malaga in Spain; but at the last French International Exhibition no less than 50 different varieties of Sweet Almonds were shown. The oil of almonds is largely used for toilet purposes and in medicine. It requires to be purified by fire, being set in a flame, which is suffered to die away of itself, the most greasy particles being thus consumed and its arid qualities wholly destroyed. According to De Candolle it yields 46 per cent. of its weight in oil; the Walnut affording 50 and the Hazel 60 per cent. The caked kernels, after the oil has been expressed, are used for washing the skin, which they are considered to soften and beautify—indeed, various preparations of the Almond have been in use as cosmetics from the days of the Romans. The Bitter Almond yields also an essential oil, in which indeed its poisonous principle consists rather than in its hydrocyanic acid; but

this is only developed when water is added to the bruised kernel, being generated by the contact of water with the vegetable albumen.

But if the various nuts already mentioned are held in high esteem for furnishing a mere adjunct to a meal, how much more consideration may be claimed by one—viz., the Chestnut, which provides the sole daily food of thousands! Though in this country ranking only as a luxury, it is yet one accessible to almost the poorest, being sold at a cheaper rate than any of its brethren even here, where it is a foreign import; for though the Chestnut-tree is common enough in England, the nuts it bears are usually almost worthless. It does not, indeed, bring its fruit to perfection in any climate except where the grape also will ripen freely in the open air. Notwithstanding the great similarity of the fruits, this tree is no relation to the Horse Chestnut, there being no other point of resemblance between them, and they belong to quite distinct botanical orders, their blossoms even being singularly unlike, considering that they develop into a fruit almost exactly identical in appearance, both as regards the prickly outer husk, the brown leathery inner one, and the white solid substance of the nut within; the yellow pendulous catkins almost as long as the leaves, with many anthered fertile flowers arranged here and there in tufts upon the twigs of the Sweet Chestnut, offering no indication of an issue having anything in common with that of the spring glory of Bushey Park, those stately pyramids of delicate petals, lighting up the dusky foliage amid which they gleam so fairly, like a feast of lanterns of Nature's own devising. The fruit, however, is not so similar as it appears, botanists considering the prickly part of the fruit of the Sweet Chestnut as an involucre, analagous to the cup of the acorn or beard of the Filbert, while that of the Horse Chestnut is a pericarp, containing real seeds, the corresponding part in the former being actually seed-vessels.

The generic name of the chestnut, *Castanea*, is derived from its native place, a city of Pontus, whence it was brought to Greece, and first planted there, in the classic

vale of Tempe; Mount Olympus, too, being at one time nearly covered by it. It was familiar to the Romans, among whom the nuts were made into bread for the poor, but nevertheless seems to have been but little esteemed, if we may judge by the very uncomplimentary remark made upon it by Pliny, who, speaking of the multiplied coverings, observes, "It is really surprising that Nature should have taken such pains to conceal an object of so little value;" but perhaps the opinion had not arisen in his time which was entertained afterwards as to this bread being a diet which tended to improve the complexion. In our own country the fruit appears to have been formerly much more largely employed than at the present day, or, at least, in more various ways: one use is recorded by Ben Jonson, when he alludes to "the chestnut which hath larded many a swine;" and Evelyn speaks of their being made into fritters, pies, and stews, which he calls "the very best use for them;" but our modern cookery-books contain no information respecting such preparations. The finest we get come from Spain, where they are the common food of the peasantry, and where, too, a special sanctity attaches to them, for in Catalonia the people go from house to house on All Saints' Eve to partake of them, believing that for every chestnut they eat in a different house at that festival they will free a soul from Purgatory. But it is in the S. of France and in the N. of Italy that they are of most importance as an article of consumption, for here they are the principal food of the lower classes. Professor Simmonds informs us that about 2,000,000 hectolitres are annually consumed in France, a portion of the rural population in some of the departments living entirely upon them for half the year. They undergo the preparation of being unhusked, dried with smoke, ground into flour, and then mixed with milk, and made into "*galettes*," a kind of pancake baked on an iron plate; or into "*polenta*," a species of porridge. When thoroughly dried for two or three days on the floor of a kind of kiln, pierced with holes, having a smouldering fire beneath fed with their own husks, they will keep good for several years, and this is the process

followed at Limousin and Perigord. It is usual to collect the nuts when ripe as they fall from the tree; but if bad weather should set in, the remainder are beaten off at once with long poles, and the husks are trodden off by sabot-shod peasants; but when thus gathered they are fit only for immediate use.

Though employed only for food in Europe, a beverage is prepared from them in Africa, Thunberg affirming that the Hottentots employ the Wild Chestnuts growing in their country in a similar manner to what we do coffee, the nuts being first steeped in water, then boiled, and afterwards roasted, ground, and made into drink.

The fruit constitutes the chief commercial value of the tree, for the wood is of very little use as timber, though at one time a contrary opinion was entertained, founded on an erroneous belief that it had been used for the roofs of many old cathedrals in France, of the Louvre, and of our own Westminster Hall. About the end of last century the Society of Arts, under the influence of this mistake, strongly recommended the Chestnut for cultivation, even offering rewards for planting it, until the error was discovered, the great Buffon demonstrating that oak wood, after the lapse of many years, assumes the appearance of chestnut, and Daubenton afterwards proving that in most of the cases mentioned that was the timber that had actually been used. As regards Westminster Hall, a paper was laid before the Institute of Architects in 1858 which satisfactorily proved that chestnut timber was not among the materials of that building, the wood which had been mistaken for it being really oak. For some purposes, however, it is really preferred to even that type of British toughness, and in America, where, too, the nuts are considered to be sweeter than those of Europe, it is looked on as among the most useful wood in the forest, being largely used for posts and rails.

This wood has the singular property of being best when young, for after 50 or 60 years, and often much sooner, it begins to decay at the heart, and the corruption then spreads outwards until the whole trunk is consumed and perishes. In the Cevennes this process is

stayed by means of burning heath in the hollow of the tree (for the wood, which is therefore little esteemed as fuel, smoulders instead of blazing) until the interior surface is charred, when it will survive many years, if the operation has been carefully performed. The huge Chestnut on Mount Etna, said to be the largest tree in Europe, has but a mere shell of the trunk remaining, the heart-wood having long since completely decayed. This liability to internal disease drew on it the animadversion of Evelyn, who quaintly says, "I cannot celebrate this tree for its sincerity, it being found that, contrary to the oak, it will make a fair show outwardly when it is all decayed and rotten within; but this is in some sort recompensed, if it be true that the beams made of chestnut-tree have this property, that being somewhat brittle, they give warning and premonish the danger by a certain crackling, so as, it is said, to have frightened those out of the baths of Antandro, whose roof was laid with this material." Another and a better compensation for this early rotting of the living tree is that the timber, if cut while sound, will never become worm-eaten, and scarcely any insect will touch the leaves, though the nut is very liable to the attack of a kind of weevil, the eggs of which are deposited in the young fruit, involving the need of careful inspection when selecting them to plant. Twice were some Chestnuts sent to Mr. Loudon as seed-nuts from the celebrated tree at Vermont planted by Washington, but both times they were found on arrival to have been insect pierced, and consequently never vegetated.

In its choice of soils this tree seems particularly judicious in fixing on the localities where it is most likely to be welcome. "Wherever I have seen Chestnut-trees," says Bosc, "and I have seen them in a great many different localities, they were never in soils or on surfaces fit for the production of corn. On mountains in France, Switzerland, and Italy, wherever Chesnut begins, corn leaves off." Forming a striking feature in wild scenery, the Chestnut-tree was specially dear to Salvator Rosa, reappearing constantly in his pictures; and the poet's famous "leaves in Vallombrosa" consist, too, mostly of its foliage.

In England it is chiefly grown in hop counties, or around orchards, especially in Devonshire. The deeply serrated pale green shining leaves are on old trees only from 4 to 6 in. in length, but on young shoots they are often nearly a foot long, and 3 or 4 in. broad, and it is a singular fact that in both wild and cultivated varieties they always grow broader in English as compared with French trees, a peculiarity which has been noticed also in the leaves of some other kinds of trees. In France there are two very distinct varieties of the Chestnut, *les Chataignes* and *les Marrons*, the former being to the latter about what the crab is to the apple, so vastly inferior are they in flavour as well as in size, three of these *Chataignes* being usually found in one common envelope, whereas the *Marrons* ordinarily sit in solitary dignity, one in each husk. The city of Lyons being the chief *entrepôt* for the latter, they are commonly called *Marrons de Lyons*. At Tortworth, in Gloucestershire, there is a Chestnut reckoned to be both the largest and oldest tree in England, tradition carrying back its origin to the heptarchic days of Saxon Egbert, while its trunk measures 45 ft. in circumference.

A similar position to that which the Chestnut occupies in particular localities in Europe is held in some parts of the New World by the Juvia-tree, which furnishes what are called Brazil Nuts, sometimes also prettily termed the "Almonds of the Amazon." The gathering of these nuts is celebrated among the Indians by a festival called *la fiesta de las juvias*, something similar to our harvest-home, but signalized by great excesses—feasting on roasted monkeys, dancing and drinking, forming the chief amusements, and the men being commonly in a state of complete intoxication throughout the two days of the *fête*. The tree, baptized by Humboldt with the name of *Berthollia excelsa*, may almost be said to have been discovered by that eminent traveller, so meagre was the information concerning it before his description was made public; for though the triangular seeds were early known in Europe, and had even been an article of commerce *

* Our present import of these nuts was recently reckoned to amount to 11,700 bushels per annum.

for above a century, there was so little acquaintance with the manner of their growth that it was generally supposed they grew each one on a separate stalk. As the name imports, they are natives of Brazil, flourishing chiefly in mighty forests on the banks of the Amazon and Orinoco, the tree being one of the most majestic in the New World, growing rapidly and attaining the height of about 120 ft., though the trunk rarely exceeds a yard in diameter. The branches bend downwards, like palm-fronds, the leaves, which are more than 2 ft. in length, growing chiefly at the extremities. Humboldt was not in the country during the blossoming season, and the natives varied in their statements as to even the colour of the flowers, some saying that they were violet, others affirming them to be yellow. The fruit, which does not make its appearance before the tree has attained its 15th year is a drupe as large, sometimes, as a child's head, and externally not unlike a Cocoa Nut,* the woody part ripening in about two months after its development into a pericarp or shell half an inch thick, and so hard that the sharpest saw can hardly penetrate it. To the central partition are attached the seeds or nuts, from 15 to 22 being the general number in each; and as these become loosened in time, their rattle, when the fruit falls from the tree, is a most tantalizing sound to the poor monkeys, who, passionately fond of the nuts, are quite unable to break open the strong box in which Nature has treasured them, and must therefore wait until the process of decay accomplishes this for them, when they too hold their *juvia* festival, joined in by squirrels, parrots, and most other small denizens of the forest, for the shells of the individual seeds offer no insuperable obstacle. The continual falling of such large bodies from so great a height, hard and heavy as they are, renders it rather dangerous to pass under these trees when the fruit is fully ripe; and it used to be said that in some places the savages were accustomed to carry wooden shields over their heads when they entered the forest at this season.

* See Plate I., fig. 5.

but Humboldt did not find that the people among whom he travelled availed themselves of any such precaution.

The juvia-tree has been assigned to the natural order *Myrtacæ*, but since the leaves, set alternately like those of the myrtle, are yet not characterized like them by being marked with pellucid dots, it is separated by Lindley into a distinct family termed *Lecythidæ*, including also its nearly the *Lecythis ollaria* or *Zabucajo*, a tree numbered among the most gigantic of the ancient forests of Brazil, and the seeds of which are the Sapucaí Nuts, which during the last few years have occasionally made their appearance in London fruit shops. Resembling the Brazil Nut in size, colour, and general form, they are more elegant in appearance, owing to the surface of the shell being channelled lengthwise into regular flutings; while the woody case in which they are inclosed is also more elaborately modelled than the mere globular outer shell of the juvia, it being an urn-shaped vessel,* the upper part of which forms a lid, which opens after the fruit is ripe, scattering abroad the nuts. The flowers of the *Lecythidæ* tribe have six petals and numerous stamens, a portion of which are in botanical language "collected into a petaloid body," one petal, quite distinct from the surrounding corolla, rising in the midst and turning over, forming a hood-like shelter to the central stamens. The fruit of every species of *Lecythis* is eatable, though it is said by the natives that those who partake too freely of the nuts of one variety are apt to lose their hair; and the bark of one kind, said by some to be this very *ollaria* which bears the Sapucaí Nuts, is much used by the natives of Brazil as wrappers for cigars, being easily separated by beating into a number of fine distinct layers, which divide so neatly from each other that they have the appearance of sheets of thin satiny paper.

There are two or three other kinds of nuts which, though rarely forming a portion of our dessert in this country, are yet well known, by name at least, to most people, and whose general exclusion from the company of their more favoured brethren is due, perhaps, to the capri-

* See Plate I, fig. 6.

cious frown of fashion rather than to their being really deficient in merit. The green-kernelled Pistachio Nut, for instance, in Sicily, where it is largely cultivated, is preferred by many to the Hazel or even the Almond; and though hardly considered wholesome when raw, is much eaten on the Continent, either roasted or in comfits and confectionery. It is also used in *ragoûts* and to make *ratafias*; and most readers of the *Arabian Nights* will remember that a kid stuffed with Pistachios seems to have possessed great attractions for an Oriental palate. The tree is recorded to have been introduced into Rome by Vitellius, a fact which of itself may almost be taken as a gastronomic certificate.

The male and female blossoms of the Pistachio grow not only separately, but on distinct trees, so that in forming a plantation care must be taken to select a proper proportion of both; and to ensure fertilization, the Sicilian cultivators usually gather the male blossoms and suspend them on the female plants. The nuts grow in clusters of little dry oval drupes,* of a green hue, but tinged with red, with a thin rind, and brittle two-valved shell containing a single green seed or kernel covered with a violet coloured pellicle. This tree abounds in Syria, and thrives generally in the same soil and climate as the olive, but, naturalized in the south of France, will bear fruit even as far north as Paris.

It is another member of the same family which produces the kidney-shaped Cashew Nut, a native of the West Indies. This tree, the *Anacardium Occidentale*, bears sweet-scented blossoms, followed by what looks like a fruit of the apple kind,† but which is, in reality, simply the peduncle, or flower-stalk, swollen and become succulent. Red or yellow in colour, and of a very agreeable sub-acid flavour, this is not only eaten, but its fermented juice is made into a kind of spirit. From the end of this *quasi* fruit protrudes the rightful owner of the fructal title, our Cashew Nut, which is of the size and shape of a hare's kidney, but larger at the end by which it is attached to its apple-like

* See Plate I., fig. 3.

† See Plate I., fig. 4.

stalk. Between the two layers of the pericarp is a quantity of oil, of so acrid a nature that it often blisters the lips or fingers of those who crack the nut incautiously, and which has been used successfully to remove ringworm, corns, &c., but needs to be applied with great care. The kernel, which is much esteemed in Jamaica, abounds with milky juice, and is eaten raw when fresh, but after having been gathered some time requires to be roasted, a process which frees it from the oil. Dried and broken, they are often put into Madeira wine, being thought greatly to improve its flavour. The trunk of the tree when tapped sends forth a milky fluid, which is a natural marking-ink, staining linen a deep and indelible black.

Last in this notice of the nutty tribe, though certainly by no means least, being, indeed, in point of size, the monarch of them all, we reach at length the Cocoa Nut, which, though seldom brought to table, is yet so universal a favourite with the juvenile portion of the community, that there is, perhaps, hardly a schoolboy to be found (or schoolgirl either, it might be added) who has not saved his half-pence for its sake, and deemed that day a memorable one when the wholesale expenditure of a 6*d.* made him the envied possessor of a whole nut. This fruit, growing singly as it does, is one of a class of botanical mysteries, for the ovary of the blossom consists of three carpels or divisions, and as a natural consequence three ovules, or embryo seeds, in due time make their appearance; yet instead of developing in a threefold fruit, as according to all rules it ought to do, two of these ovules are invariably absorbed, or in some way disappear, and only a single nut comes to perfection; the sole eventual trace of its triple promise being the schoolboy's "monkey face," the three indentations at the end of the shell. The fruit, however, being but *one* to all intents and purposes, has but a single germ to put forth, and thus requires but a single outlet, and therefore is it that two of these indentations are found to be but mere surface marks, while the third is a real doorway in the hard shell through which the sprout emerges which is to form the future plant. As the nut becomes old, the milk which it had contained disappears,

and the hollow is filled with a spongy mass, which is, in fact, the germinating organ. When deposited in the ground, the germ in a few days makes its way through the hole provided for its exit: one end of the shoot strikes into the ground to form the root, the other sends up three pale green feathery leaves, which soon unfold; the young plant then grows rapidly, in the course of four or five years begins to bear, and continues to do so without intermission during the rest of its life, which is protracted for nearly a century, and so luxuriantly that often as many as 200 nuts in all stages, besides innumerable white blossoms, may be seen upon it at one time.

The Cocoa-palm flourishes best near the sea-side, the principal nourishment it craves being silex and soda; and in Brazil, where the supply of these is naturally deficient, they even supply salt to the soil where it is planted, in quantities as large as half a bushel to a single tree; and so essential is this considered to its prosperity that it is not neglected even when salt costs 2s. per lb. It is also found to thrive near human habitations better than in solitude, which causes the natives to say that the tree "loves conversation;" though more matter-of-fact Europeans assign as the probable reason for this choice of locality, that it may derive benefit from the ashes thrown out where fires have been made. The fact itself seems unquestionable, for it is equally observed in other palm-growing countries, Sir Emerson Tennent remarking that in Ceylon it is only on the coast, or near towns or villages, that the Cocoa is found in perfection; adding that "In the deepest jungle the sight of a single cocoa-nut towering above the other foliage is in Ceylon a never-failing landmark to intimate to the traveller his approach to a village. The natives have a superstition that the cocoa-nut will not grow *out of the sound of a human voice*, and will die if the village where it had previously thriven become deserted." In that country, too, the tree is found to fulfil one singular and important use beyond the many which have been ascribed to it in other places, Sir Emerson stating further that these tall palms, when drenched with rain, serve as lightning-conductors, and

their abundance is one reason why the electric flashes, so unusually prevalent in Ceylon, so rarely cause accident. No less ornamental than useful, they form a beautiful feature of tropical scenery; and Humboldt speaks in glowing terms of the natural charms of those S. American river-banks, "the windings of which are marked by Cocoa-trees, as the rivers of Europe are sometimes bordered by poplars and willows." As the nuts grow at the summit of the lofty stem, the palm tribes being unbranched, the best means of gathering them is by passing a hoop round the tree, enclosing also the body of the climber, whose feet are likewise connected by a ligature enabling him to clasp the trunk. The slovenly Malays, however, merely cut notches in the wood to assist them to ascend—a plan which is not only dangerous to themselves, but also injurious to the tree.

A singular variety of the common nut is the once famous *Cocos de Mer*, or Double Cocoa Nut, which presents an appearance as though two of the ordinary kind had grown together, leaving only a furrow to mark the junction. These huge and strangely-shaped objects used sometimes to be found floating on the waves of the Indian Ocean, and as none knew with certainty what was their nature or whence they came, much controversy was excited respecting them, some guessing them to be only the produce of some unknown land, fallen into the water, others far more confidently affirming them to be marine productions, or in the language of one of these old writers "a fruit growing itself in the sea, whose tree has hitherto been concealed from the eye of man." The superstitious Malays added to the mystification by inventing strange stories respecting its natural, or rather, according to them, its *unnatural* history, affirming that the submarine palm-tree which bore it sometimes became visible beneath the waves, but always vanished immediately if any one dived near it; while its branches were reported to be the abode of a gigantic griffin, which had the power of attracting ships towards its dwelling-place, the crews of which it then devoured. Invested with the charm of so much mystery, these rare sea waifs were highly valued and com-

manded an almost fabulous price, Rochou affirming that it was not uncommon at one time to see them sold for upwards of £400 each, and the Emperor Rodolph, it is said, having failed to procure one, though he offered a sum of 4,000 florins for a single specimen. In the Maldive Islands it was a capital crime to appropriate one, all that were found belonging as of royal right to the king, who disposed of his treasure-trove as the most costly of gifts, or sold them at enormous prices. Their rarity, however, and their supposed almost supernatural origin, were not the sole cause of the inordinate value set upon them, for they were further imagined to be endowed with strange and powerful virtues, the kernel being reckoned not only a preventive against and cure for a variety of diseases, but also, when duly prepared in a mixture with pounded coral and ebony, was thought to be a sure antidote against all poison; while the shell was made into drinking-cups, on which wealthy Indians lavished golden settings and jewelled decorations; for even a slice of this precious substance used as a lid to a cup of other material would suffice to neutralize any poison that might be poured into it. In 1734, however, all the romance connected with the *Cocos de Mer* came to a very commonplace termination by the discovery of the Seychelle Islands (situate in the Indian Ocean, N.E. of Madagascar) where these mystical marvels were found growing abundantly in very ordinary fashion upon trees differing but little from the common Cocoa-palm, though, singularly enough, they were not found upon all the islands of this group, but only on three, not more than half a mile distant from each other. Supplied in far greater plenty, and no longer regarded as the produce of a griffin-guarded submarine prodigy, of course their value greatly diminished, but Malte Brun says that it "was found profitable to cultivate them in the Isle of France;" and it has been found that the tree begins to bear in five or six years after planting, and continues to do so for 50 or 60 years, often blossoming every four or five weeks, so as to present a continual succession both of fresh flowers and ripe nuts, from 80 to 100 of the latter being produced annually. The shells

which were once eagerly pressed by royal lips are now commonly used in Ceylon by beggars to collect the food which is given them in alms.

The derivation of the name of the Cocoa Nut is uncertain, some imagining it to be from the Greek *kokos*, a seed or berry, others from the Portuguese *macoco*, a monkey, either from the three spots at the germ end bearing no inapt resemblance to a monkey's face, or for the rather far-fetched reason that when air is blown into the pierced hole the sound produced is like the cry of an ape. From whatever cause, the nut at least is called by the Portuguese *coquo*, and as the native appellations for it in the regions where it grows are nothing like this word, it is certainly probable that we gained our name for it from those early navigators.

The Cocoa Nut furnishes at once both food and drink, the *milk*, as it is called, being a peculiarly refreshing and innocuous beverage in a warm climate, while from the palm-stem is drawn a liquid which distillation convert into more potent "toddy." Of the kernel, Dr. Davey says, "In composition, I believe it to be very like the ripe Almond. The emulsion it makes is equal to that of the Almond, and is an excellent substitute for milk for tea." Eaten as it is gathered, without any kind of preparation, it is, in its native regions, sufficiently substantial to enable a working man to subsist upon it without any other diet. It can, however, be prepared in various ways, and forms, when rasped, one ingredient in the real Indian curry, as it renders the dish not only more agreeable but also more digestible than when ghee or oil is employed, it being sufficiently oleaginous for these to be dispensed with when it can be obtained; while a cake, delicious beyond all other cakes, is sometimes made from it in England by mixing the grated nut with white of egg and sugar. The oil when extracted remains tasteless for 24 hours, and could any means be devised to preserve it so, might compete with any oil for table use; but it soon acquires a rancid flavour, and becomes unfit for culinary purposes, though largely employed in many other ways. The fibrous covering of the outer shell, too, used by the

Indians from time immemorial for matting, cordage, &c., has of late years been thus employed in England also, and is now in great demand ; indeed, in 1862 our imports amounted to no less than 3,138,346 Cocoa Nuts, valued at £21,716. Wherever it may grow, every part of the tree is turned to some account, and a favourite subject with the Cinghalese when conversing with a stranger is to enumerate the *hundred* uses to which, as they say, this inestimable tree is applied. It is thus, as a whole, so valuable that it has been remarked that a man who drops one of these nuts into the ground in a land where they will grow, confers a greater and more certain benefit upon himself and upon posterity than does many a life-long toil in less genial climes ; while another writer asserts that he who has in his garden 12 Coconuts and two jack-trees, need make no further exertion, but is provided for for the rest of his days. If, however, not content with this modest competence, any enterprising individual should wish to adventure something more largely in nut-growing, Professor Simmonds, in his *Commercial Products of the Vegetable Kingdom*, calculates that an outlay of £960 in forming a plantation would secure a net income of *at least* £1,200 per annum for at least 50 years. Whether the prospect of such profits might not make it worth while to establish a Limited Liability Cocoa Nut Planting Company, is left as a nut for speculators to crack.

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