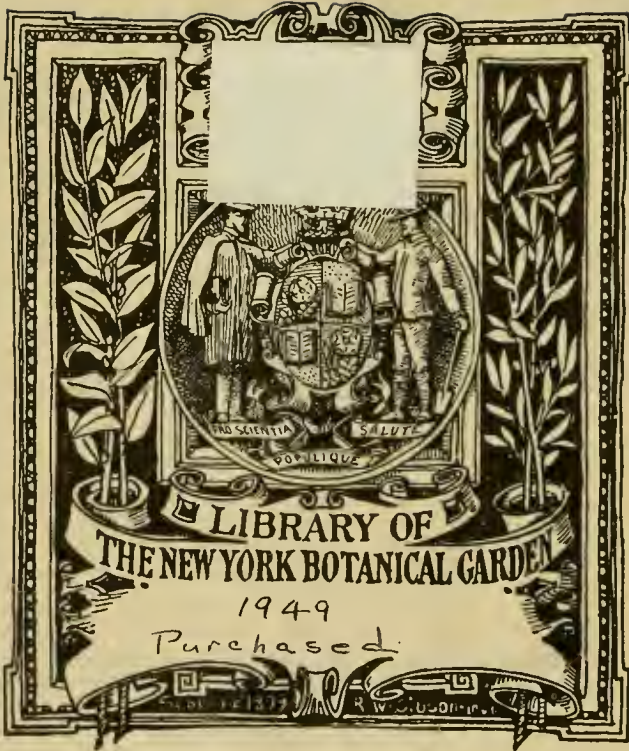


WILD FRUITS
OF THE
COUNTRY-SIDE





THE WOBURN LIBRARY
OF
NATURAL HISTORY
EDITED BY
HIS GRACE THE DUKE OF BEDFORD, K.G.

WILD FRUITS OF THE COUNTRY-SIDE

WILD FRUITS OF THE COUNTRY-SIDE

FIGURED AND DESCRIBED

BY

F. EDWARD HULME, F.L.S., F.S.A.

AUTHOR OF

"WAYSIDE SKETCHES," "FAMILIAR WILD FLOWERS"

"SUGGESTIONS IN FLORAL DESIGN," "MYTHLAND"

"NATURAL HISTORY LORE AND LEGEND," ETC., ETC.

WITH THIRTY-SIX COLOURED
PLATES BY THE AUTHOR

LIBRARY
NEW YORK
BOTANICAL
GARDEN

London: HUTCHINSON & CO
Paternoster Row   1902

471 500
H 792
1902
C. 2

PRINTED BY
HAZELL, WATSON AND VINEY, LD.
LONDON AND AYLESBURY

WOBURN ABBEY,

21st July, 1902.

IT is not every one who has the taste, capacity, or leisure for the scientific study of Natural History. But there are few persons who do not feel that some knowledge of the processes and products of Nature increases the enjoyment of country life. To supply this knowledge, in a form at once easily assimilated and scientifically accurate, is the object of the WOBURN SERIES OF NATURAL HISTORY.

Each subject will be treated by a writer who has made it his special study. In this volume, therefore, as in all the succeeding volumes, the writer speaks for himself, and the Editor has not attempted to impose his own opinions on those who have been asked to contribute to the series.

Bedford

CONTENTS

CHAPTER I

	PAGE
The Ideas associated with Autumn—Often Pessimistic, but needlessly so—Autumn the Period of Fruition—The Infinite Variety of Nature—Why Fruits thought of less Interest than Flowers—The Hedge-rows—Hawthorn or Whitethorn—Worlidge's <i>Mystery of Husbandry</i> —The May—The Poets thereon—Tree-worship—Haws—the Cross of Thorns— <i>Adam in Eden</i> —The Doctrine of Signatures—The Traveller's Joy—The Privet—Buckthorn—Gerard's <i>Generall Historie of Plantes</i> —The Wild Roses of our Hedges—Hips—The Sweet Briar—Eglantine of the Poets—Bedeguar—The Field Rose—Drying Plants—Hazel—Powers of Divination—The Squirrel's Hoard—Nut-shells and their Occupants—Keats on the Autumn—Prognostications from Nuts—Why we eat Almonds and Raisins—Culpeper in Defence of Nuts—The Guelder-rose—Snowball-tree—Woody Nightshade—Its Poisonous Berries—Dry-beaten Folk—Black Nightshade, or Petty Morel—Hop—The Vine of the North—The Herbalist Lobel—Willow-wolves—The Ivy—Its Great Variation in Form—Gerard thereupon—Is Ivy harmful to Trees?—Shakespeare on Parasites—The Poet's Crown—Christmas Decorations—Black Bryony—Red-berried Bryony—Bacon on Climbing Plants—The Blackthorn—Blackthorn Winter—Sloe Tea—Spindle-tree—Wayfaring Tree—The <i>Foure Bookes of Husbandry</i> —Parkinson's <i>Theatrum Botanicum</i> —The Yew—The Saturnalia—Clipping Dragons and Peacocks—The English Archers—Churchyard Yews—Dogwood—Honeysuckle—The Blackberry—Dewberries—Cloudberries—Stone-bramble—Raspberry—Strawberry—Mediæval Prescriptions—Barberry—Bird-cherries—The Cuckoo-pint or Wild Arum	I

CHAPTER II

The Trees of the Forest—The Monarch Oak—Acorns as Food—Oak-mast for the Pigs—Panage in Domesday Book—Oak Galls of Various Kinds—The Beech—St. Leonard's Forest Experiences—Name-carving—Beech-mast—The Hornbeam—The Scotch Fir, or

CONTENTS

vii

PAGE

Pine—Its Mountain Home—Cones, Pine-apples—The Larch— Planted by the Million—Spanish Chestnut—As an Article of Food —Abnormal Cluster—The Horse-Chestnut—A Central Asian Tree —The Birch—The Lady of the Woods—Greenland's one Tree— —Its Silvery Bark—The Books of Numa—Witches' Knots— Attraction of Sap to Butterflies—The Birchen-rod—The "Village Schoolmistress"—The Ash—The "Venus of the Woods"—The Husbandman's Tree—Elizabethan Statute for the Preservation of Timber—Ash-keys—Peter-keys—Norden on Sussex Iron-furnaces —Shrew-ash—The Serpent's Antipathy—The Rowan, or Mountain Ash—Difference of Opinion on Floral Odours—The Witcher-tree— Preservative from the Evil Eye—The Service-tree—Service-berries as Food—The Sycamore—The Biblical Sycamore—The Great Maple—The False Plane—Sycamore-wine—Fungoid Growth on the Leaves—Winged Fruits—Distribution of Seeds of the Sycamore —The Maple—Maser-tree—The Plane—Its Peeling Bark—A Town-tree—Irrigation with Wine—The Holly—The Saturnalia again—Tunbridge Ware—The Flail—The City of Tibur—"As Pliny saith"—Bird-lime	99
--	----

CHAPTER III

Plants of the Moorland, the Meadow, the Stream—Difficulty of Classi- fication—The Yellow Iris—Obedience in Nature to Law—The Relief of Choler—The Touch-me-not—A North American Plant— The Alder—Amsterdam and Venice built thereon—The Gladdon, or Fœtid Iris—The Elder—Its Value in Medicine—The Lacinated Variety—Bagpipes—The Bilberry—The Bleaberry—The Cowberry, or Red Whortleberry—The Strawberry Tree—"A Fruyt of small Honor"—The Butcher's Broom—Thorn Apple—A Remedy for Asthma—The Henbane—Skeletonising Leaves—A Plant of Saturn —Influence of Stars on Human Life—The Writings of Matthiolus —The Dwale, or Deadly Nightshade—Its Virulent Properties— Atropine—The Juniper—The Biblical Tree so-called—Its Employ- ment in Distillation—The Antidote of Mithridates—Mistletoe— Druidic Rites—Forbidden in Churches—Parasitic—On what Trees found—The <i>Compleat Husbandman</i> —Pliny on Druidism—Mistletoe growing in Westminster—How to grow Mistletoe—Sir John Colbatch on its Medicinal Value—The Cross-leaved Mistletoe— Paley on Evidences of Design—The Columbine—What is an Indigenous Plant?—A Symbol of Grief—The Scarlet Poppy— Buttercups—The Parsnip—The <i>Sylva Sylvarum</i> of Bacon—Carrot, or Bird's-nest—Cranberries—The Bearberry—The Crowberry— Broom—Shepherd's Needle—Conclusion	162
---	-----

LIST OF ILLUSTRATIONS

PLATE	FACING PAGE
I. HAWTHORN— <i>Crataegus oxyacantha</i>	6
II. PRIVET— <i>Ligustrum vulgare</i>	14
III. SWEET BRIAR— <i>Rosa rubiginosa</i>	20
IV. FIELD ROSE— <i>Rosa arvensis</i>	22
V. HAZEL— <i>Corylus Avellana</i>	26
VI. WOODY NIGHTSHADE— <i>Solanum Dulcamara</i>	32
VII. HOP— <i>Humulus Lupulus</i>	38
VIII. BLACK BRYONY— <i>Tamus communis</i>	50
IX. BLACKTHORN— <i>Prunus spinosa</i>	54
X. SPINDLE-TREE— <i>Euonymus Europæus</i>	56
XI. YEW, <i>Taxus baccata</i> , AND DOGWOOD— <i>Cornus sanguinea</i>	60
XII. BLACKBERRY— <i>Rubus fruticosus</i>	80
XIII. STRAWBERRY— <i>Fragaria vesca</i>	88
XIV. CUCKOO-PINT— <i>Arum maculatum</i>	96
XV. OAK— <i>Quercus robur</i>	100
XVI. BEECH— <i>Fagus sylvatica</i>	110
XVII. SCOTCH PINE— <i>Pinus sylvestris</i>	116
XVIII. SPANISH CHESTNUT— <i>Castanea vesca</i>	124
XIX. HORSE CHESTNUT— <i>Esculus hippocastanum</i>	128
XX. BIRCH— <i>Betula alba</i>	132
XXI. ROWAN— <i>Pyrus aucuparia</i>	142
XXII. SYCAMORE— <i>Acer pseudo-platanus</i>	146
XXIII. PLANE— <i>Platanus orientalis</i>	152
XXIV. HOLLY— <i>Ilex aquifolium</i>	156
XXV. YELLOW IRIS— <i>Iris pseudacorus</i>	164
XXVI. ALDER— <i>Alnus glutinosa</i>	170
XXVII. GLADDON— <i>Iris fetidissima</i>	172
XXVIII. ELDER— <i>Sambucus nigra</i>	174
XXIX. STRAWBERRY TREE— <i>Arbutus unedo</i>	182
XXX. THORN APPLE— <i>Datura Stramonium</i>	186
XXXI. DWALE— <i>Atropa Belladonna</i>	196
XXXII. MISTLETOE— <i>Viscum album</i>	202
XXXIII. COLUMBINE— <i>Aquilegia vulgaris</i>	216
XXXIV. PARSNIP— <i>Pastinaca sativa</i>	228
XXXV. BROOM— <i>Sarothamnus scoparius</i>	240
XXXVI. SHEPHERD'S NEEDLE— <i>Scandix Pecten</i>	246

THE FRUITS OF THE COUNTRY-SIDE

CHAPTER I

The Ideas associated with Autumn—Often Pessimistic, but needlessly so—Autumn the Period of Fruition—The Infinite Variety of Nature—Why Fruits thought of less Interest than Flowers—The Hedgerows—Hawthorn or Whitethorn—Worlidge's *Mystery of Husbandry*—The May—The Poets thereon—Tree-worship—Haws—The Cross of Thorns—*Adam in Eden*—The Doctrine of Signatures—The Traveller's Joy—The Privet—Buckthorn—Gerard's *Generall Historie of Plantes*—The Wild Roses of our Hedges—Hips—The Sweet Briar—Eglantine of the Poets—Bedeguar—The Field Rose—Drying Plants—Hazel—Powers of Divination—The Squirrel's Hoard—Nut-shells and their Occupants—Keats on the Autumn—Prognostications from Nuts—Why we eat Almonds and Raisins—Culpeper in Defence of Nuts—The Guelder-rose—Snowball-tree—Woody Nightshade, Its poisonous Berries—Dry-beaten Folk—Black Nightshade, or Petty Morel—Hop—The Vine of the North—The Herbalist Lobel—Willow-wolves—The Ivy—Its great Variation in Form—Gerard thereupon—Is Ivy harmful to Trees?—Shakespeare on Parasites—The Poet's Crown—Christmas Decorations—Black Bryony—Red-berried Bryony—Bacon on Climbing Plants—The Blackthorn—Blackthorn Winter—Sloe Tea—Spindle-tree—Wayfaring Tree—The *Foure Bookes of Husbandry*—Parkinson's *Theatrum Botanicum*—The Yew—The Saturnalia—Clipping Dragons and Peacocks—The English Archers—Churchyard Yews—Dogwood—Honeysuckle—The Blackberry—Dewberries—Cloud-berries—Stone-bramble—Raspberry—Strawberry—Mediaeval Prescriptions—Barberry—Bird-cherries—The Cuckoo-pint or Wild Arum.

THE ideas associated with Autumn, we are afraid, are often not altogether happy ones. If we are at all inclined to be pessimistic the thought suggests itself

that the gloriously long and sunny days of Summer are at last over ; that the inevitable period of decay has come ; that nothing now remains to us but to pass through a certain season of dank discomfort until we emerge to find ourselves in the icy grasp of Winter !

That there is another and a brighter side goes without saying. Autumn is no less the season of glorious fruition, when bud and blossom have at last fulfilled their mission and changed to ripened fruit, when the long labours of the farmer have culminated in the harvest-field, and all alike—harvest-mouse and squirrel, blackbird, ploughboy, and millionaire—share the common bounty, and find yet again the great promise fulfilled that till the end of time the days of harvest shall never fail.

The busy townman, surrounded in his home by multitudinous chimney-pots and encircled by gas-lamps innumerable, thinks with kindly pity on his brother in the country who has but the lights of heaven to guide his steps, to whom pavements are a luxury unknown, and who, in lieu of the gong of the electric-car, has to be content with music so old-fashioned as that poured forth by the lark as he circles upward, ever upward, into the great azure vault. Living, as we ourselves did, for many years in a district purely rural, we found that the fixed impression amongst our urban friends was that we were to be greatly envied for three months in the year, to be no less greatly pitied for the remaining nine ; and they entirely failed to credit or realise that for twelve months in each year the country life is full of charm, the only stipulation necessary to attain that result being that one should be in sympathy with one's environment.

One great attraction of the rural life is the constant change that is going on around us ; there is really no time to be dull, no call for self-pity. In Nature's great picture gallery there is infinite variety of subject. In the clear, frosty days of mid-winter the sun, shining on the rime-covered trees and herbage, turns the whole countryside into glittering fairyland, and in the sweet Springtide, when all Nature is instinct with life, the copses teem with primroses and wind-flowers, and the woodlands are carpeted in purple with innumerable hyacinths. To these succeed the glorious Summer days, when the air is full of the melody of birds, and when everything is instinct with the joy of life ; and these halcyon days pass insensibly into the no less glorious days of Autumn, when the valleys laugh and sing with golden harvest, and the woods are aflame with the foliage of the beech, the birch, or the maple, or clothed in crimson, or russet, or purple, with a splendour that makes one's colour-box a broken reed indeed, when one would endeavour to depict something of this beauty and richness of tint. It is to these latter days we turn for inspiration for our pages, for subjects of our illustrations.

It has been suggested that while many persons will find a wealth of interest in the flowers they see around them in their country rambles, the hedgerow fruits can scarcely be expected to awaken a like regard ; but such a suggestion appears to be but a mere begging of the question, a starting-point that we cannot accept. Nor does one at all care to argue out the more or less of interest, for to the real lover of Nature the appreciation of her works is all-embracing, excluding all idea of deprecia-

tion, exalting nothing at the expense of anything else, seeing beauty and interest everywhere.

In the case of those who have not reached this catholicity of sympathy, who cannot but admit a marked preference for glorious Summer over glowing Autumn, several reasons have no doubt influenced them in their difference of appreciation. One point that occurs to one's mind is that while the fruits are often to be found in the hedgerows, they are possibly out of reach, or probably only attainable by some little risk of damage from thorns, prickles, and projecting branches, and are at all events not so easily gathered as the roadside flower. They do not, therefore, get picked and taken home to be a pleasure for days as the flowers do, and it is a commonplace in proverbial philosophy that the absent meet with scant regard. Another reason no doubt is that an atmosphere of poetry and sentiment has gathered round flowers as a whole, and on some in an especial degree; while fruits have not only not been thus idealised, but have in not a few cases been branded as poisonous things to be severely let alone. Early training has, beyond all doubt, much to answer for here; youngsters will put everything into their mouths, and some berries are undoubtedly harmful. What course, then, so simple on the part of the ignorant nurse as to save herself from all responsibility by including all wild berries in one sweeping denunciation? Yet another reason for this difference of appreciation, where it exists, is that while many popular books have dealt more or less adequately with our Flora, and freely illustrated it, books giving any great attention to the wild fruits of our land are conspicuously absent, and so attention is not called

to them. That this is a potent influence we had clear demonstration, for on asking what we considered to be a fairly representative person why flowers were more attractive than fruits, the reply was at once forthcoming, "Because flowers are so varied in form and colour, while fruits are all alike." We trust that one of the results of our present pleasant labours will be to demonstrate that this is a libel and a fallacy, that a privet-berry and an acorn are distinguishable the one from the other, that a beech-nut and a blackberry are not so identical in form and colour but that practice and observation will enable us to tell which is which.

Our purpose is a very simple one, to deal with the principal typical forms that one may reasonably expect to meet with during a country sojourn, and to deal with them in the simplest way—caring but little to send our readers to the dictionary in a wild quest for six-syllabled words of weird appearance, but caring much if the result of the perusal of our pages be to so far interest them as to send them to seek for themselves in the great Book of Nature.

We shall describe not merely the fruit alone, but give such details of the plant that bears it as may, we trust, increase our interest in it; and our subject will be found to fall very naturally into three sections: that dealing with the plants of our hedgerows; that occupied with the trees of our woodlands; and a third division, yet more comprehensive, that will concern itself with the Flora of the stream, the breezy moorland, the meadow, and generally any locality of botanical interest outside the locale of chapters one and two.

HAWTHORN (CRATÆGUS OXYACANTHA).

Skirting, then, our hedgerow we soon encounter the hawthorn, the subject of our first illustration, a shrub of abundant occurrence, well known, therefore, doubtless to most of our readers, but scarcely to be omitted from our series on that ground.

While the hawthorn is undoubtedly indigenous and may be found taking its place amongst the other trees in our forests, we are most of us, perhaps, more especially familiar with it as a valuable material for making hedges, and that this use of it is of very considerable antiquity may be gathered from the fact that the Anglo-Saxon name for the plant is "hæg-thorn," the hedge-thorn. That it may claim a place, however, amongst British forest trees must not be overlooked, as specimens are on record, having trunks with a circumference of ten feet, and a height of some fifty feet. The timber is of firm texture and capable of taking a fine polish.

These old thorns, and some of them are known to have been in existence over two centuries, are ordinarily very picturesque in appearance, as their stems are extraordinarily contorted and interwoven, and we may often, on bleak hillsides, find specimens of perhaps not more than ten or twelve feet high, yet looking as venerable as forest trees centuries old, with their stems closely wreathed together and thickly covered with grey lichen.

Returning to our hedgerow, however, we find that this same freedom of interweaving of the branches makes the hawthorn of great value as a hedge-maker.¹ We have but

¹ Seeing that Fencing and Enclosing of Land is most evident to be a piece of the highest Improvement of Lands, and that all our Plantations



HAWTHORN

to contrast it for a moment with the elder, a plant we sometimes find introduced in the hedgerow, to realise this. Whatever our mission, blackberrying, birdsnesting, or what not, if we can only find a place where the hawthorn gives place to an elder-bush we shall find the hedge much more vulnerable than where the mass of closely gathered, thorn-clothed branches of hawthorn bar our passage.

The hawthorn is known as the whitethorn also, in contradistinction to the blackthorn, the subject of our ninth illustration. This name is not confined to ourselves, as in France the hawthorn is the *epine blanche*, in Spain it is the *Espino blanco*, while in Italy it is known as the *bianco spino*. The name arises from the comparative lightness of colour of the stem of the hawthorn as contrasted with that of the blackthorn, but the names are not particularly happy in either case, one of these stems being by no means black, while the other has absolutely no claim to be considered white.

In the early Summer the tree is a mass of fragrant blossom,¹ and so another of its popular names is the May.

of Woods, Fruits, and other Tillage are thereby secured from external Injuries, which would otherwise lie open to the Cattle, and also subject to the lusts of vile persons, we are obliged to maintain a good Fence, if we expect an answerable success to our Labours. I shall therefore enquire out the most proper Trees for that purpose: And first, the Whitethorn is esteemed the best for fencing; it is raised either of Seeds or Plants; by Plants is the speediest way, but by Seeds, where the place will admit of delay, is less charge, and as successful, though it require longer time, they being till the Spring come twelvemonth ere they spring out of the Earth; but when they have past two or three years, they flourish to admiration.—Worlidge. *The Mystery of Husbandry Discovered*, 1675.

¹ There sawe I eke the fresh hauthorne
In white motley, that so swete doth smell,
Asshe, firre, and oke, with many a yong acorne,
And many a tree mo then I can tell.

—*The Complaint of the Blacke Knight*.—CHAUCER.

It was in the olden time employed to garland the maypole, and to take a generally honoured and conspicuous place in the festivities of May-day. The bursting of the leaf-buds, transfiguring the plant in a few short days from its Winter condition of leafless stem to a mass of verdure, and thence onward to its vesture of snow-white blossoms, is one of the most characteristic indications that the long-looked-for Spring has at last really come. Thus Spenser, in drawing up his *Shepherd's Calendar*, writes :

Seest thou not thilke same hawthorne stude
How braggly it begins to budde
And utter his tender head ?

While Thomson, in his *Spring*, dwells upon the whitening hawthorn. In like manner Shakespeare indicates that delightful time

When wheat is green, when hawthorn buds appear,

and, with no less truth of observation, tells, in *King Lear*, how

Through the sharp hawthorn blows the cold wind,

for, in the bleak days of Winter, the icy breezes whistle keenly enough amid its leafless branches, and though Goldsmith pictures to us

The hawthorn bush, with seats beneath the shade
For talking age and whispering lovers made,

it yields, when it has lost its mantling of foliage, poor screen indeed against the wintry blast, the driving snow.

The clustering May blossoms give place later on to the crimson berries that we figure in our illustration, and these are oftentimes so numerous that the general effect of the tree at a little distance is that of a crimson spot in

the landscape. These berries are known as haws, a name that has descended to us from Saxon times. These haws are very popular with many kinds of birds, and supply them with very welcome and abundant food, and as the Winter draws on they become in great request. Bacon, in his quaint *Natural History*, declares it "an observation amongst country people that years of store of hawes and hips do commonly portend cold winters; and they ascribe it to God's Providence, that, as the Scripture saith, reacheth even to the falling of a sparrow, and much more is it like to reach to the preservation of birds in such a season."

To the ordinary man or woman—we exclude the ordinary boy, as he is practically omnivorous—these haws do not appeal very strongly. One does not hanker after them, or count the months round to their return, but they are eatable, and are occasionally eaten in time of dearth, and in some parts of the world they are even fermented into a kind of wine. In an old book open before us we see that they are declared to be "good food for Hogges, and therefore the Swineherds do beat them down for them." One can only wonder, as in the case of those multitudinous ants that the great ant-eater draws up on his tongue, or the animalculæ that the whale, some millions their size, makes a meal on, how many of these little berries are necessary to produce that feeling of satiety that the Hogge would consider as approaching his ideal.

Our forefathers believed that he who wore a piece of hawthorn in his hat was safe from all peril of lightning, could face unscathed all heaven's artillery; and another article of faith was that its spiny stem was entwined into

the thorny cross of Calvary.¹ This association with the person of our Lord was held to give it many virtues, preserving the wearer thereof, not merely from the perils of the storm, but from all the wiles and malevolence of ghostly visitants. In many parts of rural England it is yet held an ill-omened thing to chop a hawthorn down, and, with strange inconsequence, it is held unlucky to bring its blossoms into the house, unless, perchance, the evil of gathering it was deemed more potent than the good that accrued from its possession.²

Few of our plants excel the hawthorn in wealth of literary association. Chaucer tells us how for the May-day festival all went forth into the fields

To fetch the flowres freshe, and braunche and blome,
Fresh garlandes of the hawthorne

being specially sought. The old poet revelled in "the month of Maie," and found in it a theme on which he delighted to dwell. In one of his poems he bids us mark

The faire blooming of the hawthorne tree,
Who, finely cloathed in a robe of white,
Fills full the wanton eye with May's delight.

¹ Then was our Lord yled into a gardyn, and there the Jewes scorned hym, and maden hym a crown of the braunches of the Albiespyne, that is Whitethorn, that grew in the same gardyn, and setin yt vpon hys hed.—Sir John Maundeville.

² Many of the old beliefs concerning plants were passing strange. Googe tells us, for instance, in 1577, that "Basyll is an hearbe that is vsed to be set for the excellent sauoure that it hath: it is also good for the potte: it is sowed in March and April and delighteth in sonny ground. Basyll is best watred at noone. Theophrastus sayth that it prospreth best when it is sowed with curses." What is to be the objective of these imprecations we do not learn, they should have some definite target, and it could scarcely be the plant itself.

In *L'Allegro* of Milton we find the oft-quoted lines—

And every shepherd tells his tale
Under the hawthorn in the dale,

Some prosaic souls have ventured to assert that this proceeding has absolutely nothing to do with the tender passion—that the hawthorn was merely a convenient landmark to assemble his flock of sheep around while he numbered them—but we have seen that Goldsmith very definitely indeed assigned the hawthorn's shade to his whispering lovers, while Burns, no less, "beneath the milk-white thorn" introduces us to a "youthful, loving, modest pair," who, whatever the engrossing subject of their thoughts, are certainly not counting sheep. Moore, apostrophising May and all its flowers, gives place pre-eminent to the "sweetly scented thorn"; and Kirk White writes of "fragrant hawthorn, snowy flowered." Burns, Keats, Scott, and many others of our poets have happy reference in their works to the charm of the flower, though space will scarce permit quotation.

It is curious to reflect how these May-day celebrations, the mirth, the music, the dancing around the gaily decorated Maypole, like the rejoicings in our homes around the brightly lighted Christmas-tree bearing its gifts amidst its verdure, are survivals of pagan observance. The whole subject of Tree-Worship is very wonderful, and of abounding interest. We read in the Bible of the worship in the sacred groves, and we find the sacred tree an object of adoration amongst the Chaldeans forty centuries before the Christian era. We see it again on the slabs from the palace-temples of Nineveh and on the ancient buildings of a bygone race in Mexico, while the Greeks sought

their oracles, as did the Druids of Britain and Gaul, amidst the oak groves. Ancient Persia, and ancient India, no less show in their sculpture the veneration for the sacred tree, and it would appear to be a cult common to almost all forms of primitive religion the wide world over, and in some mysterious way respondent and dependent on the Tree of Life in the Paradise of God.

The fruit of the hawthorn was held in much esteem by the earlier writers, thus we find William Coles, in his delightful book *Adam in Eden*, published in the year 1657, declaring that "the Powder of the Berries, or the seeds of the Berries being given to drink in Wine, is generally held to be singular good for the Dropsy." He also affirms that "the Flowers steeped three days in Wine and afterwards distilled in Glasse, and the water thereof drunk, is a Sovereigne Remedy for the Pleurisy and for inward tormenting paines, which is also signified by the prickles that grow on this Tree."

This significance of the prickles is an allusion to the lively faith held by our forebears in what is called the Doctrine of Signatures. This belief was that God in His goodness to man, not only created herbs of healing for the woes of suffering humanity, but also impressed them with a definite sign of their special service, so that it needed but reverend care and thoughtful observation to enable the sufferer to see the guiding hand of Providence and find the alleviation that he sought. In the present case the prickles, prompt to wound, were a reminder of the sharp pains of disease that this plant could in consequence heal. Coles, therefore, declares elsewhere that "the distilled water of the Flowers of hawthorne is not onely cooling, but drawing

also, for it is found by good experience that if Cloathes and Spunges be wet in the said Water and applyed to any place whereinto Thornes, or Splinters, have entered and be there abiding, it will notably draw them forth, so that the Thorne gives a Medicine for its own pricking, as many other things do besydes, if they be observed."

In the fourteenth century, or Decorated period, of Gothic architecture a great use was made of natural forms in the wood and stone carvings, flooring tiles, and so forth. Thus we find the hop, bryony, nut, oak, maple, rose, and many other plants, and amongst these the foliage and fruit of the hawthorn is often beautifully introduced. The cathedrals of Exeter, Winchester, Lincoln, Ely, and Wells, afford excellent examples of this use of one plant. Botanically the hawthorn is the *Cratægus Oxyacantha*.

TRAVELLER'S JOY (CLEMATIS VITALBA)

Trailing for long distances over the hedges, and especially in chalk districts, will be found the "Traveller's Joy," a name suggestive of its appreciation by the wayfarer. Like the bindweed, hop, and divers other climbers that support themselves by the aid of other plants, it has a keen sense of looking after its own interests, throwing its stems and leaves well forward into the air and sunlight at the expense of the other hedgerow plants. The scientific name is *Clematis Vitalba*. The Traveller's Joy has no tendrils, but supports itself very firmly by twisting its leaf stems tightly round any practicable branch of hawthorn, or maple, or guelder rose, or whatever else may be available "re-compensing well the strength they borrow with the grace

they lend," as the poet hath it, though the views of its neighbours in the hedgerow might be somewhat differently expressed, including such mere prose as aggression, suffocation, and such like unpoetic language. The clustering flowers, a whitish-green in colour and fragrant in odour, are succeeded by the fruits, each little fruit, botanically called an achene, being terminated by a long and feathery awn of a pale silvery-grey colour. These clusters are produced abundantly and form a very noticeable and attractive feature. From their soft, fluffy appearance and colour the plant is sometimes called "Old Man's Beard," while it is also known as "Virgin's Bower," from an old legend that the Virgin Mary, during the flight into Egypt, found rest and shelter beneath its shade from the noonday heat. The plant lends itself very happily to covering and festooning trellis-work, and the clothing of our summer-house if we so please.¹ When gathered in the fruiting stage it retains its charm for a long time, and is a notable addition to our hedgerow bouquet, no longer, as in the Summer, of floral gatherings, but now selected from the wealth of Autumn, of scarlet hips and crimson haws, of the coral-like fruits of the spindle tree, the orange-yellow foliage of the beech, the deep purple-bronze of the guelder rose sprays—a mass of beautiful and most varied colour.

¹ As concerning *Arbors, Seats, etc., in Orchards and Gardens*, I advise men to make them of *Fruit-trees*, rather than of *Privet*, or other rambling stuffe, which yeelds no profit, but only for shade. If you make them of *Cherry-trees, Plum-trees*, or the like, there will be the same advantage for shade, and all the *Fruits* superadded. All that can be objected is, that *Fruit-trees* are longer in growing up than *Privet, Virgine Bower*, or the like, whereof *arbors* are commonly made. It is answered, Though *Fruit-trees* are something longer in covering an *Arbor*, then some other things, yet they make sufficient amends in their *lasting and bearing fruits*.—Austen's *Treatise of Fruit Trees*, 1657.



FRIVET

PRIVET (*LIGUSTRUM VULGARE*)

Noticeable from their sombre colour amongst the other wild fruits of the countryside are the clusters of black berries of the privet. Though so commonly found in our hedgerows, the privet is really a wild plant; its true home is in the woods and copses, where it attains a height of some seven or eight feet, and it is found in this wild state over most of Europe and throughout Western Asia. It forms the subject of our second illustration.

The privet cannot quite be classed as an evergreen, though it practically amounts to this, since most of the leaves remain on the stems until they are thrust off by the succeeding growth in Spring. When the season is a hard one, or the position is exposed the foliage often assumes a dull purple or bronze-colour. The leaves, it will be noticed in our illustration, grow in pairs, are very simple in form, and have their margins one continuous line; there is no notching of their edges. They are bitter and astringent to the taste, so that they offer no great temptation to horses or cattle, though we sometimes find sheep and goats will nibble at them.

The flowers of the privet are found in May and June, growing in dense clusters at the ends of the upper stems. They are white in colour, and have a strong and not altogether agreeable odour. Such at least is our own verdict, but tastes proverbially differ, and we see that one writer calls them "sweet scented blossoms," while another credits them with "possessing an agreeable fragrance." After these somewhat offensive or altogether delightful flowers succeed the berries, and these, if un-

molested by the blackbirds, thrushes, bull-finches, and other birds to whom they are acceptable, remain on the plant throughout the winter. Though we are most familiar with them in their dense black stage, when they are naturally most noticeable, they commence their career a bright and rather raw green. If we open a berry we find that it contains two cells or seed-chambers, and in each of these are one or two seeds. One's broad idea of a berry is that it is ordinarily a round thing; however true this may be as a general working principle to go upon, the fruit of the privet is more pronouncedly globular even than most. When bruised and submitted to heavy pressure the berries will yield an oil of fair quality, which in some parts of the Continent becomes an article of commerce.

The privet in scientific garb is the *Ligustrum vulgare*. The genuine name is derived from the Latin word *ligo*, to bind, the long pliant stems being available for tying up bundles, while the specific name indicates the commonness of the plant. Why it should be called privet does not very clearly appear. By some of the older writers it is called prim, print, and primprint. It has been suggested that the name prim has reference to the neat and orderly clipping that it is willing to undergo, but while we must perforce admit that every plant-name has a meaning we must be equally ready to admit that this meaning is often obscure or entirely lost. The ancients often mixed up the names terribly, thus in the middle ages the plant they called *Ligustrum* or privet was what we now know as the primrose, and if we go some centuries back the various names were so interchanged,

from defective translation, imperfect knowledge of the plants and other causes, that it becomes often quite impossible to arrive at any safe conclusion as to the plant intended.

BUCKTHORN (RHAMNUS CATHARTICUS)

Another common plant bearing black berries is the buckthorn. This is found in hedges and copses fairly abundantly throughout the country, but thrives best in chalk districts. When growing really wild and beyond the levelling influence of the hedge-cutter's shears it reaches a height of some twelve feet or so. The main branches bear thorns not a few, while the smaller branches often terminate in a sharp spine. The wood of the buckthorn is hard, and is sometimes used in turnery from its density of texture, but is too small in section to be of any extended value in the arts. The leaves are of a bright clear green colour, elliptical in form, strongly veined, and deeply toothed. They grow in alternate arrangement on the stems, and from their axils spring rather large clusters of four-petalled greenish-yellow blossoms; these will be found in May and June.

After the flowers have passed away they are succeeded by numerous round berries of shining surface, at first green, but by September of a bluish-black colour; these are about as large as a pea, and each contains four smooth hard seeds. When these berries are bruised they are found to contain a greenish pulp that is bitter and nauseous to the taste, and from this pulp is prepared the syrup of buckthorn, a rather potent and uncertain medicine. Though long holding a place in the pharmacopœia, it is little used in

regular practice, but finds a home in rustic pharmacy, sometimes as many as twenty berries being given as a dose.¹ Lyte, in his translation of the *Herbal of Dodonæus* quaintly declares that "they be not meete to be ministered but to young and lustie people of the countrie, who doe set more store of their money than their lives," preferring rather to risk hedgerow drugs and old wives' prescriptions than to call in the trained practitioner. The berries are a good deal used in veterinary practice.

The berries when gathered in an unripe state yield a yellow dye, employed for staining Turkey and Morocco leather and other purposes, but if they be matured the result is a green dyeing material. The berries pressed and then boiled with a little alum make the pigment known to painters in water-colour as sap-green. The stems have also some little tinctorial value, or at least had in the past, as in these latter days commercial facilities and enterprise bring to our shores the finest products of the world, and the home-grown article cannot always compete with them. A preparation of the stem, either as powder or in form of a decoction, was once in repute as a tonic, and as an application to inflamed eyes or obstinate cutaneous trouble; but here again the resources of the world have supplanted what may once have been good by that which is better.

Botanically our plant is the *Rhamnus catharticus*, the

¹ They are given being beaten into powder from one dram to a dram and a halfe: divers do number the berries, who give to strong bodies from fifteen to twenty or more; but it is better to breake them and boile them in fat flesh broth without salt, and to give the broth to drinke.—Gerard, *Generall Historie of Plantes*, 1633. The book passed through a great many editions; the date we assign is merely that on the title-page of our own copy.

word *Rhamnus* being derived from the Greek word for branch, in allusion to the branching spreading growth of the plant, while the specific name bears testimony to its cathartic medicinal properties. To entomologists the plant is of interest as being the food-plant of the caterpillar of the Brimstone butterfly, the *Gonopteryx rhamni*. This is that common and beautiful sulphur-coloured butterfly, which, though emerging from the chrysalis in Summer, hibernates in some sheltered spot, and comes out to gladden our eyes in the bright Springtime, when a day of sunshine and increasing warmth tempts it forth.

SWEET BRIAR (*ROSA RUBIGINOSA*)

The various kinds of wild roses that deck our hedgerows in the Summer with their fragrant and delicate blossoms, contribute no less to their adornment in the Autumn, when their scarlet "hips" are welcome items in the general wealth of colour of fruit and foliage so characteristic of that season of the year. One of the most charming of this goodly company is the sweet briar, of which Plate III. gives us an illustration in its fruiting stage.

The stems of the plant, and the under-surfaces of the leaves, are abundantly supplied with small glands, and these yield, when pressed, the aromatic scent that gives the shrub its best-known name. An alternative name is the eglantine, and this is the one that is generally bestowed on it by the poets. The name has a poetic ring about it, but its origin is very obscure, and if we accept it as referring to the rather specially prickly nature of the

plant,¹ has a basis of very distinct prose indeed ; to tear one's clothes, to lacerate one's fingers, being proceedings that carry very little suggestion of sentiment with them.

Sweet is the rose, but grows upon a brere,
Sweet is the eglantine, but pricketh nere,²

The plant was often transplanted to the garden, thus Spenser tells us how

Art striving to compayre
With Nature did an arber green dispred,

and in this godly bower of "wanton yvie" and other plants, a place of honour was bestowed on

The fragrant Eglantine which spread
Her prickling armes, embroyled with roses red,
Which daintie odours round about them threw ;
And all within with flowres was garnished,
That when wild Zephyrus amongst them blew,
Did breth out bounteous smels, and painted colours shew.

Chaucer, too, writes of one who sat embowered, not in "wanton yvie," but in a cool recess of which "greene laurey tree" was a notable feature, but which yielded also

A delicious smell,
According to the eglentere full well.

In another passage in the same poem, *The Flowre and the Leafe*, we find that

¹ The Latin word for a prickle is *aculeus*. Softened in old French into the adjective *aiglent*, from *aculentus*, covered with prickles, we arrive by easy stages to *aiglentier* and the modern French *eglantier*. We must remember that after the Norman Conquest French was the language of culture in England for centuries.

² Spenser. Sonnet 26.



SWEET BRIAR

The green herbere
With Sicamour was set and eglatere,¹

The hips of the various roses are pleasantly sweet to the taste and especially when mellowed by a little frost, but within the outer covering the one-seeded carpels lie ensconced in a bed of soft hairs, and if any of these be swallowed they prove most irritating to the throat. One sometimes finds these hips an item in the repasts of our forefathers. Gerard, we see, writes in 1633, "The fruit when it is ripe maketh most pleasant meats and banquetting dishes, as tarts and such-like; the making wherof I commit to the cunning cooke." As, however, he adds "and teeth to eat them in the rich man's mouth," it would seem to show that even the best culinary skill the wealthy could command found them a little difficult to deal with. At all events, we have in these days of world-wide commerce so much greater choice of fruit than our ancestors that these hips will probably henceforth be handed over ungrudgingly to the birds.

Conserve of roses figures in the pharmacopœia; while acidulous and refrigerant it is chiefly used as a vehicle for other medicines. It is prepared by beating up the pulp of the fruit of the dog-rose with three times its weight of white sugar. In Russia and Sweden this sweetened pulp, after fermentation, is made into a kind of wine.

We not infrequently find on the wild rose a curious flossy tuft of a dull crimson colour. It is indeed so

¹ In like manner Barnfield, a less read poet, in his *Affectionate Shepherd*, writes,

I would make cabinets for thee, my love,
Sweet-smelling arbours made of Eglantine.

common that one old name of the dog-rose is the canker-rose. It is a morbid growth, an excrescence produced by the puncture of an insect. On cutting it open we find within it several cavities and in each of these a maggot. This morbid development was by the older writers called bedeguar, and, like most other things, was held of medicinal value.

FIELD-ROSE (*ROSA ARVENSIS*)

The field-rose, the subject of our fourth illustration, is somewhat less common than the dog-rose, though in many parts of England and Ireland it is abundantly to be encountered. In Scotland it is much less freely seen. It flowers at a rather different period, for though there is a time common to both when the dog-rose and field-rose are flowering together, the first is in bloom earlier than this and the second later. The field-rose trails many feet with its slender branches. This is a feature so marked that the plant is sometimes called the trailing dog-rose. Its leaves are shining, prickles small, flowers white, and with little or no scent. They cluster together more than the blossoms of the dog-rose or sweet briar, and the fruit is nearly globular. Another distinctive feature is that the calyx segments which we see very markedly crowning the wild briar hip, fall off in the present plant, giving at once a very different appearance. A glance from our third illustration to our fourth will make this point very evident. The sweet briar is in botanical parlance the *Rosa rubiginosa*, the dog-rose the *R. canina*, and the field-rose the *R. arvensis*.

Those who would desire to dry plants, or at least their



FIELD ROSE.

leaves and flowers, as the fruit is ordinarily not amenable to treatment, should gather them in dry weather, place the specimens between blotting-paper, and then submit them to a heavy weight, being careful in the first place to arrange and display them in a natural manner. They should from time to time be examined and the blotting-paper changed. Heat is sometimes adopted, and with some plants it acts very well. The plants in this case should be arranged between sheets of blotting-paper, placed in a broad flat pan, covered over to a depth of about half an inch with dry sand and then put before the fire, or in the oven if it is not too hot. In three or four hours the specimens should be perfectly dried. Another method is to place the plants between blotting-paper and then iron each individually, very gradually, and with the iron not too hot. The essence of this method lies in the word gradually. It takes time and patience, but the results often come out very well.

HAZEL (*CORYLUS AVELLANA*)

Though the hazel is so commonly met with in our hedges, we must not forget that, like the hawthorn and some other denizens of the hedgerow, it may really take rank as one of our trees, not indeed in competition with the kingly oak, the far-spreading beech, the aspiring poplar, but a tree nevertheless. At the hands of the hedge-clipper it has to share and share alike in the general lopping and trimming, but when we find it in woodland or copse, where it grows as Nature wills it, it may attain to a very considerable height and girth.

The flowers are developed in the early Spring while the tree is yet leafless. These flowers, inconspicuous in themselves, grow in clusters, the male flowers being grouped into long, pendulous catkins, while the female blossoms are in minute tufts closely adherent to the stems, and only noticeable, from the crimson stigmas, two from each of the little flowers, that surround these clusters. The leaves, as may be seen from our illustration, Plate V., are large and rounded in form, having their outlines strongly serrated, and the veining very conspicuous. The under-surfaces are more or less downy to the touch. When young the foliage is of a clear green, but as it grows older it soon becomes of a somewhat dull colour. As Autumn comes on the leaves turn a good strong yellow and remain on the stems until the season is far advanced.

The stems of the hazel are very pliable.¹ Virgil, centuries ago, commended them for binding other plants. They are used nowadays for weaving into hampers and baskets, the making of hurdles, hoops for casks, and the like. Cut up into faggots they yield a very good fuel for the cottager, and they supply an excellent charcoal for the making of gunpowder, the preparation of filtering beds, and so forth. The tree will also give us walking-sticks or fishing-rods, and, where the branches are sufficiently large, the wood may be used in cabinet work, as it is beautifully mottled and variegated.

The ancient Romans observed the hazel with particular

¹ Kate, like the hazel twig,
Is straight and slender, and as brown in hue
As hazel nuts, and sweeter than the kernels.

—*Taming of the Shrew.*

care in the Spring, drawing from it good or bad omens for the harvest, and it is still a general belief that a good nut year is also a good wheat year. For centuries the hazel rod was held to possess powers of divination, and it was employed to discover hidden treasure or subterranean springs, and to detect criminals. Grasped lightly in the hand it was thought to turn by some occult power and thus indicate the object sought. The hazel grows wild all over temperate Europe and in many districts in Asia, so that we must not run away with the idea that "going nutting" is at all an exclusively British pastime. The demand for the fruit is immense, and thousands of bushels are brought each year to our shores from Spain, Italy, and Syria to supplement our home supply. The nuts grow ordinarily in small clusters of two or three together, and each is surrounded by an envelope of scales, united at their bases and deeply jagged and lobed. These are the now much enlarged scales that heretofore protected the little flowers in the boisterous days of March. This envelope or enclosing cup, together with the nut therein, presently turns brown, a sign of approaching maturity of the nut, and when it is fully ripe it falls out of this cup. Such nuts are by the rustics called "slip-shucks." These nuts, so freely provided by the bounty of Nature, are not delectable to the genus boy alone, but supply most welcome provender to several kinds of birds—as, for example, the nuthatch—that are armed with sufficiently strong beaks to pierce the woody shells, while squirrels, notably, and divers other small animals find them most acceptable for a present feast, and still more invaluable for storage in view of the coming days when the rich abundance of

Autumn¹ will have given place to the dearth of Winter. We may sometimes find on cracking a nut open that in lieu of the kernel we had anticipated we are confronted by a stolid and corpulent maggot ; this, if we had not thus crashed in upon him, would presently have become the beetle that to entomologists is known as the nut-weevil.

We sometimes declare, as an evidence of concentration, that the whole matter we are dealing with lies in a nutshell, while the empty shell may be accepted as the symbol of worthlessness. Thus Gower, in his *Confessio Amantis*, writes—

And so recorde I my lesson,
And write in my memoriall
What I to hir telle shall
Right all the matter of my tale,
But all is nis worthe a nutte shale.

Shakespeare, seeing poetry and beauty everywhere, puts even a discarded nutshell to honoured service, for he tells us of sweet Queen Mab, the Queen of Fairyland, that

Her chariot is an empty hazel nut,
Made by the joiner squirrel, or old grub,
Time out of mind the fairies' coach-makers.

How delightful could we but in some quiet woodland

¹ Season of mists and yellow fruitfulness,
Close bosom friend of the maturing sun,
Conspiring with him how to load and bless
With fruit the vines that round the thatch-caves run ;
To bend with apples the mossed cottage trees,
And fill all fruit with ripeness to the core ;
To swell the gourd, and plump the hazel shells
With a sweet kernel ; to set budding more
And still more, later flowers for the bees,
Until they think warm days will never cease.

KEATS.



HAZEL

glade, far from the busy haunts of men, see this stately procession and the nutshell coach rumbling along in its midst, while the hare-bells rang a joyous peal of welcome!

The hazel is in botanic nomenclature the *Corylus Avellana*. The first of these names is centuries old, and it is surmised that the ancient Greeks gave this title to the plant from their word for a cap, the fruit in its husk suggesting this idea of covering to them. Pliny tells us that the best nuts came from Avella, a town of Campania, hence the specific name Avellana. The French call the nuts *avelines*, the Spanish *avellanas*, and the Portuguese *avellaas*; while our popular name, hazel-nut, is pure Anglo-Saxon. In Germany it is the *haselnusse*, in Denmark *hasselnod*, in Holland the *hazelnoot*.

The power of divination, that was held to exist in the stems, was extended to the fruit also. Thus an old writer affirms that "being broken assunder they doe foreshow the sequell of the yeare, as the expert Kentish husbandmen have observed by the living things found in them; as, if they finde an ant they foretell plenty of graine to ensue; if a white worme like a gentill or magot, then they prognosticate murren of beasts and cattell; if a spider, then we shall have a pestilence or some such-like sicknesse to follow amongst men. These things the learned also have noticed and observed, for Matthiolus, writing upon Dioscorides, saith that "before they have an hole in them they containe in them either a flie, a spider, or a worme: if a flie, then warre ensueth; if a creeping worme, then scarcitie of victuals; if a running spider, then followeth great sicknesse and mortalitie." With what awe would the simple woodcutter regard so dire a presage

of the coming woe, listening in anticipation, and with shivering dread, in the quiet sunny lane, to the march of the foe, or to the low moaning of the foodless, and, perchance, hearing in the gentle breeze the rustling of the swift wings of the destroying angel bringing vengeance and desolation on the unconscious land.

It has for centuries been the custom to burn nuts on the Eve of All-Hallows, drawing omens and foretelling the future, but these observances have ordinarily been of a more or less festive character ; thus Burns tells how—

Some merry-friendly countrie folks
Together did convene,
To burn their nuts; e'en pon their stocks,
And haud their Hallowe'en.

These blazing nuts were often used as love-charms, their readiness to catch fire, the vigour of their crackling, the intensity of their glowing all being regarded as symptomatic of the depth or otherwise of the affection they were employed to test—

Two hazel nuts I threw into the flame,
And to each nut I gave a sweetheart's name;
This, with the loudest bounce we sore amazed,
That, with a flame of brightest colour blazed;
As blazed the nut, so may thy passion grow,
For 'twas thy nut that did so brightly glow.

The hazel nut yields an oil that is of much value for the lubrication of delicate machinery, such as watch-work, the works of sewing machines, and the like. Evelyn declares that “these nuts, being fully ripe, and peeled in warm water, make a pudding very little, if at all, inferior, to that our ladies make of almonds.” One old medical book, we see, says, and truly enough, that “nuts eaten alone

in too great quantity are not to be commended, for they are said to be hard of digestion, yet if any one be so much taken with them that he cannot refrain from them, let him eat Raisons together with them, so that the moisture of the one may qualifie the drynesse of the other." This clearly is the philosophy of that popular dessert dish, almonds and raisins, bane and antidote producing together a very pleasant blend.

Culpeper, we note, in his *Astrologo-Botanical Discourse on Herbs*, edition of 1681, flies so markedly in the face of general belief as to specially prescribe nuts as a medicine for pulmonary trouble. Conscious of his departure from accepted practice he breaks out somewhat fiercely—"Why should the vulgar so familiarly affirm that eating nuts causeth shortness of breath, than which nothing can be falser? Or, how can that which strengthens the lungs cause shortness of breath? I knew Tradition was a friend to errors before, but never that he was the father of slanders: or are men's tongues so given to slander one another that they must slander nuts too, to keep their tongues in use? If any thing of the nut be stopping 'tis the husks and shells, and nobody is so mad as to eat them, and the red skin which covers the kernels, which you may easily pull off. And thus have I made an apology for nuts, which cannot speak for themselves."

GUELDER ROSE (*VIBURNUM OPULUS*)

Beautiful alike in Summer and in Autumn, the guelder rose must be by no means disregarded in our review of Nature's pageantry. Seen in June it is a mass of creamy-

white blossom, revisited in August or September it is bedecked with abundant clusters of ruddy berries, globular in form, and each containing a single seed. These clusters, from their weight, are ordinarily more or less drooping, and vary very greatly in colour, those portions of the bunch that enjoy the full sunlight being much deeper in tint than the rest, so that, alike in collective bunch and in individual berry, we get portions that are a deep crimson, contrasting with others passing in all gradations from this to a clear golden yellow. When rather more than fully ripe the berries become almost black and lose much of their original attractiveness.

The guelder rose is abundant in most coppices and skirting the margins of the woodlands, and not unfrequently finds a place in the hedgerows, a somewhat moist situation seeming to suit it best. It is really a small tree, attaining a height, maybe, of some twelve feet or so, but of necessity has in the hedgerow to take its share in the general levelling down.

In the large flower-heads of the wild guelder rose we find two entirely distinct forms: in the centre the blossoms are closely clustered together, individually small, but perfect in structure; while surrounding these there is a ring of much larger flowers that are reduced to a flat, disk-like, five-lobed corolla, stamen-less, pistil-less. It is this outer ring that is the conspicuous and attractive feature, if not to the botanist, at least to the lover of the quaint and picturesque. The tree is sometimes called the rose-elder; it was the standard name for it two or three hundred years ago amongst the herbalists, but the name is not a very happy one. If we are content to view the trees at such

a distance as to lose all detail the elder and the guelder rose will appear of about the same height, and are each seen to be bearing rather large clusters of white flowers, but there all resemblance ceases. The foliage of the guelder rose is not in the least like that of the elder, the flowers of the elder bear no similarity to those of the guelder rose, *voilà tout*. The leaves of the guelder rose turn a very rich crimson-purple in the Autumn, and remain for some considerable time on the tree.

The snowball tree, often met with in gardens and shrubberies, with its great globular masses of blossom, is a cultivated variety of our plant. In this, instead of merely an outer ring of large and barren flowers, all are enlarged and barren, one result, of course, being that these garden guelder roses, beautiful as they are, have not the added charm of clustering fruit for our delectation.¹

The berries of the wild guelder rose look fairly tempting, but if tasted they are found to be bitter and no longer inviting. Our older writers on plants were so accustomed to ascribe the most wonderful healing properties to almost everything they could lay hands on, that it is really a matter for wonder to find one of these venerable authorities declaring that "concerning the faculties of these, and the berries, there is nothing found in any writer, neither can we set downe anything hereof of our owne knowledge."

In the botanical lists our tree is the *Viburnum Opulus*. Virgil, writing many a century ago, often incidentally

¹ There come forth goodly floures of a white colour, and do grow thicke and closely compact together in quantitie and bulke of a man's hand, or rather bigger, of great beauty, and sauoring like the floures of the Haw-thorne: but in my gardens there growth not any fruit vpon this tree, nor in any other place, for ought that I can vnderstand.—Gerard, 1633.

mentioned plants in his poems, and amongst these we find reference to the *Viburnum*, but it is not at all possible to assign satisfying English equivalents to many of his plant-names, and the present case is one of these many. If we venture so far as to say that perhaps his plant was the guelder rose, and that more probably it was not, we have travelled as far as we dare go in this direction. In the middle ages the monks, who were the great herbalists of those days, ministering alike to the souls and bodies of men, gave the Latinised name of *Opulus* to our tree, and this by the common people was corrupted to ople-tree, the name by which Gerard and other writers on plants in the vulgar tongue refer to it. We have high authority for declaring that a rose by any other name would be as sweet, and our present plant, whether we call it ople or elder, or anything else, is a charming acquisition to our goodly store of woodland wealth of beauty.

WOODY NIGHTSHADE (SOLANUM DULCAMARA)

The woody nightshade, *Solanum Dulcamara*, claims next our attention. It is figured on Plate VI. and one or two points will probably at once attract our notice as we study its likeness. Our assumption, by the way, that our representation *is* a likeness will not, we trust, shock our readers, for it, and its fellows are, to the best of our ability, true presentments. In all cases our studies have been made directly from Nature, and no leaf, or flower, or berry, in these pages but had its living counterpart.

The first point that cannot fail to attract notice is



WOLF-TREE FRUIT.

the great variation of colour found in the berries of this plant as they travel on from birth to maturity. Even on a single small bunch we may often get this variety of tint ; as many colours, maybe, as berries. The fruit, starting life a bright clear green, goes through a series of gradations until it finally becomes a rich crimson, and these changes are very subtle and very interesting to watch. We may perhaps realise them better if we take our colour box and mix blue and yellow together. From this blend we shall obtain a green that stands for stage one in the life history of our berry. If we gradually eliminate the blue the green becomes yellower and yellower, until it stands presently before us pure yellow pigment, and if we now add a little vermilion to this, our yellow begins to turn orange, and even more and more orange as we add more scarlet, until we have added so much that all suggestion of the former orange disappears, and the result is pure red. We may see the same interesting variation and transition in the fruit of the black bryony, the plant we have figured in our eighth illustration.

Another curious point that our sketch reveals in the growth of the plant is the peculiar way in which the leaves persist in facing in one direction, while the clusters of flowers, and consequently of fruit, are equally determined to face another. One may gather a hundred pieces of the woody nightshade, and this strange perversity is rampant in them all. It is so ordinarily the habit of plants to direct their leaves and their flowers alike upwards towards the sunlight, that any deviation from a rule so salutary, or custom so general, cannot fail to be noticeable.

The generic name *Solanum* is derived, according to

some authorities, from the Latin word *Solamen*, in reference to the medicinal value of some of the plants of the genus. The specific name *Dulcamara* is compounded from the two Latin words *dulcis*, sweet, and *amara*, bitter; and so an alternative popular name for the plant is the bitter-sweet. These names are suggested by the fact that if one tastes a piece of the stem it is at first bitter in the mouth, but afterwards sweet. The monkish name, *Amaradulcis*, places matters in their proper order, while the botanical *Dulcamara* does not.

The somewhat weak stems vary in colour from ash-colour to dull purple. They ordinarily force their way amongst the other and sturdier plants of the hedgerow or copse, finding amongst these a welcome support. The leaves, it will be observed, grow alternately on the stem, the lower ones being somewhat egg or heart-shaped, while those higher on the plant have the form we have depicted in our illustration. The flowers are to be found during June, July, and August, so that before the later ones appear we have the first transformed into fruits, and we can ordinarily gather at the same time whichever we desire. The corolla is divided into five very deeply cut segments that are turned sharply back; it is ordinarily deep purple in colour, but may sometimes be found of a pure white. The bright yellow anthers in the centre are a very noticeable feature.¹ The blossoms are similar in form to those of the tomato, a near relative of the bitter-sweet. The berries, it will be noted, are not

¹ The Flowers come forth at the top and sides of the Branches, standing many together upon short stalks, which consist of five narrow and long violet-purple coloured leaves, with a long yellow Pointel in the middle sticking forth.—*Adam in Eden*, 1657.

globular in form, but are considerably greater in their length than width, the form technically termed ovate. Each contains numerous seeds.

The plant by common repute is very poisonous, and we certainly should not advise any one to lunch off the berries. One Dr. Woodville, writing in 1790, declares that thirty of these berries killed a dog in less than three hours ; but, on the contrary, a Dr. Duval asserted that he gave sixty to a dog without any appreciable results. This clearly is one's opportunity to introduce, with variation, that slightly threadbare remark : "Who shall decide when doctors (and their canine patients) disagree?" There are undoubted cases recorded of their—the berries, not the doctors—noxious and even fatal effects on children. One old writer, we see, says that "the Berries of Bittersweet stamped with rusty Bacon, applyd to that Joynt of the Finger that is trubled with a Felon hath been found by divers Country people, who are most subject thereunto, to be very successful for the curing of the same"; while another says that the "iuyce is good for those that haue fallen from high places and haue beene thereby bruised, or dry beaten." The condition of one thus dry beaten is not quite clear to us, but we imagine that though it seems here an alternative to being merely bruised, the two conditions are practically the same, that, in fact, if the skin be not broken one may apply this "iuyce," but that it would be less advisable to do so in the case of an open wound. As none of our readers will apply it, probably, in either case, the discussion of the point is merely academic, and will not, in its result, affect the bills of mortality.

Until quite recently the decoction of the stems has

found a recognised place in the pharmacopœia, as a remedy for cutaneous ailments or for rheumatic trouble, as much as three pints a day having been administered ; but its effects, depending partly perhaps on the mode of preparation, and partly on the idiosyncrasy of the recipient, would appear to be rather uncertain, and a plant that is recorded as causing nausea, palpitation, convulsive twitchings, and syncope, is best left alone. “The Shepherds in Germany doe use to hang it about their Cattle’s neck when they are troubled with a Swiming in the Head, causing them to turne round as if they were bewitched, and therefore they say it removth Witchcrafts both in Men and Beasts, but that Swiming in the Head is no effect of Witchcraft, but proceeds from a Naturall Cause, for which this Plant is a specifick Remedy, as it is for all such-like svdaine distempers whatsoever, being hung about the Neck, and that is not farre from the Head.” This, at all events, is not so dangerous a remedy as the decoction, and some of our readers who suffer from vertigo might be willing to try it, though we imagine one’s appearance, thus be-garlanded, unless perhaps on May-day, might lead to considerable and pointed comment.

Our quotation is from *Adam in Eden*, an altogether delightful old book. The title-page is very quaint and runs as follows : “Adam in Eden, or Nature’s Paradise. The History of Plants, Fruits, Herbs, and Flowers. With their several Names, whether Greek, Latin, or English ; the places where they grow ; their Descriptions and Kinds ; their times of flourishing and decreasing ; as also their several Signatures, Anatomical appropriations, and particular Physical Vertues ; Together with necessary

Observations on the Seasons of Planting and gathering of our English Simples, with Directions how to preserve them in their Compositions or otherwise. A work of such a Refined and Useful Method that the Arts of Physick and Chirurgerie are so clearly laid open, that Apothecaries, Chirurgions, and all other ingenuous Practitioners, may from our own Fields and Gardens, best agreeing with our English Bodies, on emergent and sudden occasions compleatly furnish themselves with cheap, easie, and wholesome Cures for any part of the Body that is ill-affected. For the Herbarists greater benifit there is annexed a Latin and English Table of the several names of Simples; With another more particular Table of the Diseases, and their Cures, treated of in this so necessary Work. By William Coles, Herbarist." This is indeed a noble title-page. The edition that came under our notice was published in the year 1657.

BLACK NIGHTSHADE (SOLANUM NIGRUM)

The black nightshade, in botanical nomenclature the *Solanum nigrum*, is a very near relative of the woody nightshade, but instead of rambling for yards over the hedges it is content to remain humbly on the ground, while its flowers, similar in form to those of its big brother, are white. It is a common annual weed on cultivated ground, springing up on the margins of fields. The flowers grow in considerable clusters and are succeeded by the berries; these are globular in form, at first green, but ultimately turning a dense black. The plant is more powerful in its action than the woody nightshade, and possesses potent

narcotic properties. While used at times in cutaneous trouble, its effects are too uncertain to make it at all a safe application.¹ Orfila records a case where three children eat the berries, and were promptly seized with giddiness and convulsions; all three died very quickly. From their dull black colour and unpleasant taste these berries are less attractive to children than are many others, and so they are preserved thus far from the temptation of indulging at all freely in them. We occasionally find the plant bearing berries that not only begin by being green, but remain so, not showing an inclination to turn the normal black; such cases are, however, very exceptional. Some writers suggest that the black nightshade, wherever seen, should be exterminated; but this is a counsel of perfection that, in the case of a plant so abundant, will never be attained to, nor indeed does one see why it should be, a much simpler plan being to allow the plant itself to exterminate those foolish enough to meddle with it, and thus enable them to serve as awful warnings to the rest of us.

HOP (*HUMULUS LUPULUS*)

Tapestrying the hedges and ascending the trunks of the hedgerow trees may often be found the graceful festoons of the hop. Charming as it is in itself it makes a very

¹ While Gerard in his *Generall History of Plantes* commends it as being "good against" divers ailments, he adds: "Notwithstanding that it hath these vertues, yet it is not alwaies good that it should be applied vnto these infirmities, for that many times there hapneth more dangers by applying of these remedies than of the disease it selfe. They are not of such esteeme that we should long insist vpon them, especially seeing wee are furnished with such store of medicines lesse harmefull, yet seruing the same purpose." A sufficiently strong hint to let it alone.



HOP

bad neighbour, for its dense masses of foliage and numerous tough and twining stems go far towards choking the general mass of undergrowth. One may observe this very clearly in Winter, when, the hop having died down, we may see how ragged and thin the hedge at that point has become. Extending, as the plant does, over the greater part of England and having every appearance of being thoroughly at home, it is yet a very doubtful point whether the hop be truly indigenous. It has long been cultivated, and it is probable that the hops of our hedgerows are really the descendants of plants introduced centuries ago. However this may be, there is no doubt that the conditions here are so entirely favourable to its well-being that it long ago determined to stay with us.

The root is perennial, and each Spring throws up a vigorous mass of shoots. These, by the way, are sometimes gathered and boiled and are said to be equal in flavour to asparagus. They are highly commended, we see, in Bryant's *Flora Dietetica*. In the hop gardens, where the plant is under cultivation, it becomes necessary each Spring to remove some of the superabundant shoots, and these cuttings are an acceptable article of diet. The stems develop very quickly; they are tough, flexible, slightly angular, far-reaching. The leaves grow in pairs and are either heart-shaped or with three or five lobes, and these latter are not at all unlike vine-leaves in general form. These lobed leaves are ordinarily the lower ones and are of considerable size, and we regret that the limited dimensions of our illustration forbid our introduction of one of this type. The leaves, whatever their shape, are deeply toothed at their margins, very prominently veined,

and decidedly rough, almost prickly, in texture. Lobel¹ called the hop the *Vitis Septentrionalium*, the vine of the north, primarily because it supplied the northern nations with their beer, as the southerners found in the vine the source of their wine, but probably the vine-like foliage and far-spreading growth of the hop had some little influence too in the choice of his name.

The flowers of the hop are what are called diœcious, the male flowers being on one plant, the female on another. The male flowers are small and of a greenish-white; the plant bearing them is in rustic parlance sometimes called a Jack-hop. The female flowers are stowed carefully away in large cylindrical or ovoid heads or catkins that are conspicuous from their closely packed broad enveloping scales or bracts. This is the state of things represented in our drawing, Plate VIII. At the base of each of these scales will be found nestled two little pistillate flowers. After the flowering season is over, and to this we may assign some time in July or August, this mass of overlapping scales, often called a cone, continues to increase in size, and this it does very rapidly. It is these matured cones that form the hops of commerce, though to get these in perfection the plant is placed under cultivation. It may appear that our reference to the duration of the flowering time is a little vague, but we have found by experience that much

¹ Lobel, born at Lisle in 1538, was a great lover of plants, travelling in search of them over much of France, Switzerland, Italy, and Germany. He also visited England and added much to the knowledge of our plants. Many of these he cultivated in his garden at Hackney. He was a physician, and of such repute that James I. appointed him in this capacity to his Royal person. He finally settled down in England, dying in London in the year 1616.

depends upon the season and the locality. When the flowers do appear they last but a very short time. The young cones are of a bright green colour, but as they mature they become brown. They are of a fragrant odour, and especially when at all bruised, and are somewhat harsh and astringent to the taste, owing to the presence of a peculiar bitter principle which is termed by the analysts lupulin.

Botanically the hop is the *Humulus Lupulus*. Its generic name, it has been affirmed by one authority, has been bestowed upon it from the rich soil¹ in which the plant flourishes; but this idea is quite scouted by another authority, who declares that as the plant without external support could only grow along the ground, it derives its name from the Latin word for soil, *humus*. It is really difficult to decide which of these two explanations is the more unsatisfactory. The Latin word does not emphasise any special richness in the soil, while the second explanation may be paralleled by saying that if a sailor did not go to sea he would be a landsman, and therefore in any case we may call him one. The hop has far too fine a perception of taking care of itself at the expense of other things to be ever found rambling helplessly over the ground. *Lupulus* was at one time the officinal name for the hop, and we find it so called in monastery records.

¹ Meete plot for a hopyard once found as is told,
Make thereof account, as of jewell of gold.

Tusser, in *Junc's Husbandrie*. Elsewhere he says—
Ground grauellie, sandie, and mixed with clay,
Is naughtie for hops any maner of way;
Or if it be mingled with rubbish and stone,
For driness and barrennes, let it alone.

The meaning of the word is very obscure. It has been suggested that this is the plant Pliny called the *Lupus salictarius*, meaning willow-wolf, and that he so called it from the tenacity with which it clung to the willows. Hop has certainly no special delight in willows; on the contrary, it prefers something considerably stouter. However, if it be not a particularly good wolf-story, it is an excellent cock-and-bull story, and we must accept it on that footing.

The ripened hops are sometimes gathered in the country into pillows, as they are held to promote sleep. This use of them came into great prominence when they prescribed, and with benefit, to King George III., in the year 1787. It is found in medical practice that, besides producing restful sleep, the hops exercise considerable soothing influence over the nerves, allay pain, reduce the pulse, and give it steadiness. *Infusum*, *Tinctura*, and *Extractum Lupuli* all hold place in our pharmacopœia. One old author, we see, declares that "the Decoction of the Flowres and Tops are given with good successe to those that have drunk any deadly poyson;" while some will to-day say that, far from being an antidote, it is, as an important constituent in beer, a poison itself.

In Sweden and Norway the fibres of the hop stem are made into strong cloth, stout cordage, and coarse packing-paper. Though premiums were offered by the Society for the Encouragement of Arts, Manufactures, and Commerce in the year 1760, for the utilisation of the plant in England, but little success seems to have attended the experiment. It was, in fact, found that hemp could be produced at a cheaper rate, and that it was of much

more value for the various trade purposes that were then suggested.

The hop, alike in its wild and cultivated state, is greatly exposed to damage from mildew, and the assaults of insects.

IVY (HEDERA HELIX)

We so naturally associate the idea of fruit-bearing with Autumn that it is somewhat of a shock to find that the two things, after all, are not at all necessarily identical in point of time. Fruiting follows naturally upon flowering, and at no great interval from it ; the sequence is, indeed, practically immediate, though the earlier stages of transition from fully-developed flowers to fully-matured fruit may not be visible. If, therefore, a plant has its flowering season in October, its fruit will certainly not be developed either in the preceding or the succeeding September, but will assuredly be one of those gifts of Nature that we value the more because they come in the dark chilly days of frost-bound Winter, when so much of floral interest is of necessity lost to us. Such a plant is the Ivy. In like manner the hyacinth throws up in the woods its quaint three-lobed seed-chambers, the primrose its delicate five-pointed capsules, long ere the swarthy reapers cut the golden wheat, and each has passed away from our ken months before we, armed with hooked stick and provided with a goodly basket, set out to gather in our special harvest of luscious blackberries or of well-filled nuts in the shortening days of September.

Ivy in the hands of the gardeners has been developed

into a great many marked varieties, differing greatly in the size and form of the leaves, the variation of their colour, and so forth ; but even the common wild ivy plant of our hedgerows and old walls exhibits a great difference in the form of its foliage, the leaves being sometimes very large and of very simple outline, heart-shaped or ovate, and at other times small and acutely three-, five-, or even seven-pointed. So striking is this difference that it was long considered to indicate two quite distinct kinds.¹ While the ivy is still supported by wall or tree, the leaves are of the lobed type, but when its support serves it no farther, the branches shorten and form into large heads bearing ovate undivided leaves, and at the ends of these branches the flower clusters. These flowers are arranged in spherical masses, each flower stem of the group springing from one common centre. The flowers are small and of a pale green. They contain ample store of honey in their nectaries, and, flowering in October and November, when little else is available, form a great centre of attraction to multitudes of insects, from the lordly Red Admiral

¹ Gerard, for instance, writing some two hundred and seventy years ago, states, as beyond cavil, "there be two kinde of Iuy;" and then, however, proceeds to add yet another, the plant we all know now-a-days as the Virginian Creeper. The reference is so interesting that we may venture to quote it, though the plant can claim no place within the limits of our title-page. "There is kept for nouelties sake in diuers gardens a Virginian, by some, though vnfitly, termed a Vine, being indeed an Iuy. The stalkes of this grow to a great heighth, if they be planted nigh anything that may sustaine or beare them vp: and they take first hold by certaine small tendrels vpon what body soeuer they grow, whether stone, boords, bricke, yea glasse, and that so firmly that often times they will bring pieces with them if you plucke them off. The leaues are large, consisting of foure, five, or more particular leaues, each of them being long, and deeply notched about the edges, so that they somewhat resemble those of the Chesnut tree,"

to the lowliest midge, all flocking to the welcome banquet.

The wood of the ivy is soft and porous and of no great value, though the stems sometimes arrive at a very considerable bulk. When the plant has long been in undisturbed possession of some old ruined building the main stems may often be found a yard in circumference.

The berries are smooth to the touch, globose in form, about as large as a pea, and of a dense black that has a slight suggestion of purple in it. This sombre tint makes them the more conspicuous when in a heavy Winter most things, including the ivy foliage itself, are resting beneath a mantle of snow. These berries are borne in great profusion, and are a most welcome provision for the birds, and especially coming as they do when the farmer has gathered in all his fruit, pears, wheat, and other delectable items in the *menu* of his feathered friends and enemies, and the other wild berries have been consumed. The black-caps, missel-thrushes, and wood-pigeons seem specially partial to them, but many other species may be found eagerly flocking to the attractive repast. The birds owe, again, a deep debt of gratitude to the ivy for the valuable shelter that its dense masses of evergreen foliage afford them, not only when concealment is sought at nesting-time, but when its snug recesses shield them amidst the driving snow and fierce wintry winds. These berries, though slightly succulent when quite ripe, being somewhat bitter and acrid, have no attraction to the human biped, and are strongly emetic in their action if he be so injudicious as to venture on experimenting with them.

It has long been a problem whether the ivy that we think, and rightly so, so picturesque when we see it ascending a tree-trunk, was inflicting injury upon its host or not, and the general impression was that such a mantling was hurtful. Tusser, in his quaint old book on husbandry, says,

Let Iuy be killed,
Else tree will be spilled,

This spilling is merely a sacrifice to the exigencies of rhyme, and if we read the last word as "spoilt" we shall probably get to the plain prose of the matter as it presented itself to the old writer. Elsewhere he writes :

Where Iuie imbraceth the tree verie sore
Kill Iuie, or else tree will addle no more.

If for "addle" we substitute "add on" we get the meaning, that the tree too tightly swathed in the grip of the ivy is unable to grow healthily, and cannot increase its bulk. The old idea was that the ivy was a parasite, stealing nourishment by its rootlets from the tree that it embraced,¹ but there seems to be really no more reason to suppose that these so-called rootlets on the stems rob the tree of its vitality, than that sweet-peas or other tendril-bearing flowers rob of their life-juices any plants to which they may be found clinging. In each case the mischief which may arise, and which sometimes does arise, is mechanical, the mischief that arises from over-pressure, from the denial of air,

¹ Ivy hath a thick woody Trunk or Body sometimes as big as one's arm, usually climbing up Trees, and by the small Roots it sendeth into them, draweth nourishment from them, many times to their bane and utter ruin.—*Adam in Eden*, 1657.

light, sunshine, a fair share of rain, and such-like influences that make for a plant's well-being. The mistletoe is a good illustration of a parasitic plant, feeding as it does on the apple or other tree that bears it, but the ivy honestly draws its nourishment from mother Earth. The so-called roots, for which crampons is a better name, are the multitudinous little hands that grasp and take possession. If the ivy be found on the ground it does not develop these crampons, because it has no work for them to do.

This belief in the parasitic nature of the ivy, and the morals that could be deduced from it, were a most valuable asset in the storehouse of the earlier poets. We recall how Shakespeare, greatest of all, puts into the mouth of Adriana, in the *Comedy of Errors*, the words—

If aught possess thee from me, it is dross,
Usurping ivy, brier, or idle moss,
Who all, for want of pruning, with intrusion,
Infect thy sap, and live on thy confusion.

It will be recalled, too, how Prospero, in the *Tempest*, describing the wickedness of Sebastian, pictures his ingratitude to his benefactor in the bitter words—

He was
The ivy which had hid my princely trunk
And suck'd my verdure out on't.

Ivy possesses great vitality, and we hear from time to time of cases where ivy stems have been sawn through and yet the plant appears to be none the worse for such drastic treatment; and it has been suggested that, though the crampons are ordinarily but means of fixing the ivy

to the wall, they may in these untoward circumstances act as true roots, drawing sufficient moisture from the wall, a mossy old tree-trunk and from the air, orchid fashion, to enable the plant to live. However this may be, the cutting off of direct access to the ground does affect the vitality, and ultimately destroys the life of the plant. The delay in the process may be more or less, but symptoms of decay presently appear and the ivy ultimately dies. No one can have wandered much in woodland or copse without encountering trees clothed in a brown wrapping of dead ivy leaves, the result of the woodman's billhook having severed these ivy stems near the ground.

Ivy is often held to be obviously injurious to some fine old tree that, ivy-clad, is showing at last symptoms of decay. In the course of many years the ivy has attained to great luxuriance of growth, and has enclosed the trunk and taken possession of the larger branches; but there is in this no proof that the monarch of the forest, at last yielding to the inevitable law of Nature, has had its end hastened by its uninvited guest. When mischief arises is where young trees, having yet much growth to make, suffer from the constriction of the encircling stems.

Bacchus is ordinarily ivy-crowned; while he was yet an infant he was concealed from the wrath of Juno beneath sprays of ivy, and the plant was dedicated to him in consequence. It grows very freely in Greece and Asia Minor, and is abundant at Nyssa, the early home of Bacchus. At the ancient Greek marriage rite the priest presented the young couple in the temple with an ivy branch, a symbol of the binding tie upon which they had entered. A crown of ivy was bestowed also on Apollo, and on the poets, his

servants. Horace, Virgil, and other ancient writers refer to this, and are themselves thus reported as crowned.

“A rare old plant is the ivy green,” but our modern poets do not ordinarily receive it with favour, Carrington, for example, in his *Dartmoor*, associates it entirely with decay and fallen greatness, clothing the old ruins with its “spirit-chilling green,” and hails it as a “cheerless plant, sacred to desolation,” while Cowper tells how it—

Clings to word and stone,
And hides the ruin that it feeds upon.

With Barton it is an emblem of persistence in the midst of evanescence.

It changes not as seasons flow,
In changeless, silent course along;
Spring finds it verdant, leaves it so,
It outlives Summer's song.

Autumn, no wan nor russet stain
Upon its deathless glory flings;
And Winter o'er it sweeps in vain
With tempest on his wings.

Charles de Guise, Cardinal of Lorraine, chose as his device a pyramid, the most indestructible of all buildings, and, clothing it with ivy, placed beneath it the motto *Te stante virebo*, “While you stand I shall flourish.”

The ivy is intimately associated with the festivities of Christmas, the ease with which it can be garlanded and festooned making it very welcome in the adornment of the home. The black berries of the ivy contrast admirably with the scarlet fruit of the holly and the pale wan berries of the mistletoe. Withers, in his *Juvenilla*, pictures how at “our joyful'st feast” all hearts are aglow, how “Each

roome with yvie leaves is drest, and every post with holly,"
how at such a time—

Without the door let sorrow lie,
And if for cold, it hap to die,
We'll bury it in a Christmas pye
And evermore be merry.

For centuries it was the custom to hang an ivy bough over the tavern door, as a sign of the business carried on within. Hence our old proverb, "good wine needs no bush," and the French rendering, "*Au vin qui se vend bien, il ne faut point de lierre*"; but indeed this custom and the proverbs based on it go back beyond the Christian era.

BLACK BRYONY (TAMUS COMMUNIS)

The subject of our next illustration, Plate VIII., is the black bryony, the *Tamus communis*. That there should be a black bryony seems to suggest that there must be some other bryony as well, and this is promptly encountered in the equally common red-berried bryony or *Bryonica dioica*. These two plants, though somewhat similar in name, have no botanical relationship; they are not, for instance, like two kinds of roses, or two species of buttercup.

The black bryony throws its long twining and trailing stems for many feet amongst the hedgerow plants, asserting itself with great vigour. "There bee some Plants," Bacon declares, "that shoot still upwards, and can support themselves; As the greatest Part of Trees and Plants; There be some Other, that Creeps along the Ground; Or Winde about other Trees, or Props, and cannot support themselves; as Vines, Ivy, Briar, Bryony, Woodbines, Hops,



B ACK BRYONY

Climatis, Camomill, etc. The cause is, for that all Plants (naturally) moue vpwards: But if the Sap put vp too fast, it maketh a slender Stalke, which will not support the weight; And therefore these latter Sort are all Swift and Hasty Commers." So declareth Bacon in his *Sylva Sylvarum*, though how the Chamomile, a low-growing plant, yet sturdy withal, as befits a plant that has to fight for its life on open common land, ever got amongst the climbing plants it is impossible to divine. The sage Bacon was at this point a little less erudite than usual.

The leaves of the black byrony are large, of a very pronounced heart-shape, very polished and shining in surface, dark green in colour, very prominently veined, very numerous on the stems. In the Autumn, when the foliage is fading, it changes from sombre green to a great variety of yellow and brown tints, and becomes a very noticeable feature in the hedgerows, its long festoons being much in evidence. Beautiful in its dark glossy green garb in the Summer, it is still more attractive in its brilliant Autumn attire, and when we add to this the long line of fruit-clusters, themselves greatly varied in colour, the total result is very charming. The large tuberous roots are possessed of an acrid pulp that suggested their use to our forefathers as a stimulating plaster, and the young stems may be eaten like asparagus. The flowers are small and greenish in colour, the stamen-bearing flowers being on one plant and the pistillate flowers on another, hence it is not every black bryony we see that is berry-bearing. These berries, though attractive to the eye from their varied colours, a state of things arising from their more or less approach to maturity, do not strike one as very tempting. This

unwholesome appearance in quite justified by experience, as they are raw and acrid and entirely undesirable as an item in one's dietary.

RED-BERRIED BRYONY (*BRYONIA DIOICA*)

As both species of bryony bear red berries, to call one of them by way of distinction the red-berried bryony does not strike one as being a particularly happy idea, and so we occasionally, though much more seldom, find it called white bryony in strong contradiction to black bryony. In each plant the roots are very large, and in the case of one of them white and in the other black. The white bryony throws up a large number of slender, herbaceous stems, slightly rough to the touch, and climbing vigorously. The leaves are large, and five-lobed, rough in texture, and each having, at the base of the stem on which it is borne, a long spiral tendril. The flowers are diœcious, the males being on one plant, and the females on another, small and of whitish-green colour. The fruit is a globose, many-seeded berry about as large as a pea, green at first, but ultimately passing through yellow to crimson. The plant is called the Bryony from the Greek *bryō*, to grow up, in allusion to the vigorous growth of the annual shoots. By some old writers it is called White Vine. It is a charming plant to trail over any fencing in an odd corner of one's garden. We have had it, and enjoyed it in our own garden for years, as it comes up each Spring as a matter of course, needs no attention, and only asks to be let alone.

The odour of the berries on crushing them is somewhat

nauseous and the taste insipid. The plant abounds with an acrid juice. The root¹ of the bryony has a disagreeable odour, and a nauseous taste, and, though it has been a good deal used in medicine, has very poisonous qualities. It has been employed in asthma, hysteria, epilepsy, lumbago, and other ills of suffering humanity, but several cases are on record in the text-books and medical transactions where death has supervened from improper administration. Tincture of bryonia still holds a place in modern medicine, being used advantageously in pleurisy and inflammation of the lungs. The earlier physicians made great use of the plant. "The iuyce of the root," says one venerable authority, "being pressed out in the Spring and drunke with mead or honied water draweth forth choler." "Dropsie, falling sicknesse, swimming of the braine, black and blew spots which come of stripes, leprie" were all attacked by the administration of bryony.

BLACKTHORN (PRUNUS COMMUNIS)

The Blackthorn, *Prunus communis*, depicted in its fruiting stage in Plate IX. is in the early Springtime a very conspicuous feature in the hedgerows and copses, as it is then thickly covered over with a wealth of pure snow-white blossoms. The flowering period varies naturally in varying localities and conditions of growth, but may be taken as about the beginning of March to the middle of April.

¹ The roote is very greate, long and thicke, growing deepe in the earth, of a whitish yellow colour, extreame bitter, and altogether of an unpleasant taste. The Queenes chiefe Surgion Mr. William Godorons, a very curious and learned gentleman shewed me a root hereof, that waied halfe an hundred weight, and of the bignesse of a childe of a yeere old.—GERARD.

The blackthorn is so called to distinguish it from the whitethorn, or hawthorn, the subject of our first illustration. It is also known as the sloe. A reference to our two illustrations will show that there is no need of any special hints as to distinguishing the two plants in Autumn, and one quite sufficient point of distinction between them in the Spring is that, while they are both a mass of white blossom, in the blackthorn the flowers come out while there are few or no leaves, while in the hawthorn the foliage is well out before the flowers appear. Burns, in the touching lament of Mary Queen of Scots, dwells very happily on the approach of Spring—

Now blooms the lily by the bank,
The primrose down the brae;
The hawthorn's budding in the glen,
And milk-white is the slae.

The distinction in time between the two plants is very truthfully given. While the hawthorn is but beginning to unfold its leaves in the most sheltered positions, the blackthorn is already one sheet of blossom, so that in thinking of the tree the one mental picture that arises to the poet's mind is the profusion of its flowers, no visible leaves, no visible stems, but just one sheet of blossom—"milk-white is the slae." While the flowers of the hawthorn are strongly fragrant, those of the blackthorn are quite inodorous.

The blackthorn, if left alone, will grow into a small tree, attaining a height of some twelve feet or so. It is an excellent hedge material, as it throws out a great mass of angular branches, well armed with spines, that interlace and form an impenetrable barrier.

The dried leaves are sometimes gathered by the cottagers



BLACKTHORN

as a substitute for tea. Some little while ago large quantities were gathered and dried as a commercial speculation, over four million pounds of them being sold in one year; but it was found that they were being so largely used to sophisticate tea that the Excise authorities took alarm, and the manufacture came to an abrupt end.

The wood of the blackthorn is very hard and tough; it is occasionally made into walking-sticks, and in some circles of society a good blackthorn shillelah is considered fully equal, for strengthening an argument, to a crab-tree cudgel. The bark is astringent, and has been found advantageous as a febrifuge.

The fruit, as our illustration shows, is globular or slightly ovoid, in colour purple almost to blackness, but, when ripe, covered with a beautiful violet-coloured bloom. Inviting though it be to the eye, it is found on tasting to be so harsh that one has no inclination to repeat the experience, though after a touch of mellowing frost it loses somewhat of this biting acidity. They are at this season gathered by the country folk: they either preserve them or make them into a beverage that is held in considerable favour in rustic society. The juice expressed from them makes a good marking-ink for linen or woollen, and if a little sulphate of iron be added to it, it has complete permanence.¹

In excavating the baths at the Roman city of Silchester a great many fruit stones were found in a drain; amongst

¹ The iuice of sloes doth stop the lask and flix, and all other issues of blood, and may very well in vsed in stead of Acatia, which is a thornie tree growing in Ægypt, very hard to be gotten, and of a deere price, albeit our plums of this countrie are equal vnto it in vertues."—GERARD.

these were those of the cherry, damson, and blackthorn. These fruits were evidently taken to assist in whiling away the time at the baths, the great meeting-place of the citizens and their wives and daughters, and one can only feel that if our Roman predecessors could lunch off blackthorn berries, it is one testimonial the more to their indomitable pluck and perseverance.

Not only do our hedges and woodlands yield us wild plums, but apples, pears, and cherries no less. To describe these at any length would appear unnecessary, as those who know these fruits in their cultivated forms will find no difficulty in recognising their wild prototypes.

SPINDLE-TREE (*EUONYMUS EUROPAEUS*)

Though the Spindle tree during Spring and Summer is an entirely inconspicuous shrub, it develops in the Autumn into one of the most beautiful, its fruit in form and colour being highly attractive, and its foliage of great richness of tint. Growing as Nature would have it to grow, it attains to a height of over twenty feet, but more ordinarily in copse and hedge it is little more than a bush. The greenish-white, four-petalled flowers expand in May. The lance-shaped leaves grow in pairs. They have their margins minutely notched, and are throughout the Summer of a somewhat dull green, but in the Autumn they change to a brilliant bronze-red or purple. We have depicted the plant in its Autumn bravery in our illustration, Plate X.

The wood of the larger branches is hard and of fine grain. It was originally much in demand for making



Sambucus racemosa

spindles, hence the popular English name of the tree. It is in like manner in Germany the *Spindelbaum*, and its name in most of the other European languages is based on the same reference to the use of the tree.

In September the curious pendant four-celled seed-vessels are ripened. They are produced in great abundance, and remain on the trees, if unmolested, long after the tree has lost all its leaves. They are ordinarily of a bright rosy pink, and of a waxen texture, but occasionally we may find them pure white. They are of very quaint and beautiful form, and when fully ripe open out and show within their cup the brilliant orange-coloured seeds. One of the French names of the plant is the *Bonnet de prêtre*, in obvious allusion to the similarity in form of the fruit to the biretta, the head-dress worn by the priests of the Romish Church and their imitators within the Anglican fold.

The generic name of the plant is derived from *Euonyma*, the mother of the Furies, in allusion to the possibilities of evil stored up within its gay exterior. The seeds, though violently poisonous to mankind, are eaten by thrushes, blackbirds, and other birds, and an oil is expressed from them on the Continent that has its use in manufactures. One finds the spindle tree occasionally transferred to the garden and shrubbery: it is a very easy tree to rear, and one wonders, in view of its great attractiveness, that it is not more often found amongst other shrubs in cultivation.

Though the specific name *Europæus* would seem to specially identify the plant with this quarter of the world, it is found not only throughout Europe, but also in Western Asia and North Africa.

WAYFARING-TREE (*VIBURNUM LANTANA*)

We may occasionally find in our hedgerows and copse-lands the wayfaring-tree, a large and freely branching shrub or small tree. A very characteristic feature by which it can be readily identified is its particularly grey appearance as contrasted with its neighbours round about it. This effect arises from the soft meal-like down that clothes alike the upper stems and the foliage. It is a plant that prospers especially well in chalk and limestone districts, and it is there found abundantly.

The leaves are about four inches long and grow in pairs. They are very roundly ovate in form, and have on their margins a line of small teeth. The upper surface of the leaf is somewhat soft and velvety to the touch, while on the lower this downy covering is yet thicker, and in consequence yet greyer in effect. The strongly reticulated veining is a very prominent feature, especially on the lower surface. In the Autumn these greyish-green leaves change their Quaker-like garb for one of rich crimson red.

The flowers are small, and white in colour, the five large anthers being very conspicuous in their midst, and they grow in dense clusters of about three inches in diameter. Unlike those of the Guelder Rose, a very near relation, each flower of the wayfaring-tree is perfect, the noble outer ring of barren blossoms that we see in the guelder rose being absent.

The berries are at first green, and then turn a good strong red in colour, and finally become purplish-black, and they may often be found at the same time, and on

the same tree, in these varying tints. Each contains one seed.

The bark is so acrid as to raise a blister, and thus indicates its service in rustic medical treatment. In the "Foure Bookes of Husbandry collected by Conradus Herebachius, newly Englished and increased by Barnabe Googe, Esquire," we read that "Nature hath appoynted remedies in a redynesse for al diseases, but the craft and subteltie of man for gaine hath devised Apothecaries Shoppes, in which a man's Lyfe is to be solde and bought, where they fetche their medicines from Hierusalem, and out of Turkie, whyle in ye mean time every poore man hath the ryght remedies growing in his Garden : for yf men would make theyr Gardens theyr Physitions the Physicions craft would soone decay."

The bark furnishes a very efficient bird-lime to the village bird-catcher, who pursues his craft more or less, we fear, in defiance, or possibly in ignorance, of the various Small Birds Protection Acts, close times, and the like ; secure in the local sympathy for his work, deriving its strength from the feeling that too often regards every bird as the farmer's natural enemy, to be trapped, shot, or poisoned without mercy.

One old writer, puzzled to account for the name of the plant, breaks into ponderous humour, and declares that as this tree is so often found in the roadside hedge, it is ever on the way, and is therefore a wayfarer. But a more reasonable explanation would appear to be that its grey foliage, looking as though covered with roadside dust, suggests the wayfarer toiling travel-stained along the highway. It is sometimes by the older herbalists called

mealy-bush, a name sufficiently descriptive; or sometimes the whitten-tree. If we, still bearing in mind this grey covering, translate this into whitened-tree, we shall not be going far wrong, we imagine. A yet older name for it is the lithy-tree, lithy being a word derived from the Anglo-Saxon word for pliant. "The branches thereof," declares Parkinson, in his *Theatrum Botanicum*,¹ "are so tough and strong withall, that they serve better for bands to tye bundels or any other thing withall, or to make wreathes to hold together the gates of fields, than either withy or any other the like."

YEW (TAXUS BACCATA)

Though not at all a popular or desirable addition to the plants of the hedgerow,² we may occasionally encounter the yew; why unpopular, why undesirable, we shall presently see. To most of us, however, the mental picture we conjure up at the thought of the yew is not a lowly hedge-plant, but a venerable and far-reaching tree, densely branched, not of any great height, maybe, but of an aspect suggestive of great antiquity. Yew-trees when young are often rather acutely pyramidal, but as they grow older they expand, until presently we find them round, or almost

¹ "Collected by the many yeares travaile, industry and experience in this subject by John Parkinson, apothecary of London and the King's Herbarist. Published by the King's Majestyes especiall priviledge" 1640.

² In the formal gardens of our ancestors the yew is very frequently seen, as it bears cutting well, and is an evergreen. At Wrest, in Bedfordshire, one may see a hedge of it twenty feet high, and near Calne is one that is ten feet thick and sixty yards long. It is needless, however, to particularise, as every county in England, we suppose, will furnish its fine old ancestral hall or stately home standing in the midst of its parterres environed by these living walls.



YEW AND HOLLYHOCK WOOD

flat, headed. They are rarely more than about thirty feet high, though that at Harlington, the tallest by far in England, attains to an altitude of fifty-eight feet. In a typical yew-tree the numerous branches spread boldly out in more or less radiate fashion, the lower ones being nearly or quite horizontal, or even pendulous.

The yew is indigenous to these isles, a genuine ancient Briton, growing in wild, rocky, and mountainous districts in the north and west, and on the great downlands of the south. It prefers stiff calcareous soil, but thrives under other conditions ; battling for centuries against the roaring gales, caring nothing for heat or cold ; generation after generation of men passing away, and each gazing on it in its imperturbable fixedness and endurance. The tree is no less at home throughout Europe, flourishing on the slopes of the Vosges, the Jura range, the Pyrenees, the Alps, and the Apennines, equally at home, too, in the Caucasus and on the Himalaya, in Japan and the Philippines, and on the mountains of Canada and the United States.

The trunk of an old yew-tree becomes wonderfully split and contorted, while its bark, dark brown in colour, is rough and cracked, peeling away very easily, the upper layer being cast off and renewed each year. The wood is very hard and compact in grain and beautifully mottled in shades of reddish-orange and dark brown. Virgil repeatedly calls it the tough and stubborn yew, and commends it for weapons, while many a long year before his day its tenacity commended it to the Assyrians, and amongst the long-buried remains of great Nineveh are unearthed in this our day objects made from its wood. It has been used a good deal for wood-inlay, spoons, cups, axle-trees, cogs for mill-

wheels, and the like, and as an alternative to boxwood for the service of the wood engraver. Its power of resisting decay makes it also very valuable for piles, pumps, and fencing. Gilpin, in his book on trees, declares it to be a common saying amongst the woodmen of the New Forest that a post of yew will outlast a post of iron.

The leaves of the yew are linear, small, of a sombre green, numerous, glossy, evergreen, arranged in two opposite ranks or series on the stems.

The distinguish'd yew is ever seen,
Unchanged his branch, and permanent his green.—PRIOR.

The sombre character of the foliage becomes very marked when contrasted with the surrounding foliage of other trees, or when a large mass or grove of yew-trees is a feature in the landscape. Scott writes of a "dismal grove of sable yew," the trees appearing almost black by contrast with their environment; and Hood, in his *Ode to Autumn*, seizes on the same feature and writes of "Mournful cypress and dark yew." The same trees of ill-omen reappear in the lines of Harte, where, in describing some scene of mountain desolation, he tells how—

Dark cypresses the skirting sides adorned,
And gloomy yew-trees which for ever mourned.

Yew as a hedge material has many advantages, it makes a dense screen, is evergreen, bears clipping excellently well, and is, practically, everlasting; but all these good qualities are vitiated by one fatal defect—its poisonous nature. Our ancestors used the leaves as a vermifuge, but found that they not only killed the patient's unwelcome guests, but the patient as well, and this was held by the patient to so

far militate against their use that the remedy went out of fashion. Horses, cows, or deer, either picking up yew clippings, or nibbling at the green leaves when the grass is thin, all quickly die, while, curiously enough, goats, hares, and rabbits have a complete immunity.¹ To horses it would appear to be most fatal of all; but a Professor Wiborg, of Copenhagen, found that by mixing yew-leaves with other food, and giving the compound in careful proportion, one could gradually increase the proportion of yew without danger. The great risk both with horses and cattle would appear to be that, under sudden temptation, when food is short, owing to severe weather or other cause, too much is taken at one time. While such experiments as those of Dr. Wiborg are very interesting, and we have often felt desirous to make them, the practical difficulty was that we never quite cared to investigate the action of poisons or the like on our own horse or cow, and there was a certain delicacy in asking one's neighbour for the loan of his! It will be observed that, while many hedgerow trees, like the hawthorn, have their foliage in some seasons almost destroyed by caterpillars or other small depredators, nothing attacks the yew-leaves.

¹ While we should naturally imagine that if a thing be poisonous at all it will be poisonous all round, a little investigation soon shows that this is by no means the case, the same plant being deadly poison to one creature, innocuous and acceptable to another. That which proves—

Strong poison unto me, another loves,
And eats, and lives. Thus hemlock juice prevails,
And kills a man, but fattens goats and quails.

CREECH, *Lucretius*.

Sheep will eat hemlock with impunity, but if a cat nibbles it, it dies, and if you, gentle reader, with a turn for investigation, show your pet parrot that parsley is delectable, and to be eaten with full impunity, and it follows your example, your bird's faith in you costs it its life.

So deadly has the yew been reputed to be that to sleep beneath its shade was held a form of suicide.¹ This belief has flourished for some two thousand years at least, being in full vigour long before the Christian era. Gerard, however, writing his *General Historie of Plants* in 1633, declares, bringing the matter to the test of experiment: "I have not only slept under the shadow thereof, but amongst the branches also, without any hurt at all, and that not one time but many times." Shakespeare, in *King Richard II.*, applies the epithet "doubly fatal" to the yew, referring not alone to its poisonous nature, but to the deadly skill in archery of those who—

bend their bows
Of double-fatal yew against thy State.

Pliny, in his *Historia Mundi*, written in the first century of the Christian era, declares, in the quaint translation of him by Holland in the reign of Queen Elizabeth—"The yugh fearefull to looke upon, a cursed tree"; and it will be remembered that when the Witches in *Macbeth* were making their gruesome mixture of eye of newt and toe of frog, wool of bat and tongue of dog, adder's fork and blindworm's sting, and such-like untempting ingredients, they did not forget to throw into the horrible mess some slips of yew. The yew was always regarded as something decidedly uncanny.

The flowers of the yew will be found in March; they

¹ The Yew is hot and dry, having such attraction that if planted near a place subject to poisonous vapours its very branches will draw and imbibe them. Wheresoever it grows it is both dangerous and deadly to man and beast; the very lying under its branches has been found hurtful.—TURNER, *Botanologia* 1664.

are diœcious, the pistillate and staminate flowers not being found upon the same shrub or tree. They grow from the bases of the leaves, and must be searched for on the under surfaces of the stems, and it will be realised that only the trees bearing the pistillate type of flower will be berry-bearing. This physiological fact was not comprehended for centuries after men began to study plants, so that we find Gerard, for instance, making two distinct species of yew, the "*Taxus glandifera bacciferaque*, the Yew bearing Acornes and berries," and the "*Taxus tantum florens*, the Yew which only floures." Of the first he says: "It seemes this tree, if it were not hindred by cold weather, would alwaies have Acornes and Berries on him, for he hath alwaies little buds, which so soone as the Spring yeelds but a reasonable heate, they growe into the forme of Acornes: about the beginning of August, seldome before, you shall finde them turned into ripe berries, and from that time till Christmasse, or a little after, you may see on him both Acornes and red berries." Of the second he writes: "The Yew, which only beareth floures and no berries, is like the other in trunke, timber, barke, and leaves, but at the beginning of Nouember, or before, this tree doth beginne to be very thicke set or fraught on the lower side or part of the twigs with small round buds, verie neere and as big, and of the colour of Radish seede, and do so continue all the Winter, till about the middle of Februarie, when they open at the top, sending forth one small sharpe pointall, garnished towards the top with many little dusty things like floures; and if you shall beate or throw stones into this tree about the end of Februarie, or a good space after, there will proceed and fly from these floures an abundance of dustie

smoke." These little "dusty things" we recognise as the anthers, and the "dustie smoke" the dispersed pollen. This abundance of "dustie smoke" we may see equally strikingly on shaking a festoon of stamen-bearing hop.

The fruit of the yew is a hard nut-like seed partly imbedded in a pulpy and berry-like cup. This is the state of things we have figured in our drawing of the yew on Plate XI. This outer cup is scarlet in colour, of a curiously waxy texture, mucilaginous or glutinous when compressed, and rather mawkishly sweet to the taste. The fruit will be found from about September onward. It may be eaten in moderation without danger: missel-thrushes, blackbirds, and others eagerly indulge in the feast, and wasps also are very partial to it; but with human beings it is only the mucilaginous envelope that may be eaten, the central nut being injurious, and in any considerable quantity deadly. Gerard's use of the word acorn, it will be readily perceived, was suggested by the appearance of the central nut rising in the midst of its encircling cup. Wordsworth speaks of the yew as "decked with unrejoicing berries." What particular form of rejoicing he missed in them one hardly sees, but one does see that disparagement is suggested, so that this great Nature poet notwithstanding, it seems about time to assert very definitely that the yew is not a baleful, dismal, gloomy, cheerless, unsocial, sullen, melancholy, pensive, and funereal tree, though all these epithets and many more such have been bestowed upon it, but a welcome and sturdy guest, self-reliant, needing no petting, asking of us no attention, and rewarding us at all times with its living verdure, attractive at all times, and especially

so when its branches bear their coral-like berries, beautiful in form, beautiful in colour, and contrasting charmingly with the dark green foliage.

Like holly, ivy, laurustinus, and other evergreen plants, the yew is in demand at the glad Christmas season, both for the decoration of the church and of the home,¹ and in pre-Reformation days it was in these northern latitudes used on Palm Sunday as a substitute for the real palm in processions. The willow was also used, and so both that and the yew became called palms, a name that the former still retains in many parts of the country when the particular species most employed, the sallow, is bearing its catkins. The yew, unfortunately, loses one great attraction, seeing that its berries part company from the stem at but slight provocation. In some parts of England they hold that yew must have no place in dressing the home, or there will be a death in the family before the end of the year. Such a gruesome belief, happily, could not have been very generally held, or we should not find Herrick singing—

When yew is out then birch comes in,
And many flowers beside,
Both of a fresh and fragrant kin
To honour Whitsuntide.

Our ancestors had a pleasant custom of decking their houses all through the Winter and Spring, and had a regular sequence, the holly being succeeded by the box, the box

¹ This verdant adornment was in its origin long pre-Christian, the Romans decorating their houses with green boughs during the Saturnalia. If, however, we object to the idea of this Pagan precedent, we can find another in the Jewish use of such signs of rejoicing in their Feast of Tabernacles. It must in all ages have been a most natural form of rejoicing.

by the yew, and that in turn, as we see, by the birch, succeeding verses, that we need not quote, carrying on the floral order.

In the sixteenth and seventeenth centuries the yew was held in high esteem in the stately gardens of that period, not merely as a fence and a protection from the wind, but for the ease with which it could be clipped into all sorts of fantastic shapes, as peacocks, dragons, pyramids. Pliny refers to this as a custom in his day also. Lord Bacon, with his wonted good sense, protested against this practice, and says in one of his essays: "I, for my part, do not like images cut out in juniper and other garden stuff: they be for children." But his strictures had no influence, and in the reign of William and Mary the taste for this sort of thing was all-pervading. Yet later on the ridicule of Addison and Pope was brought to bear on the practice, and it presently passed out of fashion. As in most other things, there is between the extremes a golden mean, a happy medium, and it cannot be denied that a certain formal clipping and stately rigidity of line harmonised well with these fine old Tudor mansions, with their geometric flower-beds, statuary, fountains, terraces, and noble flights of steps.

In the language of the botanist the yew is the *Taxus baccata*. The second of these names has obvious reference to berry-bearing, but the first is by no means so clear. The common name, yew, is a corruption—or shall we rather say a suggestion—from the Celtic *iw*, green. The variation in the spelling of the word is very great; we have seen it given as yweu, eow, iw, ewe, eugh, whe, eu, ew, ewgh, yugh, yeugh, yewe, yowe, and even iuu, and this by no

means exhausts the list.¹ In fact, if our readers will fix upon the most outrageous orthography they can imagine, doubtless time and due research would make its discovery possible in some old volume.

When the yew furnished the long bow, the weapon so formidable in the skilled hands of our English archers, the weapon that gained for England the proud victories of Crecy, and Poitiers, and Agincourt, its growth and preservation were of essential national importance, so that statute after statute was passed in succeeding reigns to keep unimpaired the supply. Even after the introduction of gunpowder, villainous saltpetre, the long bow long held its ground, and so late as Flodden Field was a potent aid to victory. The home supply was by no means sufficient, and while the exportation of yew was strictly forbidden, its importation was encouraged in every way, and at length it was made obligatory that merchants trading abroad should bring back not only the wine, or silk, or furs, or whatever cargo formed their lading, but with these a certain amount of suitable yew wood for the making of bows. Roger Ascham, in his quaint *Toxophilus*, declares that "As for elme, wych, and ashe, experience dothe prove them to be but meane for bowes; ewe of all things is that whereof perfite shootinge would have a bowe made."

All Englishmen who were physically fit were, for

¹ So far as eughen bow a shaft may send.

SPENCER.

Fyn ew, popler and lindes faire.

CHAUCER.

The warlike yewgh, by which, more than the lance,
The strong-armed English spirits conquered France,

SIR THOMAS BROWNE.

generations, required to exercise the art of shooting, and it was on public holidays the great recreation. The warlike Edward III. would, in fact, recognise no other, and by royal proclamation all were instructed to "learn and exercise the art of shooting, forbidding all and singular that they do not after any manner apply themselves to the throwing of stones, hand ball," etc., a long list being given of "such-like vain plays which have no profit in them." Those who failed to obey the king's command had no alternative but imprisonment during the king's pleasure. Every man was required to have a bow, and with this he wended his way with his neighbours to the butts that were built in the outskirts of every town. King after king issued such commands as were needful to maintain the English skill in archery, and to fit all able-bodied men to take their place in the national defence. Would that we, a great Imperial race, of vast responsibilities, could nowadays emulate the zeal and patriotism of our forefathers, and, thinking less of "sport" and vain plays without profit, become a nation in which every man was familiar with the handling of a rifle and proficient in its use. With all respect to King Edward III., we think that monarch did not perhaps sufficiently realise that Waterloo was won on the playing-fields of Eton—if, indeed, he ever heard that well-worn remark. The victory, however, was to the players, and not to the lookers-on. There is considerable moral and physical difference between struggling for one's side on the football field, and being in these latter days one of forty thousand mill hands, or colliers, who surround the enclosure, roaring their approbation or yelling their disgust at the play in which they take no part.

Many noble yew-trees are in existence, and of these a great number will be found in our old country churchyards. Why this should be so is an unsolved problem. Some would persuade us that they were planted there to assist in the production of all those long bows that England once needed ; some that their sombre shade might solemnise the thoughts and remind all of the days of mourning and the silent resting-place ; some that their far-spreading branches might make a welcome defence against fierce sun, or driving hail, or what else might mar the funeral rites ; while others tell us that as they stand unmoved, generation after generation of humanity laid beneath their shade, they, clad in unchanging verdure, are to each and all the emblem of immortality. Some would have it that the yew-tree was sacred to the Druids and their disciples, though of this there is no definite evidence, and that the founders of Christian churches, raising their buildings on the sites of the temples of the older faith, yet left the old trees standing. Judging by modern feeling, it would seem most improbable that the new shrines should be reared on ground soaked with the blood of the victims of such awful cruelty as the Druidic rites are known to have fostered ; but perhaps other men other manners, and such deliberate occupation of the old sites might be held to more distinctly show to all the victory of the Cross.

It may at once be replied that if the trees had a religious significance to the disciples of Druidism, their destruction by the adherents to Christianity would be inevitable ; but this is not necessarily so. Even in things evil there may be something of good, and if we assume—and the assumption has been made, though apparently on

no just foundation—that to the Druids the yew-trees were a symbol of immortality, there would be little or no reason to destroy them. The teachers of the new beliefs would naturally find it well to avoid drastic and unnecessary changes in matters not essentials, which could be retained without sacrifice of principle, and they might not unreasonably decide that where the old teaching could be engrafted into the new, its symbols need suffer no molestation. All this, however, is the merest theory, the vaguest surmise. In some churchyards one finds more than one yew-tree, though for any symbolic purpose one would appear sufficient. In Cudham churchyard, for instance, there are two noble old trees, at Hemelsfield three, at Aberystwith eleven. While many of these venerable trees are clearly of immense age, and known, from reference in Domesday Book and other ancient records, to date long prior to the Norman Conquest, one must not too hastily assume Druidic origin all round. In several churchyards are to be seen noble-looking trees of which the actual date of planting is known. The yew really grows somewhat rapidly in its earlier days, these earlier days being an odd century or two.

The poets seem to have entered into a conspiracy to vilify the yew, not apparently having seen it growing wild and free on some mountain slope, but only as a churchyard tree. That the tree should be found amidst the tombs is clearly not the fault of the yew at all, yet

¹ In Lowe's altogether excellent monograph on the *Yew-trees of Great Britain and Ireland* is a very striking illustration of this, a tree that was planted in the churchyard of Boughton, near Faversham, on the authority of the parish Register, in the year 1695, having now a girth of trunk at three feet from the ground of nearly ten feet, or, to be absolutely accurate, nine feet and nine inches, in 1897.

because some man planted it there, another man denounces it for being found amidst such surroundings! With Fletcher it is the "dismal yew," while Blair roundly denounces it as the—

Cheerless, unsocial plant, that cares to dwell
'Midst skulls and coffins, epitaphs, and worms;

Moir points out how—

Yon dark, sepulchral yew-trees stand
O'er many a level grave;

and Stanley, writing in 1551, wishes strewn upon his "dismall grave" such offerings as "forsaken cypresse and sad yewe." Dryden, in like manner, calls it the "mourner yew," and it would be easy enough to quote much more in the same lugubrious strain.

The good folk of Sunbury-on-Thames are doubly proud of the fine old yew which stands in their churchyard; for its own sake, and for its association with Charles Dickens. It is mentioned in *Oliver Twist*, in the chapter which describes the journey of Sykes and Oliver one Winter's night through Sunbury on their way to Chertsey on a burglarious expedition.

"As they passed Sunbury Church," says Dickens, "the clock struck seven. There was a light in the ferry-house window opposite, which streamed across the road and threw into more sombre shadow a dark yew-tree with graves beneath it. There was a dull sound of falling water not far off, and the leaves of the old tree stirred gently in the night wind. It seemed like quiet music for the repose of the dead."

One hesitated to dismiss consideration of the yew with

ideas so mournful as those of the worshipful company of poets, but a passage of such pathetic beauty as this of Dickens leaves nought to be desired.

DOGWOOD (*CORNUS SANGUINEA*)

Companioning the yew spray on Plate XI. will be found a piece of Dogwood, *Cornus sanguinea*, a shrub or small tree that grows in the hedges, and is more especially at home on the chalk. It is very common in Kent and Sussex, the hedges, in some parts of these counties, the downlands, being very largely composed of it. The particular piece we figure was growing on the great chalk plateau round Marlborough, in north Wiltshire, but we have seen it in equal profusion around Guildford, in the Isle of Wight, and, in fact, anywhere where the soil conditions suit it. It makes an especially good charcoal for gunpowder, and in some districts is largely grown in coppices with a view to that use of it. It admits of frequent cutting down, and starts again as vigorously as ever; a feature of great commercial value.

The crimson stem of the dogwood is very noticeable, and is in fact the cause of its specific name, the Latin adjective *sanguinea* signifying blood-red. When we see the plant in Autumn or Winter bereft of its foliage, this deep-red colour of its stems becomes especially prominent, and is in itself sufficient to identify the plant by. The dogwood may grow, when unchecked, to a height of some sixteen feet.

The flowers are white, having four petals and four stamens, and growing in rather close clusters at or near

the extremities of the shoots. They open in June. The leaves are in pairs on the stems, broadly egg-shaped. In the early Summer they have a hoary appearance from the numerous small hairs with which they are covered, but when fully developed this feature is not so noticeable. They are very prominently veined, a feature clearly shown in our drawing. In the Summer the foliage is of a clear green colour, but in the Autumn it becomes a full rich crimson. The fruit is globose in form and almost black in colour. In taste it is very harsh and unpalatable, and according to one old writer, who called the plant the dog-berry tree, so nauseous that one would not even throw it to a dog. He thereupon proceeds to declare that that is why the plant is called dogwood, an explanation wholly fanciful, and on a par with calling the hazel the lion-bush, because one would never think of throwing the nuts to a lion. We only quote an explanation so bizarre because incidentally it at least testifies to the acidity of the dogwood berries. These berries, ripe in August or September, freely yield, when pressed, an excellent oil.

The wood is very hard and durable, hence it is used for the cogs of mill-wheels and other purposes where strength and endurance are of value. It was once in great demand for arrows, and may therefore fitly be placed in the same drawing as the plant that was in great demand for bows. It was also largely in demand by the butchers for their skewers, hence one old name for it is prickwood. The present name dogwood is a corruption of the old English names dagger-wood or dagger, because the hard stems can be held, when pointed, to be suggestive of such a weapon. It was also called Gatter in mediæval days,

from the Anglo-Saxon gad, or goad, a pointed stick, by means of which the slow-going oxen at plough were induced to develop, if even very temporarily, some little accession of energy. In some old books, the writers, led off on a wrong scent in the matter of derivation, call it the hound's-berry.

HONEYSUCKLE (LONICERA PERICLYMENUM)

The Honeysuckle, so well known and so justly appreciated, is probably better known to most people when it is wreathing the hedgerows and encircling the hedgerow trees with its wealth of fragrant blossom, than in its fruiting stage, yet under this latter condition it is by no means lacking in grace and attractiveness. Doubtless some ninety-nine per cent. of our readers have in their younger days, as they rambled down the country lanes, pulled the blossoms for the sake of the honey at their bases, and need, therefore, no explanation of its familiar name. It may perhaps, however, be news to some to know that our forefathers called the meadow clover a honeysuckle as well, and for the same reason. In Anglo-Saxon plant lists we find the *honigsucle* mentioned, but we cannot quite definitely say which plant was intended. In one early manuscript we find the *rede hony suckle gres* included, but this was evidently the red clover, all fodder plants being even now in agricultural lists often considered as grasses, and so called. To-day, however, we have but one candidate for the name of honeysuckle, the graceful plant that throws its branches far and wide over the other plants of the hedge or copse.

With clasping tendrils it invests the branch,
Else unadorned, with many a gay festoon
And fragrant chaplet; recompensing well
The strength it borrows with the grace it lends.

The reference to the clasping tendrils is a poet's licence, or possibly a poet's ignorance, the honeysuckle not possessing them. The stems reach a length or height sometimes of some twenty feet. They twine very freely and have great constricting power. One may often come across stems of hazel and other wood in the hedgerow or coppice cut almost in half by them.¹ The stems of the honeysuckle twine from right to left, as do those of the hop, bryony, and some other plants, while others, again, as the dodder or the convolvulus, always twist in the reverse direction to this around whatever support they may attach themselves to.

The leaves are in pairs, and stalkless. They are ovate in form, having their upper surfaces smooth, while the lower faces are often a little downy or hairy. The blossoms are tubular in form, very fragrant, of a creamy yellow or white, and with roseate streaks. They are grouped together in terminal heads, and will be found from June to September. The honey they so freely contain is in great request, some insects being able to reach it from the upper part of the expanded flower, while others, unable to do this, pierce the flower at its base and so arrive at the prize. The fruit is a scarlet berry. These berries are grouped some five or six together, and vary considerably in size. They may be described as globose,

¹ It growth in woods and hedges and upon shrubbes and bushes, oftentimes winding it self so straight and hard about that it leaveth his print upon these things so wrapped.—GERARD.

but they are of a very pulpy nature, and when at all compressed together lose somewhat of their typical rotundity. They are from one- to three-celled, and contain but few seeds. One old herbalist, we see, describes the fruit as "like to little bunches of grapes, red when they be ripe." These berries have a succulent and somewhat tempting look, but on trial they are found to be very acrid and bitter. In rustic pharmacy they have been used as an emetic.

The scientific name of the honeysuckle is *Lonicera periclymenum*. The generic name was bestowed in honour of one Adam Lonicer,¹ a German botanist, who died in 1586; while the specific title is from the Greek word to entwine, in obvious allusion to the growth of the plant. Another popular name for the honeysuckle is the woodbine, in earlier days spelt wood-bind.² This name is now not often used, but it has always had a special attraction for the poets. It was by early writers applied to various climbers—to the clematis, for example—but for some three centuries has been assigned to the honeysuckle alone. Poetical as it may sound, we see that it is really prosaic enough, and merely calls attention to the somewhat inconvenient habit of the plant of utilising to their detriment its neighbours. Shakespeare, it will be remem-

¹ Such a method of handing down to posterity the name of a distinguished man is much employed in botanical nomenclature. The *Lobelia*, for example, is so called in honour of Lobel, while the *Linnaea* recalls the great Linnæus, *Tillæa* the Italian writer Tilli, and the *Villarsia* Dominique Villars.

² By aventure his way he gan to hold
To maken him a gerlond of the greves
Were it to woodbind, or of hauthorn leves.

CHAUCER, *The Knightes Tale*.

bered, in *Midsummer Night's Dream*, uses both words, where Titania exclaims—

Sleep thou, and I will wind thee in my arms,
So doth the woodbine, the sweet honeysuckle,
Gently entwist,

Milton errs in applying the name “twisted eglantine” to the honeysuckle, since eglantine, as we have seen, is an alternative name for the sweet-briar, but we find Shakespeare clearly distinguishes between them in these lines—

O'ercanopied with luscious woodbine,
With sweet musk-roses, and with eglantine.

Shenstone, too, discriminates—

Come, gentle air! and while the thickets bloom
Convey the jasmín's breath divine,
Convey the woodbine's rich perfume,
Nor spare the sweet-leaved eglantine—

though his placing the jasmine, a purely garden flower, in the thicket will scarcely bear over. In Anglo-Saxon plant lists we find the honeysuckle appearing both as wudu-wind and wudu-bind, the plant that both winds and binds.

Milton writes in one of his poems of “the well-attired woodbine,” but elsewhere he sits him down upon a bank “with ivy canopied,” and proceeds to refer to the “flaunting honeysuckle”; and Thomson in like fashion tells of “a bower where woodbines flaunt.” But this notion of bold ostentation and self-assertion is very much beside the mark, and all lovers of the plant—as, indeed, who are not?—will raise their protest. Cowper goes to the other

extreme, and pleases us no better, in calling it "the wood-bine, pale and wan": the perfume, "never cloying," perhaps held as compensating for "her sickly looks"—a poor anæmic thing indeed.

The honeysuckle, from its beauty, from the ease with which it may be transplanted from the copse, from its value in covering over arbour or fencing, is often introduced into the garden. It will grow in almost any soil, and can readily be propagated by layers or cuttings, September being the best month for this purpose. It is one of the earliest plants to expand its buds.

Like almost everything else, the honeysuckle has had a goodly number of remedial virtues ascribed to it. In comparatively recent times a decoction of the stems was used for gout, while an infusion of the flower was held of healing power for the victims of asthma. One old writer declares that they cure the hicket—whatever that may be; while another asserts that "the ripe seed gathered and dried in the shadow and drunk remoueth wearisomenesse," while "the flowers steeped in oile and set in the sun is good to annoint the bodie that is benumbed and growne verie cold."

BLACKBERRY (*RUBUS FRUTICOSUS*)

In our twelfth illustration we have figured a spray of the Blackberry, certainly one of the best known of our hedge-plants, "going blackberrying" being a delightful experience of our younger days that few, surely, have been so unhappy as to have had no share in. While many plants, as we have already seen to be the case with the



privet, the black nightshade, and the dogwood, have black berries, the present plant, ignoring all such rivals, claims to stand out in exclusive pre-eminence as the blackberry.

In these days of highly scientific farming the picturesque old-fashioned hedges are held in no favour, and are either entirely removed, or else clipped almost out of their lives; removed, because for steam-cultivation it is well to throw the many small fields of the old days into a few large ones instead; clipped, because one cannot now afford to have a great mass of rambling material as many feet or even yards thick as some of these old boundaries were, using up and impoverishing much ground, and harbouring the numerous birds that, in some cases rightly, in others wrongly, the farmer regards as his sworn enemies. Our forefathers, we know, not only tolerated large masses of blackberry in their hedges, but deliberately planted them there, for Tusser, who wrote on matters agricultural in the sixteenth century, directs the farmer to—

Go plough up, or delve up, advised with skill,
The breadth of a ridge, and in length as ye will;
Then speedily quickset, for a fence ye will draw,
To sow in the seed of the bramble and haw.

Thus it is small wonder that we find the blackberry so abundant in our country lanes, and many of these plants, no doubt, may boast a very considerable antiquity. Elsewhere we see in his book that he advises the farmers—

To plot not full
Ad bramble and hull,
For set no bar
Whilst month hath an R.

Divers old names for the plant we all recognise now

as the holly are the holm, hulst, hull, and hulver. This advice is given to the farmer for operations on the farm in October. Stripped of its poetic charm and set forth in the barest prose, the instruction is simply this—where any sign of thinness in the fencing makes itself felt, fill in the weak places either with bramble or with holly, setting no time limitations to these planting operations, so long only as the month when they are undertaken justifies the work by the presence of the letter R in its name. Hence the work might fitly be done in October; May, June, July, and August being by this stipulation the only unsuitable months for the task.

Blackberries, too, appeal to the sentimental side of our nature as we recall the tragedy of the Children in the Wood,¹ how, deserted, they wandered up and down the woodland glades, and how—

Their pretty lips with blackberries
Were all besmeared and dyed,
And when they saw the darksome night
They sat them down and cry'd.

Blackberry is, in the language of the grammarians, a noun of multitude, and signifieth many things, for while the ordinary individual thinks he knows a blackberry-bush when he sees one, the plants vary much in details of growth, and, according to the more or less of importance attached to these variations of form, so species are multiplied until at last we arrive at this point, that one authority admits only one type form with five, well-marked

¹ Then sad he sung the Children in the Wood;
How blackberries they pluck'd in deserts wild.

varieties ; while another requires us to believe that we have in Britain nearly fifty different kinds of blackberry !

The leaves of the blackberry are beautifully varied in colour in the Autumn, being anything from strong orange yellow to crimson, or purple, or rich brown, all these colours being often found exquisitely mottled and combined on one leaf, while the flowers, of delicate pink and beautiful satin-like texture, are to the full as attractive. One very pleasing feature, too, in the blackberry is that its flowering and fruiting stages are of long duration, so they liberally overlap, and one may at almost any time during the Summer and Autumn find the plant in full flower and yet showing its fruit in abundance, from the earliest little green berries, or the larger and redder ones, to the full-grown luscious fruit.

Blackberries eaten when ripe are very refreshing and grateful to the taste, but before this are sour and astringent. An excellent preserve is made from them ; those who have assisted in gathering the fruit will scarcely need to be told that the plant throws out long arched stems, and that these are liberally provided with strong hooked prickles. These long flexible branches root again on touching the ground, and greatly assist in increasing the plant. One that we have trained on our own garden wall grows many feet in a season, and if not presently checked will entirely monopolise it. Hundreds of pounds weight of fruit have been gathered from this plant during some years of occupancy.

DEWBERRY (*RUBUS CÆSIUS*)

The Dewberry, an allied species, has more slender branches, and does not flower so freely as the blackberry,

but the great point of difference is found in the fruit, for while this is somewhat smaller than that of the blackberry, the grains of which it is built up are fewer, and, individually, much larger, and it is covered with a rich purple bloom. On testing it we find that its tempting appearance is not belied on this closer acquaintance, as it is richer in flavour and more succulent than the blackberry.¹ In the blackberry the five segments of the calyx at the base of the fruit are throw back, while in the dewberry these segments are narrower and longer and rise up round the fruit. Botanically it is the *Rubus cæsius*, and, though not so common as the blackberry, the *Rubus fruticosus*, is very generally distributed throughout the country.

CLOUD-BERRY (*RUBUS CHAMÆMORUS*)

Yet another *Rubus*, the *R. chamæmorus*, is the Cloud-berry, sometimes called the Knotberry, or the mountain Bramble. This, however, is not a plant of the hedgerows, but of the high peaty moorlands in the North of England, in Wales, and in Scotland. Though a true bramble, as its flowers and yet more its fruit indicate, it is but six inches high, and unarmed with prickles. Its leaves are very like those of the mallow, its flowers large and pure white, and the fruits that succeed these are first scarlet and then of a rich orange colour, and agreeably acid in flavour. They are much larger than those of the blackberry, and an excellent preserve may be made from them; or gathered fresh and

¹ Be kind and courteous to this gentleman,
Hop in his walks, and gamboll in his eies,
Feed him with apricocks, and dewberries,
With purple grapes.

eaten with sugar and cream they are, after a long day's tramp, most acceptable.

STONE BRAMBLE (*RUBUS SAXATILIS*)

The Stone Bramble, *Rubus saxatilis*, is another member of the bramble group, and, like the last, a native of the northern and western mountain districts. It is sometimes called Roebuck-berry. The fruit is crimson, composed of but a few large grains, and excellent in flavour. The flowers are few in number and of a greenish-white.

Why these different brambles should be called *Rubus* is rather an open question, and where many theories are advanced to explain anything we need scarcely stay to point out that none of them are quite satisfying. One of these derives the word from the Celtic word *reub*, to tear or lacerate, while another hath it that the Celtic *rub*, red, is the explanation. *Fruticosus* means shrubby, and is from the Latin *frutex*. *Cæsius* is bluish-grey, in reference to the beautiful bloom on the dewberry. *Saxatilis* signifies pertaining to rocks.

RASPBERRY (*RUBUS IDÆUS*)

Another valued fruit, and botanically again a close relative of the blackberry, is the Raspberry, the *Rubus idæus* of scientific nomenclature and classification. It should be sought in woods and thick hedgerows, and more especially in the north, though we have indulged sumptuously¹ in its

¹ One old author, we see, says that "the fruit is good to be given to those that haue weake and queasie stomachs," but this testimonial is by no means good enough. Had we had the pleasure of his company in Devonshire, he would, we think, have modified this statement considerably.

scarlet berries in the lanes of Devonshire, not by any means one of our most northern counties, and have assisted with the greatest satisfaction in many a glorious raspberry-gathering expedition in Wiltshire. Indeed, it is, we believe, possible to go raspberry-seeking—not, perhaps, quite the same thing as raspberry-finding—almost within sight of the dome of the Metropolitan Cathedral, as the plants maybe found on several of the open common lands around London.

Though the individual fruits are smaller than those of the cultivated plant, they are as fragrant and luscious, and the preserve they make is fully equal to the garden product. They are also in such profusion that the basket quickly fills, and as they grow on stems some four feet high, Nature has given a very happy medium indeed to the gatherer, avoiding on one hand the continuous stooping that befalls the picker of the hedge-bank strawberries,¹ and the considerable reaching that is sometimes necessary to gain possession of those particularly fine blackberries that look so very tempting high overhead, and which are so magnificently ripe because so ungetatable. The stems are covered with a soft downiness, and are furnished with weak and small prickles. The foliage, green above, has the lower surface almost white, a very noticeable feature when a breeze sets all in motion ; this arises from the felting of greyish-down or soft hairs with which this under face of the leaf is covered. The flowers are small, the petals white and narrow, scarcely rising above the calyx, and therefore very inconspicuous.

¹ The blushing Strawberry

Which lurks, close-shrouded from high-looking eyes,
Shewing that sweetness low and hidden lies.

Old writers often call the plant the Raspis, or the Hindberry. Pliny mentions it centuries ago as the *Idæa*, the Greeks so calling it after Mount Ida, where it was abundant, and we to-day, in memory of this, call it specifically *idæus*.

The garden raspberry is but the result of cultivation at the hands of the gardeners of the wild indigenous plant. Dr. Turner says, in his *Herbal* of the Year 1568, that “the raspis is found in many gardines of England.” Gerard, in his *Generall Historie of Plantes*,—our edition is dated 1633,—says that “the Raspis is planted in gardens,” but adds, “it groweth not wilde that I knew of, except in the field by a village in Lancashire called Harwood, not far from Blackburne.” Worledge, in his “*Systema Agriculturæ*, being the Mystery of Husbandry discovered and layd open,” our edition being that of 1675, declares that “Rasberries are not to be omitted out of the number of the most pleasant and usefull Fruits, which yield one of the most pleasant Juyces of any Fruit, and being extracted and preserved, will serve to tinge any other Liquor with its delicate Aromatick Gust.”

STRAWBERRY (FRAGARIA VESCA)

On the sloping hedgebank or in the copse one may find the Strawberry, *Fragaria vesca*, in considerable abundance. It is one of our indigenous plants, known to our Anglo-Saxon forefathers as the streowberie, while its botanical name bears testimony to its worth, being compounded of two Latin words signifying fragrant and good for food. By the ancients it was called the *morbus*

terrestre, the mulberry that grows upon the ground; not a particularly happy title. It forms the subject of our thirteenth illustration.

The flowers, as our figure shows, are white and five-petalled, and having in their centres a prominent mass of brownish-yellow stamens that makes a very effective little colour-contrast with the corolla. These little white, earth-born stars strew abundantly the banks and hedgerows and copses from May onward, and are in turn succeeded by the scarlet-crimson fruit.

One uses the broad term fruit as descriptive of the pistil arrived at maturity, but it is sufficiently evident, on looking around us, that this arrival of fruition fulfils itself in many ways, reveals itself in many forms, a pea-pod, for example, a blackberry, and an acorn being very unlike in appearance. This fruit of the strawberry, in popular diction a berry, is somewhat abnormal in its structure. This any of our readers who have not thought it out will readily realise if they consider that what they term its seeds are upon its outer surface, and that they have always, hitherto, been accustomed to expect to find any seeds, not on the outside certainly, but stowed away within the fruit; a pea-in-pod-wise or pip-in-apple-like arrangement. These so-called seeds, however, in the strawberry (they are carpels really, each containing a single seed) are scattered over the fleshy receptacle that gives to them a resting-place and to ourselves a succulent and toothsome morsel.

The strawberry is found extending all over Europe and Northern Africa, throughout Siberia and Western Asia, but not penetrating across the Himalaya to the torrid



plains of India ; throughout, also, the temperate regions of North America. We have, for instance, in our own dried collection a little wild strawberry-plant from Goat Island, nurtured amidst the spray and turmoil of Niagara.

The garden varieties, of which there are many hundreds,¹ all spring from this little wildling, and those who gather a dish of its fruit, admit, after a judicious application of cream and sugar, that even in comparison with any of its cultivated descendants it leaves little to be desired. New varieties are made by crossing and re-crossing existing kinds ; there is now no need to revert to the original species, but it is distinctly interesting to see them doing so in earlier days. In one old book we read that "the ordinary red strawberry grows plentifully in the new-fallen copses,² from whence, if you take your plants about August, you will have a very fair encrease." While Tusser, pointing out the work to be done in September, says—

Wife, into the garden, and set me a plot
With strawberry roots, of the best to be got ;
Such growing abroad, amongst thorns in the wood,
Well chosen and pricked, prove excellent good.

From a song of about the year 1480, we see that the

¹ "The President of the Horticultural Society, Thomas Andrew Knight, Esq., states that he has at this time not less than four hundred varieties of this fruit in his garden." This passage we extract from *The Companion to the Orchard*, published in 1831, and is interesting as showing what was being done even then.

² The Putting forth of certaine Herbes discovereth of what Nature the Ground where they are put forth, is: As Wilde Thyme sheweth good Feeding Ground for Cattell; Betory and Strawberries shew Grounds fit for Wood.

crying of Strawberries in the streets was even so early as this a recognised institution in the metropolis.

Straw is often put around the garden plants, and for a twofold purpose, the retention of the moisture beneath it, and the cleaner growth of the fruit above it, and some would tell us that here is an obvious reason why the plant is called the strawberry. Others say, not so at all, but rather because it was long the custom for children to gather the berries in the woods and thread them on straws of grass for sale, a custom that still obtains in some parts of the country. Neither of these explanations meets the case. The first half of the word is sometimes straw, sometimes strew, or strow, or stray in old authors, but is, in any case, based on the Anglo-Saxon verb *strew*,¹ to scatter, disperse, or spread, and refers to the growth of the plant ages before either straw or straws had anything to do with it. The strawberry, wild or cultivated, throws out runners most freely; these root, and again repeat the process, so that in a short space of time the area covered by the plant is greatly increased. If, therefore, we find the strawberry at all, we find it in profusion, aggressively covering a considerable distance along the hedgebank, and with no regard at all to the rights of its companions.

“The water of the Berries carefully distilled is a sovereign remeday and Cordiall,” declares one venerable authority, “in the palpitations of the heart, that is the

¹ And fulle myche peple spredden her clothes in the wey, other kitterdon braunchis of trees and strewiden in the weye.—WICLIF. St. Matthew xxi.

And so thyder he rode to dyner, and so alyghted there, and went into his chambre, the whyche was strawed with grene herbes, and the walls sette fulle of grene bowes, to make the chambre more fresh.—*Froissart's Cronycle*.

panting and beating of the heart, and it is good to the
• overflowing of the Gall, which causeth the yellow Jaundice. The Berries themselves are excellent good to refresh and comfort the fainting Spirits, and to quench thirst." Some people have even been known to eat strawberries because they liked them, and found in that a sufficient justification for their internal application. Dryden tells us of happy folk who were "content with food which Nature freely bred," and so "on wildlings and on strawberries they fed." The only serious drawback that we know of to strawberries is that they are procurable for too short a time, and so these contented people that Dryden appears to have found somewhere would perforce have in a short season to change their dietary.

The *Syrupus pilosella*, a mixture in favour with our ancestors as a soothing and healing preparation, owes something at least to the strawberry, though, as that appears to be about one-thirtieth of the prescription, we cannot quite say what proportion of the accruing benefit may be ascribed to it. "Take of Mouse-ear three handfals, the roots of Lady's-mantle one and half ounce, the roots of Comfrey, Madder, white Dittany, Tormentil, Bistort, of each an ounce, the leaves of Wintergreen, Horse-tail, Ground-ivy, Plantain, Adder's tongue, Strawberries, St. John's-wort, with the flowers, Golden-rod, Agrimony, Betony, Burnet, Avens, Cinquefoil, red Colewort, red Roses, of each a handful, boil them gently in six pounds of Plantain water to three, then strain it, and when it is settled add Gum Tragacanth, the seeds of Fleawort, Marsh Mallows, and Quinces made into a Mussilage by themselves in Strawberry water, of each three ounces, white sugar two

pounds. Boil it to the thickness of honey." The fabrication of *pilosella* evidently required a very considerable knowledge of our wild plants before one could say quite happily, "prescriptions accurately dispensed."

BARBERRY (BERBERIS VULGARIS)

In many parts of Britain, but more especially in the north, one may find the Barberry, often merely a shrub, but at times considerably more. It is a plant of the hedgerows, copses, and open woods. It has rather a partiality for a chalk soil. As a hedge-plant it has its attractions, as it is tremendously thorny and bushy, grows rapidly, is close-growing, and takes free-clipping kindly. It is often from its ornamental character transferred to the shrubbery, being very attractive when in early Summer a mass of yellow blossom, in Autumn a mass of scarlet fruit.

The leaves are very numerous, small, of a palish green, clustered together, oval in form, stiff in character, minutely toothed, each serration prolonged, so that the leaf appears as though fringed with fine hairs; at the base of each leaf cluster one finds three thorns, or, to be more correct, one thorn that at its base spreads into three arms. "The leaves," quoth one of the ancients, "are vsed of diuers to season meate with, and instead of a Sallad, as be those of Sorrell." They have a pleasant acidity, as one quickly determines on biting a small portion.

The flowers are yellow and six-petalled, arranged in pendulous clusters, racemes, and flowering in the early Summer. On first opening they have the delicate smell of the cowslip, but the odour towards evening and on

nearing decay soon becomes very disagreeable.¹ The stamens are curiously sensitive. When the flower is first expanded they spread outwards, but when their bases are touched by insects they spring inwards, and the pollen is brought into contact with the central organ. One can readily produce the effect by touching them with a pin or piece of twig.

The berries are somewhat small. They are described as being ovoid, long oval, cylindrical, and so forth, but, if the dignity of the subject will permit of the homely comparison, we may venture to say that they are the shape of a sausage. They are generally a little curved, and of a brilliant scarlet colour, each being tipped with the little black style. Their texture and appearance is very coral-like. They are exceedingly sour to the taste, and strongly astringent, so that one is not tempted to try more than the first. In France large quantities of malic acid are prepared from them. Even birds decline acquaintance with these berries, tempting as they look, but, on being made by the housekeeper into a jelly or conserve, with due proportion of sugar, they are very acceptable, or they may be gathered while yet green and pickled. Medicinally they have been employed from their cooling efficacy,² in fevers, and they

¹ The author had a barberry-tree in his garden near twenty feet in height, the branches of which extended over a circumference of sixty feet. When covered with blossom in the Spring, it had a pleasing effect in the shrubbery, but was so offensive for about a fortnight, that no one could walk near it during that time.—PHILLIPS, *Companion for the Orchard*.

² The fruit is cooling, quenching thirst and restraining Chollerick and pestillentiall Vapors, and is of very good use in Agues, if either the Conserve or the Syrup thereof be taken with the Syrup of Violettes. The sayd juyce also or the Berries themselves is often used for those that loath their Meat, to procure an Appetite. It is good also to fasten loose Teeth.—*Adam in Eden*.

make an excellent gargle for sore throats. They have also supplied a remedy for jaundice.

The bark, from its astringency, has been employed in tanning leather, while the stems and roots, prepared with alum, yield a strong yellow dye for fabrics or for staining wood for cabinet-work. In Queen Elizabeth's time we find the ladies steeping barberry and ash roots together, and preparing a compound therefrom for the creation of golden hair.

The Arab name for the plant is *Barbaris*, and the botanical name, *Berberis*, is derived from this. One curious old name that we find for the barberry is the piprage, or pipperidge, meaning literally the red-pip; the French words *pepin* and *rouge* supplying the derivation. It is bestowed in obvious allusion to the hard pip-like scarlet berries.

Since barberry is a constituent we append another of these tremendous prescriptions of our forefathers. This time it is the *Syrupuse Corallius compositus*. "Syrup of Coral restores such as are in consumptions, is of a gallant cooling nature, and very cordial." To make this admirable preparation, so cooling yet so warming, we "take of red Coral six ounces, in very fine powder and levigated upon a marble, add of clarified juice of Lemons sixteen ounces, clarified juice of Barberries eight ounces, sharp white wine Vinegar and juice of Wood-sorrel, of each six ounces; mix them together and put them in a glass stopped with cork and bladder, shaking it every day till it have digested eight days, then filter it and take juice of Quinces half a pound, sugar of Roses twelve ounces. Make them into a syrup in a bath, adding Syrup of Clove-gilliflowers sixteen ounces." This, we imagine, would be a still more admirable prepara-

tion if the pounded coral could be taken out. Under these circumstances certainly it would require renaming, but that, after all, is a detail, and of much less importance than swallowing ground-up coral.

BIRD-CHERRY (PRUNUS PADUS)

We may from time to time find the Bird-Cherry, *Prunus Padus*, ordinarily as a hedgerow plant, but sometimes as a goodly tree of twenty feet in height. It bears in the Spring long pendant and graceful bunches of white blossoms. These are followed in due course by the fruit, hanging in bunches, something like currants. These are at first green, then red, and finally, in August, deep black. They are nauseous in taste. Our forefathers, or more probably our foremothers, used to tie these berries round the necks of their children to ward off various evils, bodily, mental, and spiritual, from them. Birds are very partial to the fruits; they are, in fact, as the name suggests, the birds' cherries, though, unfortunately for the fruit-grower, they by no means confine themselves to them. They are sometimes called heg-berries, hag-berries, or hack-berries, the first half of the word in each case having as its root the Anglo-Saxon *hege*, a hedge. The name, in one or other of these forms, is centuries old, but does not strike one as being a particularly happy one, as they are no more and no less hedge-berries than many other plants, hawthorn, privet, ivy, blackthorn, and many others that at once occur to us.

CUCKOO-PINT (ARUM MACULATUM)

Our fourteenth illustration depicts the brilliant berries of the Cuckoo-Pint, or wild Arum, the *Arum maculatum*. This plant, common enough almost everywhere in damp and shady hedgerows or under the shade of the trees in the copse, is curious in the way it presents itself to us under such an entirely different guise at different times of the year. In the Spring we see its quaint inflorescence rising from the midst of its mass of foliage, then that all passes out of sight and is forgotten, and presently when the Autumn days come we see the scarlet spikes, such we have figured, rising amidst the low vegetation in their naked simplicity, the leaves, like the flowers, having disappeared months ago.

The leaves are bright and shining, as though highly glazed or varnished, and are of arrow-head shape. They are of a deep green colour, blotched over with purple spots of various sizes. They are so acrid that they inflame and irritate the skin, and may even raise blisters. Bulliard, in his *Histoire des Plantes Vénémeuses*, instances the case of three children who ate some of these berries. They were seized with horrible convulsions, their throats becoming so swollen that they were unable to swallow anything; two of them quickly died, while the third was saved with great difficulty.

The flowers are very peculiar in structure, a central club-like body bearing on its lower portion a ring of pistillate flowers, and above these the stamiferous ones, the whole being surrounded by a large leafy sheath. The flowering season is April and May. In the Autumn, as we have



CUCKOO PINT.



indicated, one finds the spike of berries. These berries are very lightly attached to the flesh stem, so that on the slightest provocation they come away. There will be noticed on each of our pieces, and especially on the right hand one, the scars where they have been detached. They are, though at first green, of a brilliant and rather orange-scarlet colour, globose, and succulent; each berry is one-celled, containing one or more hard seeds. Being of a rather soft nature one finds them when packed closely together losing somewhat of their roundness under this pressure. They are devoured by many birds, pheasants, and others.

The whole plant is very violent in its action and to be carefully eschewed by humanity. The root is in its raw state very poisonous, inodorous, and at first insipid, but soon causing an intensely strong burning and pricking sensation in the throat that may last for hours. Coles, in the year 1657, finds an extraordinary use for it. He declares that "the fresh Roots cut small and mixed with a Sallet, will make excellent sport with a sawcey guest, and drive him away from his over-much boldness, and so will the Powder of the dry Root, sterewed upon any dainty bit that is given him to eat. For either way, within a while after the taking it, it will so burn, and pinch his mouth and throat that he shall not be able to eat any more, or scarce to speak for pain." When we can feel that the hint has been taken, we may, "to take away the stinging, give the party so served new milk and fresh butter." Starch and flour have both been made from the dried root, the action of heat removing the deleterious properties. "The Juyce of the Berries boyled in Oyl of Roses easeth pains in the Ears, and a dram or more

being beaten and taken is a most present and sure Remedy for Poyson and the Plague," we are told, though surely this can only be on the principle that the patient being killed off by the cuckoo-pint is troubled by the plague no more, since the weaker poison succumbs to the stronger. It resembles too much the prescribing of a good strong dose of prussic acid as a remedy to cure arsenical poisoning.

CHAPTER II

The Trees of the Forest—The Monarch Oak—Acorns as Food—Oak-mast for the Pigs—Panage in Domesday Book—Oak Galls of various kinds—The Beech—St. Leonard's Forest Experiences—Name-carving—Beech-mast—The Hornbeam—The Scotch Fir, or Pine—Its Mountain Home—Cones, Pine-apples—The Larch—Planted by the Million—Spanish Chestnut—As an Article of Food—Abnormal Cluster—The Horse-Chestnut—A Central Asian Tree—The Birch—The Lady of the Woods—Greenland's one Tree—Its Silvery Bark—The Books of Numa—Witches' Knots—Attraction of Sap to Butterflies—The Birchen-rod—The "Village Schoolmistress"—The Ash—The "Venus of the Woods"—The Husbandman's Tree—Elizabethan Statute for the Preservation of Timber—Ash-keys—Peter-keys—Norden on Sussex Iron-furnaces—Shrew-ash—The Serpent's Antipathy—The Rowan, or Mountain Ash—Difference of Opinion on Floral Odours—The Witchen-tree—Preservative from the Evil Eye—The Service-tree—Service-berries as Food—The Sycamore—The Biblical Sycamore—The Great Maple—The False Plane—Sycamore-wine—Fungoid Growth on the Leaves—Winged Fruits—Distribution of Seeds of the Sycamore—The Maple—Maser-tree—The Plane—Its peeling Bark—A Town-tree—Irrigation with Wine—The Holly—The Saturnalia again—Tunbridge Ware—The Flail—The City of Tibur—"As Pliny saith"—Bird-lime.

OAK (QUERCUS ROBUR)

WE propose in the present chapter to deal more especially with the trees of the forest. Amongst these one stands pre-eminent, and in unchallenged supremacy, the Oak. In its massive strength, in its endurance, in its picturesque grandeur, in the magnitude it attains to, in its association with our island story, beneath its sacred shade the home of Druidic worship,

or carrying across the ocean the flag of England, the Mistress of the Seas, it stands alone in interest, in regal majesty. As the yew-tree won for us Cressy and Agincourt, so the oak bestowed on us, some little thanks also being due to the passengers it carried, Trafalgar and many another glorious victory.

It will be observed in our illustration, Plate XV., that the leaves are what is botanically termed sessile, or, in other words, stalkless, while the acorns are borne on a stalk, or, botanically, a peduncle; and thereby hangs a tale. We have in England two distinct forms of oak, in one of which, as in our figure, the leaves are sessile and the acorns pedunculate, and this has been distinguished as the *Quercus pedunculata*; while in the other these conditions are reversed, the leaves being stalked while the acorns are not, and so this has been differentiated as the *Quercus sessiliflora*. While some would give distinct specific value to these characteristics, others would tell us that they are but variations, and that, whichever form we find, it is in any case the grand old British oak, one and indivisible, the *Quercus robur*. Our illustration, therefore, is that of the *Q. robur*, if we sink these minor differences; *Q. robur pedunculata*, if we like to reckon them as but a variation of form, to be recognised if we so choose, but not to be thought over-much of; or the *Q. pedunculata*, if we insist on ascribing importance to them. The pedunculate form is generally the more abundant, but in some districts the sessile-fruited is found almost exclusively. When the oak was the foundation of our naval supremacy, it was thought at first that one variety supplied better timber than the



OAK

other, but protracted experiment showed that there was nothing to choose between the two, the more or less of excellence depending really upon soil, locality, and other considerations quite outside the presence or absence of a leaf or acorn stem.

The name *Quercus* is open to more than one explanation. That this should be the Latin word for an oak-tree would seem sufficiently to account for its present employment, but some would tell us that the name is derived from the Celtic words *quer*, beautiful, and *cuez*, a tree. In the Gaelic tongue the oak was called *darach*, and in Greek *dras*. From this latter is derived the word dryad, and some would venture to find also in it a justification for druid. The Celtic word, however, for the oak being *derw*, we find a fairly reasonable derivation without wandering so far afield as Athens in search of it. The specific name is the Latin *robur*, signifying strength, while our popular name oak descends to us from Anglo-Saxon times, when our tree was the *ac*.

The curiously waved outline of the oak-leaf is indicated in our drawing. In the Spring the foliage is of a rich red colour that presently merges into green, and is again transformed, as Autumn advances, into a rusty brown. These brown and curled-up leaves often remain on the tree until dispossessed in the Spring by the new growth. The flowers of the oak are, as in most forest trees, very inconspicuous. We have already had in our pages more than one example—the hop, for instance—of the male flowers being found on one plant, and the female on another, the arrangement known botanically as dioecious, but in others the pistillate and the staminate flowers,

though distinct, are found on the same plant, an arrangement technically termed monœcious. To this latter class the oak belongs. The stamen-bearing flowers are found in slender pendulous catkins, from two or three inches long, each individual flower in the group consisting of some six to twelve stamens, surrounded at their bases by a ring of very small scales, while the pistillate flowers are erect and solitary, surrounded by a ring or cup of conspicuous scales or bracts. This ring presently develops and coheres, hardening into the cup of the acorn. The flowers appear in April or May, simultaneously with the bursting leaf-buds.

The fruit of the oak, the well-known acorn, is composed of two very distinct features, the central nut, and the ring of encircling bracts, or cup, at its base. It is ripe in October. When mature the supply of moisture is withheld, the nut shrinks a little in consequence, and becomes held loosely in its cup, and so a gust of wind then suffices to throw it to the ground.

When a plant has matured its seed, Nature has next to prepare for its dispersion ; nourishment, as we see, is withdrawn, and the stems and seed-chambers become dry and fragile ; the Autumn gales then sweep down alike on forest or on flower-bed, and the gusts scatter far and wide the ripened seeds. In this way the acorn is thrown from its cup as a ball is tossed from one's hand. Nature, too, has many assistant gardeners : the schoolboy that gathers a pocketful of acorns, and presently tires of them, drops them, or throws them aimlessly away ; the squirrels and other woodland creatures that hoard, and bury, and sometimes forget the position of their larder ; the forest ponies or

the deer, that with sharply pointed hoof dig in the moist ground a resting-place for the acorns, and, trampling restlessly around, dibble them securely in for their winter's sleep. The empty cups, their mission so far accomplished, then become, if we may believe Shakespeare, who knew a good deal about most things, the homes of the fairies.

Dioscorides¹ and other venerable authors attributed great healing virtues to acorns. Despite the high position they once held in ancient therapeutics, they have long since lost their reputation in matters medicinal. On looking again at this last sentence, it struck us as being a little vague, as applying equally to either the acorns or the venerable authors; and our first thought was to erase it and try again, but as the statement would indeed apply with equal force to either we retain it proudly as a model of compression. Acorns, long after their medical value was set at nought, were tolerated by mankind under stern necessity as an article of diet, but such food is too bitter and austere to be used continuously, and we may well regard Cowley's rhapsody on some unknown heroic race as having but slight relation to the facts. He declares that—

Heroes on earth once lived, men good and great,
Acorns their food; thus fed they flourished
And equalled in their age the long-lived oak.

¹ Dioscorides was a physician, and approached the study of plants from the medical point of view. He lived in the time of Nero. He, Hippocrates, and Theophrastus are the great authorities for all Greek plant-names and plant-uses up to a little beyond the time of the commencement of the Christian era.

While another writer goes yet further and asserts that these men—

When fed with oaken mast
The aged trees themselves in years surpassed.

If so it is an interesting illustration of that great law, the survival of the fittest, those who could thrive on acorns being practically unkillable. According to Chaucer “thei weren wonte lightlie to slaken hir hunger at euen with akehornes of okes,” but this would appear to be merely a light supper before turning in, and not a solid dietary.

Famines frequently occurred in earlier days, and in the Saxon Chronicle we read of one special time of dearth and scarcity in the year 1116, when it is stated, “this year was so wanting in mast that there was never heard such in all this land.” We must remember that this natural provision of oak-corn, while of very slight nutritive value to man, furnished a valuable food for swine, and one that they greatly appreciated and throve on.

From oak to oak they run with eager haste.
And wrangling share the first delicious taste
Of fallen acorns; yet but thinly found,
Till the strong gale has shook them to the ground.¹

We find swine's flesh the principal animal food of most tribes and peoples in an early stage of civilisation, whether on a South Sea Island or dwelling in an English shire, since pigs multiply rapidly, and, herding together, need but little oversight. The scarcity of mast in this Saxon time of dearth meant therefore not scarcity of acorns for the man and his family, but for his pigs; yet if these

¹ Bloomfield, *Farmer's Boy*.

primarily, were on insufficient diet of acorns, he perforce, secondarily, had to go on short commons of pork, and so, the acorn crop being a failure, he starved.

We have been told by farmers that if pigs are allowed to eat too freely of acorns the resulting bacon is wanting in firmness and good quality, but we are possibly in this matter more critical than our forefathers. According to Harrison, however, as we read in his *Description of England*, this view that acorns are not a suitable diet either for pigs or poultry would appear to be a very just one :

“In time of plenty of mast, our red and fallow deere will not let to participat thereof with our hogs, more than our nete : yea, our common pultrie also, if they may come vnto them. But as this abundance dooth prooue verie pernicious vnto the first, so the eggs which these latter doo bring foorth (beside blackenesse in color and bitternesse of tast), haue not seldome beene found to breed diuerse diseases vnto such persons as haue eaten of the same.”

It will be noted that the word “let” has its old sense of hinder, and not its modern and contrary significance of permit. The passage tells us that when the acorns are ripe the wild forest deer have no notion of being hindered from being participants in Nature’s bounty, but claim full share with the farmer’s hogs and stock generally. Tusser, we see, strongly advises that the “nete” should not be allowed to share in this feasting.

To gather some mast, it shal stand thee vpon,
with seruant and children, er mast be al gon :
Some left among bushes shal pleasure thy swine,
for feare of a mischief keepe acorns fro kine.

We are startled by the assertions of ancient writers,

that acorns in early times formed a welcome diet, but we must bear in mind an important point : that these venerable authorities were Latins or Greeks, dwellers around the Mediteranean, and that the acorns they referred to were not those of the English Oak at all, but of South European species that bear fruit at once nutritious and inviting. The evergreen oak, *Q. ilex*, abundant throughout South Europe, bears a fruit that in flavour resembles a nut. Another oak, also evergreen, the *Q. ballota*, is almost equally common, and yields an abundant supply of nutritious acorns. During the Peninsular War both the French and English soldiers found welcome subsistence on these in the great woods round Salamanca and elsewhere.

One of the most unpopular and vexatious acts of William the Conqueror, in his passion for converting the great forest tracts into his own hunting grounds, was the restriction that was imposed on the keeping of hogs by the common people, and this grievance sorely rankled until, in the great explosion of wrath against King John that culminated at Runnymede, these restrictions were greatly modified in the great Charter of English liberty that he was there compelled to sign.

In Domesday Book the woodlands are valued not for their timber—the time for that had not yet come—but by the number of swine to which they would yield panage; and so closely was this calculated that we even find patches of forest ground entered as “of one hog.” The right of turning out swine in the forest was of great value. We find it in Saxon times often assigned as an endowment to a monastery, and more than once it is the dowry of a king’s daughter. About the end of the seventh century,

King Ina, amongst the few laws that he enacted to regulate the simple economy of our Saxon ancestors gave particular directions concerning these panage rights. Injuring or destroying trees was by him made penal,¹ the fine being thirty shillings, a large sum at that time, unless the tree were large enough for thirty hogs to stand beneath it, when the penalty was doubled. Offa, King of Mercia, the treacherous assassin of Ethelbert, King of East Anglia, gave to atone for his many sins, a large piece of land to the See of Canterbury, *in pascua porcorum*, for the pasturage of the swine of the Archbishop. Deeds of Edward the Confessor and other sovereigns are yet extant where this panage forms an important item in the gift of land or the transfer of its ownership.

The oak is particularly subject to attack by various small creatures, and in consequence bears not acorns alone, but many abnormal growths—oak-galls, oak-apples, oak-spangles, and not a few others. One of the commonest of these is figured in our illustration. Bacon, in his *Sylva Sylvarum*, declares that “there is no Tree, which besides the Naturall Fruit, doth beare so many Bastard Fruits as the Oake doth: For besides the Acorne, it beareth Galls, Oake-Apples, and certaine Oak-Nuts, which are Inflammable: And certaine Oake-Berrie, sticking close to the Body of the Tree, without Stalke. It beareth also Mistletoe, though rarely. The Cause of all these may be, the Closenesse and Solidnesse of the Wood, and Pith

¹ In like manner, in the Mosaic dispensation, it was enacted that even in an enemy's country and in time of war “thou shalt not destroy the trees thereof, by forcing an axe against them; thou mayest eat of them, but thou shalt not cut them down, for the tree of the field is man's life.”

of the Oake: Which maketh severall Iuyces find severall Eruptions. And therefore if you will desire to make any Super-Plants, you must euer give the Sap Pentifull Rising and Hard Issue." These oak apples are a purely adventitious growth; masses of dried and diverted sap. A little insect punctures the stem and then deposits its eggs within the wood. This causes abnormal action to be set up, and within the resulting globular forms the eggs are carefully protected. These are hatched about Midsummer, and, if after this time we cut these little balls open, we shall find some little white grubs snugly ensconced within. These eventually, as winged creatures, force their way out, and fly away to repeat afresh the preliminary stages in oak-apple growing. The "apple" when first formed is often beautifully varied in colour with tints of brown and green and pink and sufficiently suggestive of a real though miniature apple to account for its name. The round oak-galls, so familiar to every one, are formed in a very similar way: they are first green in colour and then brown and when they have arrived at this stage we may ordinarily see in them plainly enough the little circular puncture by which the once imprisoned creature found its way to freedom. They are sometimes, from their spherical form, called marble-galls: they may be seen figured in our illustration.

Another very common form is that known as the artichoke gall, where a leaf-bud has been attacked and its due development arrested, so that we get in its place a mass of brown scales. Yet another gall of frequent occurrence is known as the oak-spangle. These are to be found studding the under surfaces of the leaves, at first crimson, then a rich brown in colour, small in size, but generally

numerous, so that the leaf is literally spangled over with them.

Some fifteen hundred insects are supported by the oak in one stage or other of their existence. To catalogue these in our pages would be a work of supererogation, but we may at least mention that glorious butterfly the Purple Emperor and the Red-Underwing and Wood-Leopard moths, and amongst beetles the well known Cockchafer.

BEECH (*FAGUS SYLVATICA*)

The Beech, perhaps the most beautiful of all our trees, and second only in its grand proportions to the oak, is freely distributed all over the South of England, sometimes in association with other trees, often in solitary grandeur, while in some districts forming magnificent forests, as at Savernake, in Wiltshire. Evelyn, who is generally regarded as no mean authority on trees, has yet the hardihood to assert that "on the whole the massy full-grown luxuriant beech is rather a displeasing tree." This is rank heresy. Sir T. Dick Lauder, in editing Gilpin's *Forest Scenery*, refers, on the other hand, to "the pleasure arising from the contemplation of a noble beech, as one of the most magnificent objects of God's fair creation"; while yet another authority declares equally uncompromisingly that "the beech must certainly rank as second only to the oak, for majesty and picturesqueness; while, for the union of grace and nobility, it may claim precedence over every other member of our Sylva."

The beech is particularly common on ground of calcareous nature, but is by no means confined to such

localities. Provided only the substratum be dry and well drained the tree thrives well on most soils, and especially if the position be somewhat high.¹ We have seen magnificent beeches on the chalk at Deepdene, in Surrey, and others as fine on the sand at Haslemere, in the same country. The finest beech-trees are said to grow in Hampshire, though the Buckinghamshire people dissent from this view in favour of their own county. We have seen magnificent specimens in Kent and in St. Leonard's Forest, Sussex. The cottagers of the Forest have a belief that the great saint himself, St. Leonard, sleeping in these umbrageous recesses, was inhospitably disturbed by the vipers, and his repose broken by the singing of the nightingales. Ordinary folks would have to put up with such inconveniences or go, but such saintly men as St. Patrick or St. Leonard require the inconveniences to go instead, and so ever since his visit

The viper has ne'er been known to sting,
Or the nightingale e'er been heard to sing.

It is generally considered that the beech is one of our indigenous trees. Cæsar, it is true, specifically declares that it is not; affirming in his writings that the trees of Gaul and of Britain are alike, except that the latter has neither beech nor fir; but after all his opportunities of observation were not so absolutely far-reaching that we need feel that his simple statement settles the question, as it is proverbially difficult to prove a negative.

¹ This Tree grows plentifully in Gravelly, Stony, and Sandy Land: great Beechen-woods I have seen on the driest, barren sandy Lands: they delight on the sides and tops of high Hills, and chalky Mountains: they will strangely insinuate their Roots into the bowels of those seemingly impenetrable places.—*Systema Agriculturæ*, 1675.



BEECH

The roots of the beech extend far and wide, but are always rather near to the surface of the ground, so that when a forest giant is uprooted in a heavy gale one is surprised at the great bulk of root that is torn up, and the very flattened mass that it presents, the whole being a great disk of roots and earth, yards in diameter, and yet scarcely a yard in depth. One result of this large mass of roots so near to the surface is that scarcely anything will grow beneath a beech-tree, further reasons for this very marked absence of vegetation being the dense shade, and the thick carpet of fallen leaves.

The leaves of the beech are arranged, as our illustration, Plate XVI., shows, singly on the stem. They are ovate in form, having their outlines wavy, and fringed in their younger days with delicate hairs. They are also very deeply veined, strong lines, as we see, passing from mid-rib to margin. Throughout the summer they are a strong rich green in colour, but in the Autumn this changes to a deep orange-red. The Autumnal beauty of all other trees fades before the glowing splendour, the gold and amber of the beech; and to see on some glorious September day the woods aflame is a revelation; the trees attired in this robe of glowing colour, the thick carpeting of leaves beneath them purple in the shadow and pure golden-orange in the sunshine. We have enjoyed many such days in the great beech forest of Savernake, and the memory of them endures. On such occasions a colour box is a mockery, for no pigment of man's devising can touch the splendour of the scene.

The foliage is sometimes riddled with holes by a species of weevil, but comparatively few insects attack it as com-

pared with most other trees, and notably the oak. While the entomologist finds but little spoil in the beech woods, the fungologist gathers a rich harvest of quaint and interesting forms. The leaves of the beech decay very slowly, and were formerly both in England and on the Continent in great repute for stuffing beds with, as they continue sweet and elastic for many years. Their use for this purpose extends back many centuries, for we find Juvenal and other classic writers singing their praises.

The smooth trunk of the beech is another very characteristic feature. It is of a general olive-grey in tint, but richly mottled with silvery-grey and golden lichens, and its base is clothed with large patches of deep green moss of velvet-like softness. This smooth surface of the beech trunk has proved an irresistible temptation from the beginning of Time for the wandering lover to carve thereon the name of his beloved, or the wandering individual, free from this pre-occupation, to place thereon his own.

Ovid tells us how the faithless Paris, summoned from tending his sheep on the slopes of Mount Ida to the perilous task of adjudging the palm of beauty between three rival Goddesses, is bribed by Venus to declare in her favour by the promise that he shall have to wife the fairest woman in the whole world. Captivated, infatuated, in the presence of the glorious Helen he, alas! utterly forgets honour and the just claims of sweet *Cœnone*, the once well-beloved, and so she writes to her errant lover an epistle of touching tenderness to recall to his mind the happy days of old, reminding him that "the beeches still preserve my name, and *Cœnone* the work of your

hands¹ is read upon their bark, testimonies of my just claim upon your affection." The appeal is in vain, and the flames of burning Troy cast a lurid light on the story.

Shakespeare does not absolutely tell us in *As you Like It* that the trees were beech, but the speech of Jaques, "I pray you, mar no more trees with writing love-songs on their barks," indicates that these effusions were of considerable length, and we may well assume that so experienced a hand would appreciate the special merits of the beech over all other trees for his purpose.

"The quaint old author of *Adam in Eden* tells us that the Beech Tree delighteth to grow in some places more than in other: for, as in the Chiltern County, no word is more familiar; so in others not far from it, a Beech Tree is a great rarity, as in Oxfordshire, where there is one growing between Oxford and Banbury, which is so famous that it is noted over all the County, and called the Beechen Tree, there being scarcely a Traveller that goes by that way but takes special notice of it, yea, formerly many went to it (though it be somewhat out of the way), to cut their names upon its smooth bark, so that now it is so full of letters that there is hardly any space left."

The flowers of the beech are monœcious, the stamen-bearing flowers being in globose catkins of about a dozen

¹ The tending of sheep would appear to be a calm pursuit lending itself very readily to thoughts of the absent fair one. We quote another illustration:

But oft, when vnderneathe the greene wood shade,
Her flocks lay hid from Phœbus scorching raies,
Vnto her knight she songs and sonnets made,
And them engrau'd in barke and beeche and baies.

FAIRFAX.—*Godfrey of Boulogne*. Book VII., St. 19.

flowers each and pendant on slender drooping stems, while the pistil bearers, on a short erect stem, are generally only two together and within a globular mass of small and narrow scales that ultimately develop into the prickly husk that, as we see in our drawing, presently opens into four lobes and thus liberates the fruit. In the upper part of our illustration we see this husk just preparing to open, and in the lower it is fully extended. This illustration was made, we see by our diary, on October 11th. As the fertile flowers are normally in pairs, the nuts, too, are in pairs.

The fruit, known as beech-nut, or beech-mast, is very sharply three-sided, and contains a sweet, oleaginous kernel.¹ In the lower part of our drawing we have given two views of one of these nuts. They are fairly palatable. It is said that if "eaten in great quantities they occasion headaches and giddiness," but one cannot imagine any one indulging to this extent. They have been sometimes dried and ground into meal for bread, but their great popularity is found not in this direction at all, but as the eagerly sought food of deer, pigs, badgers, squirrels, dormice, ring-doves, pigeons, pheasants, and other creatures that hold in the time of mast harvest high festival.² An oil, that is said to equal in flavour the best olive oil, with the great advantage of keeping longer without becoming rancid, is obtained by pressure in

¹ The beech, of oily nuts prolific.—*The Task*. COWPER.

² With these kernels mice and squirrels are greatly delighted, who do mightily encrease by feeding thereon: Swine also be fatned herewith and certaine other beasts: also Deere do feed thereon very greedily: they be likewise pleasant to Thrushes and Pigeons.—*The Historie of Plantes*. GERARD.

France and elsewhere on the Continent: the nuts when crushed are still very acceptable to oxen and poultry. An attempt, about a century ago, was unsuccessfully made to introduce the manufacture of this oil into England, and in the reign of George I. a patent was issued for the making of butter from beech-nuts. They have also been roasted as a substitute for coffee.

HORNBEAM (CARPINUS BETULUS)

On hard clay soils we may often find a tree, the Hornbeam, having foliage somewhat like that of the beech, more elongated and having serrate edges, but having a similar regularity, sharpness, and parallelism of line in the veining. Its timber is particularly hard and tough, close-grained, and white in colour. It is freely used in turnery, the making of pulleys, and the like, and appears from time immemorial to have been fashioned into ox-yokes, hence its name *Carpinus*, this being derived from the Celtic words *car* and *pin*, meaning wood and head. Another old name for the tree is the Yoke-elm. Hornbeam, some would tell us, is the beam or yoke used with horned cattle, while others would have it that the wood is so hard and dense that beams cut from it are really more like horn than timber. This latter explanation does not strike one as being very satisfactory—nor indeed does the former—but it is entitled to such little support as another of its old names, *hardbeam*, can afford.

The flowering arrangements are of the monœcious type, the male catkins being cylindrical, and some one and a half inches long; the flowers, of some five to twelve stamens

each, being surrounded by large, round, yellowish scales ; while the pistillate blossoms are in slender lax catkins, often several inches long. These are conspicuous from the long, foliaceous, three-lobed floral leaves that envelope the flowers. These catkins and the leaves appear together in April or May.

The nuts are small, and very prominently ribbed ; they will be found at the bases of the floral leaves, and ripen about September. These floral leaves grow larger and become yet more conspicuous as the fruit within their shelter ripens.

The hornbeam would, under favourable circumstances, attain to a height of some forty feet, but it bears chopping very well, and is often found severely pollarded in consequence. As one goes to Burnham Beeches to see the most picturesque pollarded beech-trees, so in Epping Forest one may find hundreds of the most picturesque hornbeams, pollarded for firewood and poles, by those having forestal rights of "lop and top," or possibly sometimes by those not possessing them.

SCOTCH PINE (*PINUS SYLVESTRIS*)

We pass on from the glowing beech woods of the South to the great sombre pine forests of the North, and the transition is a very striking one. Our illustration, Plate XVII., presents to us the foliage and cones of the tree that is best known as the Scotch Fir, though technically it is a pine, and botanically it is the *Pinus Sylvestris*. This word pine or pinus is derived from the Celtic *pin* or *pen*, a head, the reference being to the growth up to two



SCOTCH PINE

thousand feet above the sea of the tree on the great mountain headlands

The Scotch pine is indigenous to Scotland, and is more or less naturalised throughout England, appearing thoroughly at home, for instance, on the great moorland tracts of Hampshire and Dorsetshire, though it does not attain there to the grand dimensions and noble growth it reaches in its northern home. In Scotland one finds vast natural forests of it, and it is only here in the midst of the grand mountain scenery that one realises to the full its wild and picturesque beauty, as it stands "moored in the rifted rock" and in situations often quite inaccessible to the human foot. To view it rising from a well kept lawn, and surrounded by calceolarias at its feet in a Bournemouth pleasaunce, is barely sufficient to justify one in saying that he has really seen a Scotch pine at all.

The tree is widely distributed over Northern Europe, in Norway, Sweden, and Lapland, and in Russian Asia, everywhere forming dense forests. It would appear to flourish best on granite or on dry sand. It is commercially a most valuable tree, as besides its immense value for timber for building operations, it yields tar, pitch, and turpentine. Its durability as timber is proved to be scarcely less than that of the oak, and it has a great power of resisting water-action. Divers descending to the wreck of the *Royal George* found this wood less destroyed by water and the assaults of various sea-creatures than any other, and the Stadthuis at Amsterdam rises securely from its watery bed, sustained by over thirteen thousand fir-wood piles. As a fuel it kindles rapidly and burns with a great heat, but gives a

good deal of unpleasant black smoke, features that its resinous nature would lead us to anticipate.

The Scotch pine rises high into the air and has but few lateral branches. The flat-topped mass of foliage throws a strong shade, the ground is carpeted with the dead leaves that, brown and dry, are strewn around, while the air is fragrant, and especially in the warm sunshine, with the aromatic odour given forth. The stillness in a pine forest may often be so profound that a sense of awe creeps over us; loud talking seems a profanation, and we may hear distinctly the patter of the squirrel's feet as he scampers up a trunk some trees away from the intruders upon his domain. At other times the wind, unfelt below, makes a subdued and solemn murmuring amongst the tree-tops. Wordsworth, ever open to Nature-observation, ever in sympathy with every phase of Nature-charm tells how

At every impulse of the moving breeze
The fir-grove murmurs with a sea-like sound.

His comparison is a very apt one, the soothing, slumbrous sound being very suggestive of the breaking of the surf on a distant beach.

The trunks, eighty to a hundred feet high, are enwrapped in a rough red bark that scales off in large thin patches. A group of Scotch pines at sunset, when the last warm rays are striking upon their rugged trunks, turning them into glowing crimson, is wonderfully striking. Where the trees are more or less isolated, having plenty of light and air, they branch near the ground, but when, as is ordinarily the case, they are part of a thick forest their

trunks go cleanly up until near the top of the tree, when the branches are given off, almost or quite horizontal in their general direction, and greatly gnarled and twisted into wild picturesqueness. Under favourable conditions the tree may go on increasing in bulk for a hundred and fifty years, and last in good trim for yet another hundred after that.

The leaves of the Scotch pine are in pairs, each of these couples being surrounded at its base by a wrapping of short, dry scales. The leaves, sometimes happily called "needles," are long, narrow, and rigid. They are ever-green, and remain for two or three years on the branches. They then turn brown and fall to the ground, remaining unchanged for a considerable time, and forming a thick layer. This mass of dry dead leaves and the shade cast by the spreading mass of foliage overhead, combine to cause that absence of other vegetation that is so striking. In an ordinary wood one often finds the trees being ascended by ivy or enwrapped with hop, or traveller's joy, or honeysuckle, and in the sweet Springtime the new-born primroses, in all their delicate beauty are nestling everywhere, the white anemone stars are in profusion, and the hyacinths beneath the trees are one great sheet of purple splendour, while, later on, other plants take their place. The fir woods alone are unchanging: above is ever the same evergreen canopy, and beneath ever the same brown carpeting. April, July, November, all are as one, except that in the Autumn one find sometimes a considerable amount of varied fungus-growth.

The Scotch pine is yet another example, of which we have had several already, of monœcious growth. The

staminate flowers are in small compact catkins, having two anthers on the inside of each scale, and these discharge an abundance of sulphur-coloured pollen. These catkins are from half an inch to an inch long. The pistillate flowers are in short many-flowered cones. These cones are covered with closely imbricated scales¹ that presently dry and harden until they become woody. Each of these scales, except a few of the lowest, covers and protects two winged seeds at its base, the wings being some two or three times as long as the seeds, and aiding in their distribution. The cones are green or purplish-green at first, but by July they attain their full size and become brown in colour; these remain on the tree for a considerable time, though the seeds are discharged from them in the following Spring. These cones, when they do eventually fall, remain, like the leaves, long unchanged on the ground; if collected they make very good firing material. The flowering stage is in May and June, but the fruit does not mature until July twelvemonth. In our drawing it will be observed that one cone is small, immature, closed; another is larger and preparing to open; while the third, and lowest, shows the woody scales fully expanded and the seeds dispersed.

The Scotch pine had a goodlier string of "vertues" attached to it by the old herbalists than its sombre foliage, rugged bark, and woody cones would quite suggest. We see, for instance, that "if at any time any one should wittingly or unwittingly take Henbane and be distempered

¹ We have striven to avoid the use, as far as may be, of technical terms, but this one, "imbricated," describes the matter so entirely that we are constrained to use it. It is from the Latin *imbrex*, a tile, and exactly brings before us the picture of the scales all overlapping, like tiles on a roof.

thereby, the Remedy is to drink Goat's Milk, Honeyed Water, or Pine Kernels with Sweet Wine. These do all help to free them from danger, or restore them to their right temper again." It is interesting to see that whether the case be one of suicide or mere carelessness, the pine kernels are equally willing to do their best for the sufferer. Another old writer declares that "the woody scales whereof the Pine Apple is composed and wherein the Kernels lie, do very much resemble the foremost teeth of a Man ; and therefore Pine leaves boyled in Vinegar make a good decoction to gargle the mouth for asswaging immediate pains in the teeth and gums." Another ancient prescription teaches how to distil a water from the young green cones for the removal of one's wrinkles. Yet another venerable author discourses with enthusiasm on this tree, and advises us that "the whole Cone or Apple being boyled with fresh Horehound til the decoction become to the thicknesse of Hony maketh an excellent medicine for the cleansing of the chest." Linnaeus states that in Siberia the Pine buds, given in decoction with milk, whey, wine, or beer, are believed in as a remedy for scurvy ; and we need scarcely remind our readers what faith our grandfathers had in tar-water. One old author, Thomas Bartolinus, protests against the use of hops in beer as "pernicious and malignant," declares they induce plague and other evils, and recommends in their stead "shavings of deal boards to give a grateful odour to the drink." Coles, in 1657, would have us add fir-cones to our dessert, declaring that they "are wholsom and much nourishing, whilst they are fresh, and although they be somewhat hard of digestion yet they do not offend : especially if they be steeped three

or four hours in warm water before the taking, to soak out their sharpness and oiliness." A very good way, we fancy, to save these for any connoisseur who preferred them would be to place a dish of greengages or grapes by them as a counter-attraction.

LARCH (*LARIX EUROPEA*)

Another very common cone-bearer is the Larch, *Larix europæa*, not an indigenous tree at all, having been only introduced into England somewhere about 1620. Parkinson, in 1629, mentions it as rare and nursed up with a few, and those only lovers of variety, but now more extensively planted than perhaps any other. It flourishes best on high ground, being found in the Alps, Apennines, and other European mountain regions up to an altitude of some five thousand feet, and it will in the Scottish Highlands do well a thousand feet higher than even the Scotch fir will thrive at.

In the year 1727 the then Duke of Atholl received a consignment of young orange and other plants from Italy, and amongst them some larch. All were put into a hothouse, but the young larches did so badly under this treatment that they were presently thrown out on to the rubbish heap. Here they quickly revived, grew rapidly, thrived vigorously,¹ and attracted attention, the outcome being that as Duke succeeded Duke, each added to the ancestral woods, so that by 1830 over fourteen millions of larches had been planted. 1,102,367 were planted in the Spring

¹ In the Atholl woods, nine hundred feet above the sea some Scotch pines that had been planted forty years were six feet high, and some larches that had been planted amongst them ten years later were fifty feet high.

of 1820, and they had previously been planted for some time at the rate of two hundred thousand a year. The first British war vessel built of larch was the 36-gun frigate, the *Atholl*, laid down at Woolwich in 1819, the whole of the timber employed in its construction coming from the Atholl woods.

The larch is now found all over Britain, and will grow on almost any soil, no matter how poor, if not absolutely arid or a mere swamp. It reaches ordinarily a height of about a hundred feet, though sometimes considerably more, and may have a diameter at base of nearly five feet. Larch timber is in great request for its toughness and durability. From its bitter, resinous nature worms will not touch it; it does not warp or split, and it will take a fine polish. Before the employment of canvas larch was much used by the older painters, Raffaele's "Transfiguration" and many other fine works being painted on larch-board. The value of the tree was well known to the Romans, its timber being commended by Pliny, Vitruvius, and other writers. It was called by them *larix*, hence its botanical name. Venice stands largely upon piles of larch.

The larch throws up an erect central trunk, the lateral branches being nearly horizontal, and diminishing in size upwards, so that the tree is of tapering form. It is the only cone-bearing tree that sheds its leaves each Autumn; all others are evergreen. It is, therefore, not broken down by weight of snow, and seldom affected by boisterous wintry gales. It comes into leaf in April, the foliage being of a particularly vivid green. One enthusiastic writer describes the tree as then "a pyramid of beryl," while another writes of "its emerald glory." Another calls the foliage "a lively

pea-green," while yet one more, and he of much more prosaic mould, declares the colour raw and crude, and out of harmony with its surroundings. The leaves are in small bunches, looking like little tufts of grass along the stems, each leaf being about an inch long.

The larch is monœcious, developing its flowers in April. The stamen-bearers are in little yellow spherical clusters, adherent to the branches; while the pistillate flowers are in ovate cones, an inch or so in length, and borne erect upon footstalks. The cones, when young, are of a very pleasing pink and purple colour, and ultimately turn brown and woody; remaining, as we have seen in the Scotch pine, on the boughs in this hardened condition long after the seeds are dispersed. The scales have their edges turned outwards, and have at their base the ovate seed, half surrounded by its broad membranous wing.

SPANISH CHESTNUT (*CASTANEA VESCA*)

The Spanish Chestnut, *Castanea vesca*. Botanical authorities appear to have decided that this tree is not really a native of these islands, and one great reason for their belief, and it is not at all a bad reason, is that it does not often fully ripen its fruit here, as we might expect an aboriginal to do; and they declare that it was introduced by the Romans. As they were in possession here for some four hundred years, it is very natural to assume that they would bring hither the hardier kinds of trees, and especially those that in their native country they valued as producers of food. Tradition hath it that the tree was brought to Rome from Asia Minor by the Emperor Tiberius, and that it thence quickly



SPANISH CHESTNUT

spread over Southern and Western Europe. It, at all events, centuries ago, made itself thoroughly at home in our midst, though we do not find it, except in parks, hedges, or copses where it has obviously been planted by man. It appears to do best on a deep sandy loam. It forms great natural forests in the south of Europe, and the reason that we call it in England the Spanish chestnut is because enormous quantities of its fruit are yearly imported to our shores from Spain.

Some botanical and philological experts tell us that the tree derives its botanical name from the little town of Castanea in Thessaly, where it is said to have been especially in evidence, but other authorities turn the matter the other way round and declare that it was this multitude of trees that gave its name to the town. In Welsh it is the *Castan-wydder*, in French *châtaignier*, in German *Kastanien*, in Spanish *Castana*, in Russian *Keshtann*, in Swedish *Kastanje*, the Italian, Portuguese, Dutch, and Danish names being all of very similar nature to these.¹

The Spanish chestnut, when well grown, forms a very noble tree, equalling even the oak in picturesqueness and rugged beauty in its noble trunk and grand ramification. Its massive branches are thrown boldly out nearly horizontally from the trunk, and at times sweep down to the ground. It is a tree that Salvator Rosa loved to paint : though to him it was not the stately adornment of some well-kept English park, but at home, in all the wild

¹ It is very curious and unusual to find such a sameness in plant names used in different countries. There is ordinarily much more diversity ; the tree, for instance, that we call oak is to the Frenchman *chêne*, to the Italian *quercia*, to the Spaniard *roble*, to the Portuguese *carvalho*, and to the German *eiche*.

grandeur of its native growth, in the midst of savage mountain environment.

Londoners may see some very good chestnut trees in Kensington Gardens, in Greenwich Park, and in Kew Gardens. In this latter spot we were watching a number of boys hunting under the trees for the fallen chestnuts, when we heard another onlooker tell his companion that these busy seekers were "after mulberries," which remark seems almost in itself, if the idea be at all common that chestnut trees yield mulberries, a justification for our book.¹

Many fine chestnuts are to be found scattered over the country, in the Forest of Dean, Enfield Chace, Cowdray Park, Petworth, Burgate, Cobham, Nettlecombe, and elsewhere. At Tortworth, in Gloucestershire, is a chestnut that, now little more than a ruin, had, at four feet from the ground, a circumference of fifty-one feet. It is known to have been standing there in the year 1150, and was even then so fine a tree that it was called "the great chestnut." It was a boundary mark between two manors, and is mentioned in deeds of Kings John and Stephen. As young inconspicuous trees are scarcely raised to the dignity of boundary marks, it may well have been standing there a century before, while tradition carries it back yet further.

The leaves of the Spanish chestnut are of a deep, glossy green, strongly veined, and having a much indented margin. Their general character may be seen depicted in our eighteenth illustration. They are often eight or nine

¹ On pointing out to a friend amongst some ruins in the environs of Rome a rather specially fine plant of fennel, a man who happened to be within earshot turned to us and said, "Don't you know what it is? That is the hemlock that Socrates was poisoned with!"

inches long, and in the Autumn are very varied and rich in colour. Few creatures care for them, but amongst these few may be mentioned the caterpillars of the common, but curiously marked, buff-tip moth.

The flowers are monœcious in arrangement and should be sought for in May. The barren flowers are exceedingly numerous and arranged in little clusters along a very long stem. The stamens of each little flower of the cluster stand boldly out and form a conspicuous feature. These spikes of stamen-bearing flowers may be seen in a now withered state in our figure. The pistillate flowers are much fewer in number and are usually in groups of three within a leafy, four-lobed cup of bracts, or involucre. The odour of the flowers is powerful and peculiar, and to some persons very disagreeable.

The nuts, singly or in pairs, are within the enlarged prickly involucre.¹ In our illustration one of these spiny protecting balls is yet closed, while the other is opening and showing within it the fruit. The nut is not round like an acorn, but flat on one side for greater convenience of packing.

These nuts, though plentifully produced, do not ordinarily come to maturity in England, though Shakespeare in various passages refers to them as an article of food. Deer are very fond of them, as also are mice, squirrels, and divers other creatures. Abroad they are largely used as a table vegetable, and even as a substitute for bread, but then the foreign chestnuts it must not be forgotten, are much better than anything of the sort that we can grow.

¹ The fruit is inclosed in round and rough and pricklie huske like to an hedge-hog or vrchin, which opening itselſe doth let fall the ripe fruit.

Ground up and mixed with a little milk and salt, to which the more extravagant may add an egg and some butter, a very palatable cake is produced, while *polenta*, a very popular South-European dish, may be made by boiling chestnut-flour in milk until it becomes thick. Another preparation one may come across is *chatigna*, which is merely chestnuts boiled, mashed, and seasoned; while the joy of roasting chestnuts on the bars no Briton can surely be oblivious to, and it is an interesting touch of our kinship in experience with the past to find an author, some three hundred years ago, warning his readers that "unlesse the shell be first cut the chestnuts skip suddenly with a cracke out of the fire whilst they be roasting."

The edible or Spanish chestnut generally bears its fruits in bunches of two or three, or, more rarely, in clusters of four, but we have known of a cluster gathered in the New Forest that consisted of fifteen, the largest being about an inch in their greatest diameter. This was, of course, very abnormal.

HORSE CHESTNUT (*ÆSCULUS HIPPOCASTANUM*)

The Spanish chestnut naturally suggests to us the horse chestnut, of which a representation, in its fruiting stage, is given in our nineteenth illustration. It is botanically the *Æsculus Hippocastanum*. The resemblance between the two chestnuts is one of popular name only; they are botanically entirely distinct. The generic name is from *esca*, food, while the specific name is a compound signifying horse and chestnut. It was also, by the older writers, called *Castanea equina*, from the resemblance of



HORSE CHESTNUT

the fruit to that of the chestnut. Why it should be at all identified with a horse opens up a question. Some will tell us that it is because the fruit is given to horses, while others remind us that where a plant somewhat resembles another, but is coarser and larger in growth, it sometimes gets "horse" as a prefix to its name, horse-mint and horse-radish being examples of this. The foliage of the horse chestnut is larger and more massive-looking than that of the Spanish chestnut, but yet one could scarcely speak of the one tree as being a coarse version of the other.

The claims of the horse chestnut to a place in our book are painfully slight, as it has not been known in England three hundred years; still, it is now so common and so well known that it could scarcely be denied mention. It was brought from Central Asia, about the year 1550, to Constantinople, and thence spread over Europe. We find that Gerard, writing in the year 1597, says, "the horse-chestnut groweth in Italie, and in sundry places of the East countries"; but in his edition of 1633 we are told "it is now growing with Mr. Tradescant at South Lambeth."

Its chief claim to a place in our regard is its ornamental character, as neither its fruit nor its timber are of any service, the nuts being bitter and uneatable, the wood soft, spongy, and lacking durability. The tree grows very rapidly, and, bearing a very ample and dense mass of foliage, may be used to ensure privacy, to screen off unsightly surroundings, or to form an excellent shade for horses and cattle.

The leaves are of a character quite unlike those of any other of our trees, though they are curiously like, on

a greatly enlarged scale, those of the little cinquefoil, the *Potentilla reptans*. They are composed of five or seven leaflets, spreading like the rays of a fan, the central leaflet being the largest, and the others diminishing in beautiful gradation. In early Autumn they change from green to a rich reddish-brown, and are one of the earliest leaves to fall. From their number and size they strew the ground thickly, and invite prompt removal if scattered on meadow or roadway. They have, moreover, a striking way of coming down almost simultaneously, so that in less than a week the tree, so lately a mass of ruddy foliage, has become but bare branches.

The flowers are very attractive either singly or collectively, the ivory-white petals, with their quaintly waved and crumpled margins, being delicately tinted in their centres with yellow and pink, and the whole mass forming a very graceful hyacinth-like cone of blossoms. These expand in May, and are ordinarily in great profusion; being found at the ends of the branches, they are very much in evidence. So soon as the flowers are fallen the tree bethinks itself of next year, and the buds develop and continue swelling until the Autumn. They are then overspread with a very tenacious, protective varnish, and so continue until, at the first hint of genial Spring weather, the enclosing scales are unwrapped and thrown aside, and in a few days the tree has wholly discarded its wintry appearance and stands revealed before us fully clothed in verdant beauty.

In the lower portion of our illustration, Plate XIX., we have depicted the nut ensconced in its green and prickly shell; the upper case has not yet split open. The nut

is roundish in form, of deep reddish-brown colour, and of a very polished exterior. If the nuts be cut up and mixed with bran or oats, they may be given to horses, but, while they contain much farinaceous and nutritive matter, there is an astringency in the raw state that is a drawback to their use. When deprived of this by maceration and boiling, cattle, sheep, and poultry will eat them, but pigs decline them in any form.

In France and Switzerland they are used for bleaching yarn and cleansing woollens, and a paste for paper-hangers, book-binders, etc., may be prepared from them. In 1796 a patent was granted to Lord Murray for a method of extracting starch, but the practical outcome of the whole matter, we fancy, may be summed up by affirming that, when all is said and done, the fruit of the horse chestnut is of very little economic value.

BIRCH (*BETULA ALBA*)

The Birch, the most charming, perhaps, of all our forest trees, occurs abundantly in the North, where it may be considered to be truly indigenous, thriving on the most barren and rocky soils, and growing luxuriantly under the hardest conditions. It may be found plentifully, too, in our milder southern shires, prospering on sandy commons, and on land that will grow little else but heather, but in these latter circumstances, graceful and charming as it is, it appears to lack something of the beauty that contrast gives, and which is felt so strongly amidst the savage grandeur of its surroundings in "Caledonia, stern and wild."

In spite of the delicate lightness of its appearance, for Coleridge calls it in happy appropriateness—

Most beautiful
Of forest trees, the Lady of the Woods,

it is pre-eminently a tree of the rugged uplands and bleak mountain slopes, being found in Scotland up to an altitude of three thousand five hundred feet above the sea, a much higher level than that attained by any other tree, companionship us as we ascend the loftier heights long after we have left the Scotch pine behind us. In the Apennines it reaches six thousand feet, while in the icy North it approaches nearer the polar regions than any other tree, and is the only tree found in Greenland at all.

In Anglo-Saxon plant lists it is the *birc*, *birce*, *beorc*, or *byrc*, while in Holland it is the *berke*, in Denmark the *birk*, and in Germany the *birke*. It is suggested that these names are all derived from the verb *brechen*, to brighten, and that the allusion is to the brilliant silvery whiteness of the bark. "It showeth wondrous white," saith Holland.¹ Wordsworth, in his description of an evening walk at Winandermere writes—

How pleasant, as the yellowing sun declines,
And with long rays and shades the landscape shines,
To mark the birch's stems all golden light,
That lit the dark slant woods with silvery white.

And the same feature, the whiteness of the trunk, strikes the eye of Keats, who writes of—

The silvery stems
Of delicate birch-trees.

¹ An English translation of Pliny's *Natural History*, a book written in the first century of our era, was made by Philemon Holland in the reign of Queen Elizabeth. Our quotation is Holland's apt rendering of Pliny's strong expression, *mirabilis candor*.



L. 100.

It is also suggested that the tree derives its name from the Anglo-Saxon *beorcan*, to bark, to strip the bark from a tree, since this bark of gleaming whiteness is the first feature to catch the eye, and in early days was of great utility in boat-building, roofing, and other necessary purposes.

The books written by Numa, some seven hundred years before the Christian era, were inscribed on birch-bark. He ordered that at his death his body should not be cremated, but interred, and that in his tomb should be placed with him the books that he had written. On his tomb being opened four hundred years after, these writings were found to be in perfect condition. They were carefully read, and as it was found that they were not in harmony with the ideas, religious and political, of the day, it was decreed that they should be destroyed, and they were forthwith solemnly consigned to the flames. If, instead of being discovered some three hundred years before the Christian era, they had been brought to light some nineteen hundred years after it, what would not archæologists have given for such a treasure?

The trunk of the birch in ascending is often somewhat sinuous ; it has not the stiff rigidity of the larch, for instance, and at some little distance from the ground, divides into numerous branches, more or less flexible and pendant at their extremities. The tree would ordinarily be about eighty feet in height, though exceptional specimens considerably overtop this, while a Greenland or Lapp birch is, under the stress of Arctic conditions, but three or four feet, or even less, in height.¹

¹ We recall walking at some considerable elevation in Switzerland through a pine forest, the trees reaching to our knees.

We may at times see amidst the branches great masses of small twigs that suggest at once the idea of large nests, a rookery possibly, some trees having a dozen or so of them. These are popularly called witches' knots. They are, however, neither the work of witches nor of rooks, but a case of arrested natural development of the stems caused by the proceedings of a minute gall-mite.

The leaves of the birch are small, arranged singly on the stems, broadly ovate in form, and having their margins cut like the teeth of a saw. Reference to Plate XX. will show their general growth and character. In Autumn they change to a clear, bright yellow-brown tint. Where the conditions of life are hard they are used as fodder for horses, cattle, sheep, and goats, and, under the same conditions, are employed as a substitute for tea.

The flowering arrangements are of the monœcious type. The pollen-bearing catkins are borne at the ends of the last year's shoots, and are generally very numerous, and, from their position, conspicuous. While they are not mature until April, they may be seen developing months before. Though not uncommonly three may be found grouped together, they are more ordinarily in twos. In the earlier days they are stiff, erect, about an inch long, and very suggestive of the letter V as they spring from the stem in pairs; later on they elongate to two inches or so, becoming slender and pendulous. They are covered with scales, these scales protecting flowers having from eight to twelve stamens. The pistillate flowers are in shorter and denser catkins composed of three-lobed scales, each of which shields three flowers. The fruits that succeed these are of flattened form, and furnished with a broad,

flat, membranous wing surrounding them. This wing is Nature's provision for their dispersal, the broad plate-like form being admirably adapted for this. These little fruits are produced in great profusion and form a very welcome food, and especially in high latitudes, to many species of birds, such as the black grouse and ptarmigan. The siskin is particularly partial to them, and may be seen diligently investigating the catkins in search of them.

The sweetness of the sap that exudes so freely from the birch renders it very attractive to various kinds of insect life, and a knowledge of this fact is of great value to the entomologist, who is careful to keep an eye upon any of these trees that he may find. The sap undergoes some little fermentation, and butterflies, wasps, and other insects succumb to the temptation. Inebriation is the result, and those that take part in this debauch become often so hopelessly incapable that they can be easily picked off by the hand from the stems or from the surrounding rocks or herbage. Peacock butterflies and red admirals are generally the most numerous. The very rare Camberwell beauty is also one of the species that yield to this temptation and fall, willing victims, into a state of shocking intemperance.

Economically the birch is of much value, and especially in those sterile lands where it flourishes so well and where so much else is wanting. Its timber supplies fencing, flooring, barrels, and many other useful things; its bark is moulded into the canoe, or forms the shingles of the hut, its larger branches yield welcome fuel, and its smaller ones, twisted together, serve as cordage. Its sap yields a welcome beverage,¹ and the fragrant and insect-resisting Russian

¹ Holes are made in the trunk in the beginning of March, a large tree

leather owes both these qualities to its preparation with birch oil. Furniture, wooden shoes, brooms, are other needs that the birch is equal to supplying, nor must we overlook its value as a stimulus to learning and correct conduct. This, in fact, is placed first by Coles in his *Paradise of Plants*. He declares that "the civill uses whereunto the birch tree serveth are many; as, for the punishment of children, both at home and at school; for it hath an excellent influence upon them, to quiet them when they are out of order; and therefore some call it Make-peace." Shakespeare warns us how fond fathers, not sufficiently zealous in applying "the threatening twigs of birch," find in time "the rod more mocked than feared"; while Shenstone, in his charming poem of the "Village School-mistress," tells how a birchen-tree doth rise hard by the little home of learning, and how, as its branches waved in the breeze, the pupils shuddered—

And as they look'd, they found their horror grew,
And shaped it into rods, and tingled at the view.¹

ASH (FRAXINUS EXCELSIOR)

Gilpin, while he calls the oak the Hercules of the woods, ascribes to the ash the position of Venus. The idea is forced and fanciful, but we at least accept it as a testimony

bearing tapping in four or five places and being none the worse for it. A pipe is then inserted and some sort of vessel suspended to catch the sap. This sap is then boiled with sugar; after cooling it is put into a cask, being drunk when it is a year old.

¹ But though no more his brow severe, nor dread
Of birchen sceptre awes my riper age,
A sterner tyrant rises to my view,
With deadlier weapon arm'd.

JAGO, "Edgehill."

to the charm of the ash, which, in its elegance of form, the lightness of its foliage, and its noble branching,¹ is one of the most beautiful of our forest trees. Virgil appreciatively designates it *fraxinus in sylvis pulcherrima*. It is, moreover, after the oak, the most useful of trees, its timber having a toughness, lightness, and elasticity of fibre that gives it great value. It has been called by an old writer "the husbandman's tree," as there is nothing equal to it for poles, ladders, tool-handles, and such like purposes. Evelyn says of it—"It serves the soldier, the carpenter, the wheelwright, cartwright, cooper, turner, and thatcher . . . from the pike, spear, and bow to the plough; in peace and war it is a wood in the highest request." Homer dwells on the mighty ashen spear of Achilles, and the mediæval pikemen had the staves of their weapons of this wood. It has a great power of standing sudden strain, so for weapons, axe-hafts, and the like it has a special value. Hence Spencer, in his description of divers trees, "the builder oak; the laurel, meed of mighty conquerors; the yew, obedient to the bender's will," sums up the present tree in the pithy comprehensive phrase—"the ash, for nothing ill."

We see from a passage in Norden's *Surveyor's Dialogue*, a book published in 1607, that it was necessary in the reign of Henry VIII. to make a Statute for the preservation of certain trees that from their economic value were becoming scarce: the oak, beech, and some few others, and amongst these we find the ash. It was required that "twelve storsers and standils² should bee left

¹ Ash, far-reaching his umbrageous arms.

COWPER.

² Store trees, standing trees, so that everything should not be ruthlessly

standing at every fall, vpon an acre." Even in the farmer's own interest, Tusser, in his book on husbandry, advises to—

Leaue growing for stables the likest and best,
Though seller and buier dispatched the rest.
In bushes, in hedgerowe, in groue, and in wood,
This lesson obserued is needful and good.

It is curious in these latter days, when we are a little anxious about the duration of our coal supply, to find in Norden's book that one great cause of the destruction of timber was its employment as fuel for various manufactures. Sussex, now so purely agricultural, had, when he wrote, one hundred and forty hammers and furnaces for the smelting of iron, consuming "each of them in every 24 houres 2, 3 or foure loades of charrcoale," while "in Surry adjoining" there were three thousand four hundred "glasse-houses" equally exigent.

The importation of timber from abroad to supply our own necessities is not by any means a proceeding of yesterday merely, or the day before, for we find Hartlib lamenting, in 1659, the great dearth of home-grown timber. He writes, "It is a great fault that generally throughout the Island the Woods are destroyed, so that we are in many places much necessitated for fuel and

felled. This Statute was confirmed and stiffened in the reign of Elizabeth, but we find Harrison complaining that "Within these fortie yeeres we shall have little great timber growing, for it is commonlie seene that those yong staddles which we leaue standing are vsuallie at the next sale cut downe without any danger of the Statnte, and serue for fire bote, if it please the owner to burne." Austin, writing in 1657, reminds the law-makers and law-breakers of a salutary "law in Spaine, that he that cuts downe one tree, shall plant three for it."

also for timber for building and other uses, so that if we had not Coales from New-castle and Boards from Norway we should be brought to great extremity, and many Mechanickes would be necessitated to leave their callings."

In scientific nomenclature the ash is the *Fraxinus excelsior*. The generic title, as we have seen from the line from Virgil, is its old Latin appellation. Hence it is still in Italy the *frassino*, in Spain the *fresno*, in Portugal the *freixo*, while in France it is the *frêne*. Our English name descends to us from the Anglo-Saxon *æsc*. It is in Germany the *esche*, in Denmark the *aske-træ*, and in Sweden the *ask-träd*. It is curious to observe how all the southern names spring from one derivation, while all the northern names have another common parentage. This double grouping is only what might have been clearly anticipated, but it is nevertheless interesting to take note of it.

One striking feature in the ash is the curiously sooty blackness of the buds; this characteristic alone would suffice to identify the tree while yet leafless. It will be recalled how Tennyson, whose Nature-touches are so numerous, so appreciative, so admirable, and so true, declares of one of his heroines that her hair was blacker even than the ash-buds of March.

The foliage of the ash is of a light and bright green that often causes a very pleasant contrast with the surrounding trees. The leaves are what is termed pinnate, or feather-like, a central stem having a terminal leaflet, and other leaflets in pairs below it. The leaves of the ash have two great drawbacks: they appear so

late, and disappear so soon ! The tree is rarely in leaf before June, and at the first touch of frost, no matter how early, the foliage falls rapidly, so that one may see a tree in full and vigorous leaf, and two or three days hence find it bare, and the pathway thickly strewn with the fallen and blackened foliage. The ash contributes nothing, therefore, to the splendour of colour of the woods in Autumn.

The flowers open before the leaves, and should be sought for in April or May. They grow in large clusters in pairs on the stems, and are of a rich red purple. They are particularly simple in character, having neither calyx nor corolla, but throwing up a small stigma-tipped column, having at its base a couple of stamens.

The fruits of the ash are popularly called keys, a name given them from their clustering, pendent character, suggestive of a bunch of keys. By some old authors they are called Peter-keys, from the great Apostle, the bearer of the keys, or sometimes *Lingua passerina*, from their supposed resemblance in form to the tongue of a sparrow. These clusters are abundantly produced, and each cluster consists of many keys ; green at first, but presently turning black, and hanging on long after the leaves have gone. The seeds propagate freely, so that one often sees young seedlings in abundance around the parent tree. To quote a rather quaint phrase that describes the position admirably, "the ash possesses a considerable power of occupancy." The fruit is dry and at its extremity flattens out into a foliaceous wing to assist in its dispersal, the whole arrangement being about an inch and a half long. In the green state the keys are sometimes pickled in vinegar and salt ; they are slightly

aromatic and a little bitter. After one's first taste one is not conscious of any special hankering after them.

The "virtues" of the ash were held to be great. The little shrew mouse was held in the good old times to be of a terribly vindictive and hurtful nature, one of its favourite recreations being to run over horses, sheep, or cattle and paralyse them. To counteract so very objectionable a proceeding all that was necessary when any of the farmer's stock was suffering was, not to send for the "Vet," for he was not invented in those days, but to gently stroke the parts affected with a twig of shrew-ash. To make shrew-ash all that was needful was to bore a deep hole in any ash-trunk, insert alive a shrew mouse, and, with divers mystic rites, plug the opening up again.

Pliny taught his disciples that no serpent dare come within the shadow of an ash tree, and that if a serpent be surrounded and penned in with ash-boughs, except where the circle be interrupted by a fierce fire, the creature will prefer to make its exit through this than through the fence of ash-stems. It is wonderful how these old beliefs held their ground for centuries, when the test of experiment would at any time have shattered them in ten minutes. It was, however, considerably easier for one writer after another to repeat what their predecessors had said than to venture on a proceeding so iconoclastic as to bring the statements of venerated authorities to the proof. Culpeper, however, seems to have been thus daring, for while he quotes the statement that "ash tree leaves are good against the bitings of serpents and vipers," he adds, "I suppose this had its rise from Gerrard or Pliny, both which hold that there is such an antipathy between an adder and an Ash tree that

if an adder be encompassed round with Ash tree leaves she will sooner run through the fire than through the leaves." He then proceeds to bring matters to a climax by declaring "the contrary to which is the truth, as both mine eyes are witnesses." As both his eyes agreed to pronounce Pliny's statement erroneous he had no choice but to believe them. "Three or four" leaves of the ash tree," advises Gerard, "taken in wine each morning from time to time, doe make those leane that are fat, and keepeth them from feeding which do begin to wax"; but Dioscorides declares that a decoction made from ash-shavings is a deadly poison.

By the early northern races the ash was regarded with great reverence. The great ash Ydrasil, of which the branches extended over heaven was the canopy of the gods, and in Scandinavian theology and myth the first created man was formed of ash-wood. To enter, however, upon the mythology, superstition, and folk-lore that has gathered around the ash would, if at all adequately done, mean, not a paragraph, but a volume.

ROWAN (*PYRUS AUCUPARIA*)

The Rowan or Mountain Ash, the subject of our twenty-first illustration, must not be at all associated with the real ash. The name is unfortunate, and was only bestowed upon it because of a certain similarity of form in the leaves of the two trees. The rowan is really a close relative of the hawthorn and apple, as its botanical name, *Pyrus Aucuparia*, clearly indicates. This specific name *Aucuparia* was bestowed on it because it has long been the custom



ROWAN.

for bird-catchers in Germany and elsewhere abroad to trap redwings, field-fares, thrushes, and other birds in hair nooses baited with rowan berries.

The rowan is extremely hardy, and will flourish in almost any soil. It is really a wild mountaineer, delighting to grow on the rocky heights, and forming, either in leaf or in fruit, a charming contrast with the solemn pines, its companions. It is in our own minds irrevocably associated with the grandest mountain scenery, and we have seen it sometimes such a mass of berries that the trees have told as scarlet spots in the landscape. Yet this same rowan, flourishing two thousand feet and more above sea-level, is content to beautify the suburban garden, and give an added grace even to villadom, though we need scarcely say that those who have only seen it amidst such surroundings have but a faint idea of what a rowan is really like.

The pinnate leaves are of a rather dark green colour, and are built up of a terminal leaflet and from five to nine pairs of laterals. The flowers are in numerous large clusters at the ends of the branches and consequently very conspicuous, so that in May the tree is a mass of white blossom. The individual flowers are small, and five-petalled, very hawthorn-like in character, very numerous in each cluster, and having an odour that we might perhaps describe as fragrant if we took the precaution of suggesting a note of interrogation after our verdict. Some persons will declare it delightful, while others, we have noticed, are not prepared to allow it to be much more than peculiar. There is great difference of opinion, one cannot help observing, on the question of floral scents—the meadow-sweet, for instance, to some persons amply justifies its

name by its fragrance, while others pronounce it mostly sickly and objectionable.

The berries of the rowan are at first green, but soon turn to a rich red. They are globular in form and, like their sister fruits, the haws, are surmounted by the remains of the calyx. Under favourable conditions they are very numerous, but they are very greedily devoured by the birds, so that a tree is often very quickly stripped of all its ruddy fruit. The berries are harsh and austere according to man's standard, and he is ordinarily quite content to leave them to the blackbirds and thrushes, but a very pleasant preserve may be prepared from them, and the mountaineers of Scotland make them into a kind of cyder, or by distillation extract from them an ardent and potent spirit.

The rowan has also, by the older writers, been called the witchentree, a name that testifies to the belief once held in its sovereign efficacy against enchantment and the evil eye. A branch of it was hung up over house portals and the doorways of stables and cowhouses, to preserve the respective indwellers from all sorts of perils. The dairymaid brought home her charges from the mountain pastures by the soft persuasiveness of a rod of rowan, and the shepherd required all his lambs to jump soon after their birth through a hoop of rowan as a defence against the ills before them, while all who desired to be free from the possibilities of enchantment and witchcraft were careful to carry about with them at all times a small piece of this sovereign antidote.

SERVICE (PYRUS TORMINALIS)

Another member of the same genus as the rowan is the Service, *Pyrus torminalis*. It is only found in a really wild state in the woods and hedges of our southern and central English counties, and varies from a mere shrub to a moderate sized tree, attaining to a height of about fifty feet. It is of slow growth, and under favourable circumstances will reach a very considerable age; thriving especially in chalk districts. The wood is very hard and close of grain, and though too small in bulk for much other service is in request for turnery.

The leaves are much like those of the hawthorn in form, but are considerably larger, being often four inches long and some three inches across. The young leaves are clothed, and especially on their under-surfaces, with a loose, grey down that presently disappears. The foliage of the service in the Autumn becomes of a yellowish-brown colour.

The flowers should be sought in May. They are found in clusters at the ends of the stems, and are of a very similar type to those of the rowan, but are somewhat larger individually and are fewer in number in the clusters. The berries that succeed these are of ovoid or globular form and of brownish colour. They are exceedingly acid and rough to the taste, but when mellowed later on by a little frost they become softer and more mealy and almost palatable, and in this state they are quite wholesome. They are something like medlars in flavour and are occasionally brought to market. "Service berries," quoth Gerard, "are cold, and much more when they be hard

than when they are milde and soft ; in some places they are quickly soft, either hanged in a place which is not altogether cold, or laid in hay or chaffe. If they yeeld any nourishment at all, the same is very little, grosse, and cold." This certainly cannot be considered much of a testimonial. He goes on to say that "it is not expedient to eate of these or other like fruits, nor to vse them otherwise than in medicines," and he then suggests divers applications of them, such as staunching bleeding and such like things, where their astringency would be of possible service—"if they be cut and dried in the sunne before they be ripe, and so reserued for vse in diuers waies according to the manner of the greife." The Latin name for the plant was *sorbus*, and one of its old names is, in consequence, the sorb-tree, while its fruits were dubbed sorb-apples.

SYCAMORE (ACER PSEUDO-PLATANUS)

It is generally accepted that the Sycamore, the subject of Plate XXII., has no claim whatever to be considered an indigenous tree, though the date of its introduction is unknown. It is, nevertheless, now so widely distributed and so thoroughly at home with us that it may fully claim a place in our pages. Some would tell us that it was brought from the East at the time of the Crusades, a special value being attached to it from a belief that it was the tree associated in the Gospel story with Zacchæus. St. Jerome, who died in the fourth century, was shown a tree which was claimed to be the sycamore actually climbed by Zacchæus, but however that may have been, the tree of the Bible narrative was not the tree known to us



LEA 1000

as the sycamore, but was either a species of fig, the *Ficus sycamoros*, or the black mulberry, *Morus nigra*. The former tree is the one generally accepted. It is referred to in Psalm lxxviii., and in 1 Chronicles xxvii., by the Hebrew words *shikmim*, *shikmoth*, but it is not at all a common tree in Palestine; while the latter, the black mulberry, still called *sycominos* in Greece, is very abundantly found in the Holy Land, and is held by others to be the tree referred to by St. Luke. The subject is not free from difficulty.

The introduction of the sycamore into England can scarcely have been so early as the days of the Crusaders, since it is a tree that sows itself very freely, and yet we find writers on plants centuries after the Crusades, referring to it as a rarity. Gerard, writing his *Herball* in 1597, declares that "the great Maple is a stranger in England, only it groweth in the walks and places of pleasure of noble men, when it specially is planted for the shadow sake, and vnder the name of Sycomore." Parkinson, a little later, says, "It is nowhere found wilde or naturall in our land, that I can tell, but only planted in orchards or walkes for the shadowes sake." Chaucer in *The Flowre and the Leafe*, mentions it, but only as a plant under conditions that suggest cultivation—

And so I followed till it me brought
 To right a pleasaunt herber well ywrought
 That benched was, and with turfes new
 Freshly turned whereof the greene gras
 So small, so thicke, so short, so fresh of hew
 That most like vnto greene welwot it was.
 The hegge also that yede in compas
 And closed in all the green herbere
 With Sicamour was set and eglatere.

It will be noticed in all these writers that they speak so strongly of the shade-giving feature, but Evelyn condemns the sycamore and declares that "it is much more in reputation for its shade than it deserves; for the honey-dew leaves, which fall early, like those of the ash, turn to mucilage and noxious insects, and putrify with the first moisture of the season, so as they contaminate and marr our walks, and are therefore, by my consent, to be banished from all curious gardens and avenues."

This tree that we call, and not quite happily, the sycamore, is by some writers given the title of the great maple; as we have seen, for instance, in our quotation from Gerard. To this title no objection can be raised, for, foreigner though the tree be, it is a near relative of the common and indigenous maple, the *Acer campestre*, a much smaller tree. The botanical name of the sycamore is *Acer pseudo-platanus*. Here, again, a difficulty in nomenclature is suggested, for we are reminded by the specific name *pseudo-platanus*, or false plane, that some folks, led away by the similarity in form of the foliage of the two trees, thought that the sycamore must be a kind of plane, and so used either name as equally suitable.¹ In France the Sycamore is called the *fausse platane*.

The growth of the sycamore is somewhat stiff. The main boughs spring in rigid and angular fashion from the

¹ Hieronymus Tragus, for instance, in his *History of Plants*, published in 1532, called the sycamore, *platanus*. He was a German, and his real name was Jerome Bock. Bock signifies goat, and in accordance with the pedantic fashion of that day, Latinising wherever possible, he became Tragus, as the Swede, Carl von Linné, became Carolus Linnæus. Still, when a man wrote his treatise or book in Latin, it was only fit that his name should be Latinised also.

central trunk, and lessen regularly in size towards the top, so that we get a rather formal round-headed mass of foliage. The leaves are of considerable size and very numerous, so that one can quite understand its shade-giving property being one of the first things noted. The wood is close-grained and yet easy to work, and it was in our forefathers' days much used for the making of spoons, plates, bowls and trenchers, before Birmingham and Burslem between them supplanted wood by metal or by earthenware. If the trunk be punctured as the tree is coming into leaf an abundant supply of sap may be procured that can be converted into sugar or wine. Thirty-six quarts of this saccharine juice have been drawn from one tree within a week.

The leaves of the sycamore are dark green on their upper surface and whitish beneath. As the leaves are large and on long footstalks, they move readily to the wind, and a sudden gust very curiously reveals these light undersurfaces. Their form is sufficiently indicated in our illustration. One old writer, we see, calls them "great broad and cornered leaves much like to those of the Vine." They grow in pairs, it will be noted, a very unusual arrangement amongst our British trees, and the sharp decision of the lines of the veining is also a very marked feature. The young leaves are folded up fan-wise in the buds, and when these latter once yield to the genial influence of Spring the leaves expand with great rapidity, and the tree is very quickly a mass of foliage. The leaves are sometimes covered with little red lumps, the habitation of a grub, and towards the Autumn are a good deal spotted and blotched with irregularly shaped patches of purplish-

black, looking like splashes of ink, and fungoid in their origin. The stems are often red, and towards Autumn a good deal of this red colour may be found in the leaves, but the sycamore does not contribute much towards the Autumnal splendour of colouring in the woods, for very often its foliage merely shrivels up, turns a dull brown, and forthwith drops. The flowers individually are very small, and greenish in colour, but are clustered loosely together in considerable numbers in the hanging racemes that appear abundantly in the early Spring. The bees are always very busy with them, finding them bountifully honey-laden.

The fruits of the sycamore and the maple differ from all others found in our woods and hedges, being composed of two winged fruits joined together as shown in our figure. One venerable author describes the arrangement as "fruit fastened together by couples, one right against another, with kernels bumping out neere to the place in which they are combined: in all the other parts flat and thin, like unto parchment, and resembling the innermost wings of grasshoppers." A fruit thus winged is technically called a samara, so the form we find in the sycamore and maple is termed a double samara. These broad membranous wings waft the seeds away, and thus we may find the young plants widely dispersed from the parental home, starting life for themselves in the crannies of the stonework of the old church tower, in the cracks of the rocks, or wherever else the conditions are fairly kindly to them. While the double samara form differentiates the sycamore and the maple from all other trees, they wear this exceptional distinction with yet a difference, the twin wings of the sycamore

being nearly parallel, or at all events not making more than a right angle with each other, while in the maple the two are almost or quite in a straight line with each other, so that their extremities are as far from each other as it is possible for them to be.

MAPLE (ACER CAMPESTRE)

The Maple, *Acer campestre*, is undoubtedly a true native, indigenous in south England and the midland counties, but not in Scotland or Ireland. Its Anglo-Saxon name is *mapul*, a sufficient explanation of its popular name, though one authority on plants would have us believe that we call it maple from the Latin *amabilis*, because the plant has such beautiful leaves.

The maple may sometimes be found as a tree, and attaining to a height of thirty feet or so, or even, under exceptional circumstances, more than this. Chaucer, in the *Romant of the Rose*, writes—

There were elmes great and strong,
Maples, ash

thus giving it full arboreal rank, but we more ordinarily find it in hedge or copse as scarcely more than a large bush. It bears the shears well, and in those bygone days, when it was the fashion to border the parterres with grotesquely fashioned hedges, bearing some sort of similitude to bird or beast, some resemblance to globe or pyramid, the maple was in great request. It flourishes in a chalky soil, though one may find it doing well almost anywhere.

The wood of the maple is very compact, and of fine grain, but the outer bark is curiously corky and rough,

being deeply furrowed. An old name for the maple is the maser-tree, as from its wood were made the maser-bowls that were so prized in the middle ages. The wood is beautifully veined and takes a fine polish, and the collection of fine pieces of it made into tables, cabinets, and the like, was one of the hobbies of the wealthy connoisseurs of ancient Rome.

The foliage is throughout the Summer of a somewhat sombre green, but in the Autumn turns to a deep, clear, golden-yellow colour, that makes the maples, either in wood or hedgerow, particularly in evidence. It will be recalled that the glory of the Canadian "Fall" is largely owing to the different kinds of Maples, and especially to the Scarlet Maple, *Acer rubrum*.

The leaves of the maple are in pairs, and very elegant in form; five-lobed, something like those of the Sycamore, but much smaller, and having much deeper indentations between the leaves. From the beauty of form of the leaves, and the quaint charm of the winged fruits, the Maple was one of the favourite subjects of the 14th Century carvers, and examples of its decorative use may be freely found in the capitals and other ornate features of the architecture of that date. The leaves are sometimes found thickly covered with little red excrescences, the work of a mite that burrows into the tissue of the leaf with this result.

The flowers are very small, greenish in colour, and borne in erect clusters. Some of the blossoms in these clusters are bi-sexual, while others are uni-sexual, staminate or pistillate alone. They may be found in the early Summer. The fruits are ripe in October, when they turn



PLANT

from green to reddish-brown. They are in form, as we have already pointed out, while dwelling on those of the Sycamore, double samaras.

PLANE (PLATANUS ORIENTALIS)

The Plane is not a native of these Isles, being only mentioned by the earlier herbalists as a great rarity¹ but it has now been planted so widely, and its curious spherical fruits, hanging on the boughs months after the leaves have disappeared, are so well known, that it claims from us passing notice and an illustration, Plate XXIII.

Botanically it is the *Platanus orientalis*. The generic name, coming to us through the Latin, is Greek in its origin and signifies round, some will tell us from the rounded form of the leaf, some from the rounded mass made by the tree itself, others from the round fruits. The tree is mentioned by both Spenser and Milton, and by them called the platane.

The plane is a tree of much gracefulness of form. Mant, we see, calls it "the beauteous plane," and it can scarcely be said to be done justice to by those who see in it no more than a rounded mass. It has a curious habit of throwing off its bark in large flakes that adds to its picturesque effect. In the Bible authorised in the reign of King James we find a reference in Genesis xxx. 37, to the chestnut, but

¹ As, for instance, by Turner, in his *Herbal* of 1568. "I have seene," he says, "two very young trees in England, which were called there Playn trees, whose leves in all poyntes were lyke vnto the leves of the Italian Playn tre. And it is doubiles that these two tres were either brought out of Italy, or of som farre countre beyond Italy, wherenvto the freres, monkes and chanoners went a pilgrimage."

both in the Septuagint and the English revised Version this is translated as plane. The tree is abundant in Palestine, and its Hebrew name, *Armon*, is derived from a root signifying nakedness, in allusion to this habit of throwing off its clothing. The tree bears smoky town life better than most others, and is therefore often planted in urban enclosures and thoroughfares. In one case that we know of where this was done the vestrymen, with whom knowledge of plant-life appears not to have been a strong point, directly their planes began to shed their bark, issued an indignant "whereas," offering a goodly reward for the detection of the offender.

The leaves, as our illustration shows, are very pleasing in form, cut into deep segments, and having their margins sharply indented. The curious enlargement at the base of the leaf-stalk will be noted. Soon after the opening of the leaves the flowers appear. They are individually very small, the staminate flowers being on different stems to the pistillate, but each collected into globular catkins, or "buttons."¹ These buttons vary in number in each cluster from about two to five, and are borne on long pendant stems. In our figure one will be seen cut through the centre. The seeds ripen in October or November.

The plane-tree has been held to be a great purifier of the air, preventing plague and other epidemic diseases, while the fruit, the leaves, and the bark have all been regarded as of great remedial efficacy, from the mending of a cut

¹ Gerard does not, in 1597, mention the plane-tree as growing in England, but he tells us that the Surgeon of the *Hercules*, of London, knowing his interest in such matters, "brought one of these rough buttons, being the fruit thereof," to him, from Lepanto.

finger to the saving of the lives of those attacked by deadly serpents or stung by scorpions.

According to Bacon, in his *Sylva Sylvarum*, A.D. 1629, "The Irrigation of the plane Tree by Wine is reputed by the Ancients to make it Fruitfull ;" though why one should desire to make it fruitful, seeing that the fruit is of no value, is not apparent. Bacon is, however, so far pleased with the idea that he says, "It could be tried likewise with Roots ;" though we could hardly fancy, at all events in these days of agricultural depression, a farmer giving out to his men two dozen of champagne for the turnips. "Vpon Seeds it worketh no great Effects," he says ; a statement that seems to imply that thus far he brought the matter to the test of experiment, and that the results were not so altogether and absolutely a failure as one would have anticipated.

HOLLY (ILEX AQUIFOLIUM)

The evergreen Holly, clad in its bright deep green and glossy foliage, and bedecked abundantly with brilliant scarlet berries, is appreciated by all Nature-lovers as one of our most beautiful trees ; while, in addition to this inherent charm, there are the added associations that spring from the part it plays in our Christmas observances, ecclesiastical and social. Even before the days of Christianity we find the Romans adorning their homes with holly and other evergreen foliage, since the great feast in honour of Saturn fell in the Winter season ; neighbour presenting to neighbour great bunches of holly in token of good-will, thus antedating in their religious worship and kindly greeting something at least of the spirit of the glorious song of

the angels at the birth of the Messiah. Our old Teutonic ancestors hung the verdant boughs of the holly in their dwellings, that the Sylvan spirits might, fleeing from the rigour of Winter in the storm-swept woods, find in its shelter a welcome resting-place. The early Christians, instead of striving to abolish ingrained customs, confirmed them, but diverted their meaning, and so the evergreen boughs became the symbol of immortality, the expression of rejoicing in the birth of Christ; while the sharply-pricking leaves and blood-red berries foreshadowed, in an age of symbolic teaching, the ensanguined cross of thorn, the ultimate triumph won through suffering and death.

The holly in Anglo-Saxon days was the *holegan*, a word which some would have us accept as derived from the leaves being *hol eege*, all edge. This they certainly are not, though one must admit on handling them that their stiff spinous margins are much in evidence. In old plant lists the holly is often called hulver, holm, hull, or Christ-thorn. Botanically it is the *Ilex aquifolium*. It has been suggested that *Ilex* is from the Celtic *ac*, a point, but this is certainly one of those cases where we may fail to see the point. The specific name is from the Latin *acus* and *folium*, and, happily enough, refers to the spiny foliage of the holly.

Pliny tells us that Tibertus built the city of Tibur around three holly-trees, a flight of birds passing over them being considered a most favourable omen. Pliny declares that these trees were standing in his time, that he had indeed seen them; but, if so, they must have been something over twelve hundred years old, and that seems



HOLLY

to us, however it may have struck Pliny, as being a few centuries too much for credence. The authority of Pliny was so potent and so far-reaching that for centuries after his death it needed but to add "as Pliny saith" to the wildest statement, to secure for it complete acceptance. It was, therefore, almost a shock, even to ourselves, when we found the Editor of the *Athenian Mercury* in 1693, declaring that he meant his periodical to last "as long at least as the Raven lives, which is a very tough liv'd Bird, and has ten times as many Lives as a Cat, if Pliny's Credit is Authentick; and he's very Sawcy that dares Question the Authority of such a Reverend Old Boy as that, as a great many Impertinent Dogmatical Upstarts have done very often of late, and we amongst the rest."

In England one rarely finds holly-trees of any great size, though at Claremont, in Surrey, is one that stands eighty feet high, and in the New Forest may be seen several with a girth of eight or nine feet.¹ The timber becomes valuable when the tree is of any considerable size, and so the trees are felled. The wood is very tough,

Save elme, ash, and crab-tree for cart and for plough,
 Save step for a stile, of the crotch of the bough,
 Save hazel for forkes, save sallow for rake,
 Save hulver and thorne, thereof flail for to make.

The flail is now well-nigh as obsolete as a pair of snuffers, but those who have heard its resounding blows on

¹ "One that I know," says the author of *Adam in Eden*, "had a Holly Tree growing in his Orchard of that bignesse that being cut down he caused it to be sawn out in Boards, and made himselfe thereof a Coffin, and if I mistake not left enough to make his wife one also. But the parties were very corpulent, and therefore you may imagine that the Tree could not be small."

the barn floor from morning to night will readily realise that the wood it was made of had need to be tough.

The wood of the holly is of very fine grain, and as white as ivory. It works well on the lathe, and can be cut into veneers for the cabinet-maker, and at the time that Tunbridge ware was in demand was of great value as an inlay, one reason being that it took various stains so very readily on its white surface, and could thus be anything from holly to ebony that the mosaicist required. It has been used, too, by the draughtsman on wood as a substitute for box or pear, and the engraver for wall-paper patterns finds its dense even surface no less valuable for his special work. As a tree it is much branched, and these branches make excellent walking-sticks. At Tynningham, in Scotland, the seat of the Earl of Haddington, Selby, in his *History of Forest Trees*, published in the year 1843, tells us may be seen two thousand nine hundred and fifty yards of holly hedges, planted nearly two hundred years ago. In height they vary from ten to twenty five feet, and are from nine to thirteen feet in width. These are hedges indeed!

The leaves of the holly vary greatly in their prickliness, the foliage on the younger shoots being almost or quite free from spines, while the older and lower branches are clothed with foliage of very spinous character. The upper branches carry the less spiny foliage, and also the greater proportion of the flowers and fruit. One old writer, we see, affirms that "there be three sorts of Holly. 1. The Holly Tree without prickles. 2. The Holly-bush with prickly Leaves. 3. The Holly-bush with yellow Berries. Yet there be some that affirme that with and without

prickles to be the same." The difference in form between divers leaves on the same holly-tree, though striking, is really not so great as between the acutely-pointed five- or seven-lobed leaves of the ivy when it is climbing, and the simple ovate form of foliage that crowns the plant when it has attained to the height of its ambition, and its climbing days are over. Holly-leaves are very stout and rigid, of a deep dark green above, and lighter beneath, of a particularly glossy surface, and of a very waved outline.

Holly-leaves contain an active principle termed Ilicine, that was once held to be of great remedial efficacy, but in later works on *Materia Medica* no mention is made of it. It was for some little time strongly commended, especially in the treatment of fevers, and as a tonic, but divers reasons, commercial and medical, led to its gradual disuse.

The flowers of the holly are found in May, and June. They are small in size, white in colour, rather waxy in texture and effect, clustering many together in the axils of the leaves, and very popular with the bees. The corolla is ordinarily four-cleft, but sometimes has five segments, and the somewhat conspicuous stamens then follow suit, being either four or five in number.

The berries are globular, and, to quote Gerard, "of the bignesse of a little Pease, or not much greater," but to be on the safe side we will say as large as a big Pease, very smooth and shining, and, normally, of a rich scarlet colour, though one may find them, under cultivation, yellow, orange, or white; none of these, we venture to think, being at all so charming as the brilliant scarlet. On opening a berry we find four hard nuts neatly packed

together, and each of these contains one seed. Blackbirds, thrushes, and many other birds devour them with avidity. The human subject will be wise to avoid them, though a couple of centuries ago our forefathers held them in great repute, some ten or twelve being reckoned a dose, and swallowed like pills, for various ailments. Our ancestors would appear to have been of altogether tougher fibre than ourselves, judging by the amount of port wine that they drank, the wall-papers they could live with without flinching. We imagine that in these latter days any one indulging in this wholesale fashion in holly-berries would speedily become the victim of Ilexitis, unless kindly Nature, the berries being strongly emetic in their action, came to his aid, and warned him not to do anything quite so foolish again, lest he became an awful example to the world at large, an interesting case in the text-books, a tender memory to his sorrowing friends.

Holly is one of the trees that yields bird-lime for the wiles of the fowler. It was made, according to the author of *Adam in Eden*, by "putting the Barke of Holly into a hole made in moist, foggy ground, and covering it with boughs of Trees, and some earth over till it be putrified, which will be within a fortnight: being afterwards beaten in a Mortar it will become thick and clammy, so that the filthinesse being cleared therefrom by often washing, and a little Oyle of Nuts added thereto it will be as good as that which is made of Misseltoe, and being applyed with the Yolke of an Egge to any place that hath any thorn, prick, or Splinter therein it draweth it forth, but it is dangerous to be used inwardly." Why any one should ever think of applying bird-lime internally, to remove a

thorn or anything else, one cannot imagine. The use of bird-lime we fancy, is now very much a thing of the past. There was a man in the days of our boyhood who lived near Ripley, our home in that far-off time, who prided himself greatly on his bird-lime. He told us how he one day spread some liberally along the top shoots of his garden hedge, and, hearing a tremendous twittering, presently went to see how he had fared. The birds, hopelessly entangled, made a supreme effort at escape when he appeared, the result being that his hedge was uprooted, and the last he saw of it was its being carried off by the birds out in the direction of Woking. Assuming this story to be true it speaks volumes for the strength of his bird-lime.

CHAPTER III

Plants of the Moorland, the Meadow, the Stream—Difficulty of Classification—The Yellow Iris—Obedience in Nature to Law—The Relief of Cholera—The Touch-me-not—A North American Plant—The Alder—Amsterdam and Venice built thereon—The Gladdon, or Fœtid Iris—The Elder—Its Value in Medicine—The lacinated Variety—Bagpipes—The Bilberry—The Bleaberry—The Cowberry, or red Whortleberry—The Strawberry Tree—"A Fruyt of small Honor"—The Butcher's Broom—Thorn Apple—A Remedy for Asthma—The Henbane—Skeletonising Leaves—A Plant of Saturn—Influence of Stars on Human Life—The Writings of Matthiolus—The Dwale, or deadly Nightshade—Its Virulent Properties—Atropine—The Juniper—The Biblical Tree so-called—Its Employment in Distillation—The Antidote of Mithridates—Mistletoe—Druidic Rites—Forbidden in Churches—Parasitic—On what Trees found—The *Compleat Husbandman*—Pliny on Druidism—Mistletoe growing in Westminster—How to grow Mistletoe—Sir John Colbatch on its Medicinal Value—The Cross-leaved Mistletoe—Paley on Evidences of Design—The Columbine—What is an Indigenous Plant?—A Symbol of Grief—The Scarlet Poppy—Buttercups—The Parsnip—The *Sylva Sylvarum* of Bacon—Carrot, or Bird's-nest—Cranberries—The Bearberry—The Crowberry—Broom—Shepherd's Needle—Conclusion.

WHILE in our first chapter we dealt mainly with plants of the hedgerow, and in the second with trees of the woodland, it soon became abundantly evident to us that such an attempt to discriminate and sort out was only possible on the broadest possible basis, many an aspiring hedgerow shrub being quite prepared to become a tree of very respectable size if only the fateful shears would not so persistently cut short its ambitions; while, on the other hand, some plants that are included

amongst our woodland trees, such as the maple, are to be found abundantly as constituents in the farmer's walls of living green. The captious critic, if there be such a person, might even declare that the regal oak itself, the monarch of the forest, need not be sought for in the forest at all, being in many parts of the country one of the commonest of roadside trees, so that as we ramble along the skirting hedgerow we can at will as easily gather either the blackberries or the acorns that it yields. There is no gainsaying the fact, and one can only plead in extenuation that such difficulty of classification seems inevitable; and rejoice, moreover, that dear mother Nature does not pen up her treasures in sharp divisions, but gives us everywhere a wealth of variety, beauty, and interest, so that blackberries and acorns are both possible to us at once, even if in botanical books they are many pages apart.

In the present chapter we propose to deal with divers other plants that scarcely belong to either of the preceding groups; plants of the stream, the meadow, the moorland, and so forth. Yet here again we feel that we shall have need to plead for the greatest elasticity of treatment for ourselves, and an all-embracing charity from our readers, or we shall be having the brain-bound pedant, if there be such a person, declaring that the buttercup or the campion that we class as flowers of the meadow may be found freely enough amongst the rank vegetation at the foot of the hedgerow, and should, therefore, have found a resting-place in our first chapter, and been read about and forgotten long ere this.

YELLOW IRIS (*IRIS PSEUDACORUS*)

Whatever difficulties of classification may yet be before us, we shall, we think, be on entirely safe ground in commencing our new chapter with the Yellow Iris, the plant we figure in our twenty-fifth illustration, since, as a water-plant, it has never shown any desire to roam, bryony-wise, over the hedges, nor has it ever been known to leave its aqueous home to compete on their own ground with such forest giants as the massive oak or the wide-spreading beech.

This yellow iris is one of our most graceful water-plants, even in such goodly company as the peerless water-lily, the ever-welcome forget-me-not, the golden-flowered loosestrife, the stately flowering rush, the quaint buckbean, and many another charming water or waterside plant that springs to our thoughts as we wander in imagination by some placid stream, and recall something of the wealth of floral beauty that rises from its waters or fringes its banks.

Our plant is called iris because, though always found bearing the golden yellow flower that our illustration shows, it belongs to a genus having blossoms of the richest variety of colours. *Iris* is the Greek word for the rainbow, and in all the centuries since the days of Theophrastus, who bestowed the name on this family of plants somewhere about three hundred and fifty years before the birth of Christ, these beautiful flowers, so full of rich variety of colour, have borne this expressive name. Its specific name is *pseudacorus*, from the Greek word for false, and *acorus*, the sweet flag or sedge. This sweet sedge in turn is the *Acorus Calamus*; so that we arrive at this point, that the yellow



YELLOW FLAG

iris, so far at least as its foliage is concerned, looks like the sweet sedge, but still it is not the sweet sedge after all, and any one who so calls it names it falsely. As this *acorus* was so-called from two Greek words signifying an ailment of the eye, for which this plant was held to be a remedy, it was distinctly important that those needing optical relief should not be putting their faith in the wrong plant, and thus the iris has had tacked on to its poetic title this very prosaic after-note of warning.

A good old English popular name for this yellow iris, and for any other iris, wild or cultivated, is the flag, and this name it derives from the gaily-coloured outer members of its perianth floating in the air, like banners on some great day of festival, our ancestors delighting in pageantry, and suspending, in token of rejoicing, rich hangings from their balconies and casements, and seeing in these iris flowers a suggestion of these suspended flags. Any one, by the way, who hung out a noble yellow flag to-day would be regarded by his fellow-townsmen with grave suspicion, as it is the quarantine signal, and implies that within the building or ship so distinguished some infectious and deadly visitant has found a home.

The yellow iris may be found abundantly all over Britain at the edges of streams, in marsh land, and in ditches, attaining to a height of some two feet. Curiously enough, it bears transplantation excellently well from these distinctly watery conditions, and will flourish, if one so pleases, with our choice pelargoniums, phloxes, wall-flowers, and many other things that would certainly not repay the visit, or settle happily down in the natural habitat of the yellow iris.

The leaves of the iris stand stiff and erect around the flower-bearing stems : the guarding swords drawn around the flag. In Germany the plant is the *Wasser Schwertlilie*, the water sword-lily. If we gather a bunch of Iris we shall be well advised to see that it includes several buds, no matter how immature, for, if we put our gatherings into water, these buds continue to develop, and they presently expand into flowers. The same thing may be noticed with the buds of the dog-rose and the field-rose. With either of these three plants, the pleasure of their possession may be made much more lasting by gathering not merely the open flowers that fade on the morrow, but by taking steps to insure a pleasant succession of them.

The flowers are of conspicuous beauty and quaintness of form, being something rather outside what we may perhaps, without disrespect to many beautiful flowers, call the ordinary type of blossom, the saucer-like form. These iris blossoms have their parts in threes : three large pendant members of the perianth ; three inner members, much smaller than these and erect ; three petal-like stigmas alternating with this second series, and each arching over its special one of the three stamens. The capsule, the fruit that succeeds these, green in colour, and containing numerous pale-brown seeds, conforms equally to this numerical law, being three-celled, and if cut across the centre would be found to be three-sided. If we start with the idea of an equilateral triangle, and then substitute for each angle a rounded form, we shall get very fairly close to the form of the fruit when subjected to this cross-section. When the seeds are mature this capsule opens from above downwards into three valves, so that the seeds are revealed

to sight and presently dispersed. As the fruit scarcely begins to put in an appearance until after the flowers have ceased, many who have been attracted by its yellow blossoms may have failed to notice the plant in this later stage.

Nature, we need scarcely say, while rigidly obedient to law, system, and order, and altogether out of sympathy with the casual and the happy-go-lucky, is also full of charming variety ; and, while the geometrician lays out with mathematical precision his equilateral triangle, and the designer, having drawn one half of his leaf, takes a piece of tracing paper and makes the other half like unto it, Nature declines to be bound within conditions so rigid. We would venture to say that if we sought to find two leaves exactly alike in size, veining, and outline in a hundred gathered at random from any tree, our quest would be in vain. There is in Nature a wonderful unity in variety ; there is no less a wonderful variety in unity.

The farmer in these latter days, either by hay, good pasturage, or well-grown crops of swedes, turnips, or other roots, is able to feed his stock without going outside the store that his meadows or arable land will yield him ; but in earlier days outside help had often to be invoked, and then, amongst many other things never thought of nowadays, the leaves of the iris were gathered, dried, and carried off to supplement the store of fodder. Apart from this, our forefathers found, as they did for almost everything else that grew, divers uses for the iris, using its leaves for thatching, or for the seating of chairs, roasting its seeds, coffee-fashion, as a beverage, and also, of course,

applying it to medicinal use, an application rarely indeed overlooked in the consideration of a plant's "virtues." We accordingly find divers preparations of its very astringent root, leaves, and seeds in vogue for the relief of toothache, dropsy, pneumonia, and various other ills that afflict humanity, and which, we fear, iris notwithstanding, will continue to do so. "The root cleane washed and stamped with a few drops of Rose-water, and laid plaister-wise vpon the face of man or woman, doth in two dayes at the most take away the blacknesse or blewnesse of any stroke or bruse." One seems to see in this a delicately-worded hint that even in those good old times men were brutal and women aggravating; blackness on the face, in some circles of society a not uncommon complaint, suggesting that the peaceful current of family life had become somewhat ruffled by some breeze that had sprung up. In such case another good application would be a preparation of the root, for "the iuyce of the same doth mightily and vehemently draw forth choler."

TOUCH-ME-NOT (*IMPATIENS FULVA*)

If our riverside stroll that brought us in contact with the yellow iris chanced to be along the banks of the Wey or some portion of the Thames, we shall very probably have found a balsam-like flower, orange-red in colour and a foot or so in height, rising amidst the luxuriant riverside herbage. This would be the *Impatiens fulva*, a North American plant really, that in some mysterious way has thoroughly established itself in the River Wey, and the Basingstoke Canal, and other water-

courses that communicate with them, and has now extended itself from the mouth of the Wey into the Thames, being found as far down the greater stream as Chiswick. It is a freely-seeding annual of succulent habit. Its botanical name *Impatiens* and its popular name Touch-me-not are most appropriate, for on the slightest touch the fruit bursts open, scattering its seeds abroad with startling energy. The five valves of which the outer wrapping of the capsule consists, at once then twist themselves tightly into a spiral form.

Our home for many years being on the banks of the Wey, the touch-me-not was a plant as well known to us as the iris itself, and in our boyish days we must have compressed the tips of these capsules times beyond all numerical computation, to see them thus start into vigorous action, quite oblivious that we were treating in this unceremonious fashion so distinguished a stranger. We recall, later on, some one once bringing us a piece for identification. In reaching out to gather it their foot had slipped off a mossy old tree trunk that they had too implicitly trusted to, and they were there and then immersed in over six feet of water. This seeker after knowledge was, naturally, interested to know that the plant was called the touch-me-not, a name that they probably never forgot.

Another species, the *Impatiens noli-me-tangere*, is found sometimes in damp woods in various parts of England. It has very slight claim to be considered a native plant. As its botanical name from beginning to end implies, its fruit exhibits the same curious and startling elasticity as that of its near relative, the *I. fulva*.

ALDER (*ALNUS GLUTINOSA*)

While we can scarcely regard the Alder on its own merits as one of our more attractive trees, it often, when found in large masses, gives a greatly added charm to our river scenery, whether found fringing the rushing torrents and mountain streams of the north, or by the more placid streams of the south, that have a tranquil charm of their own as they wind amidst the low-lying meadows. The ramification of the alder is somewhat stiff, and the growth a little formal, lacking the picturesqueness of many of our trees, but its masses of dark foliage contrast admirably with the lighter green of the willows and black poplars that are ordinarily its companions in the watery situations,¹ which form its habitat. It may be found occasionally fifty or sixty feet high, but is ordinarily considerably less than this, anything from a mere shrub to a small tree. It may be found in sodden, water-logged land, in moist woods, fringing ditches and such-like aqueous spots, but thrives best where there is some little current and movement of the water.

It is one of the commonest of our indigenous trees if we only seek it in its proper domain. In Anglo-Saxon times it was the *ælr*, *alr*, or *aler*, orthography in those days having a licence that is now denied to it. The "d" in our word alder is supposed to have been inserted at a later date for the sake of euphony; but other folks

¹ The shooter eugh, the broad-leaved sycamore,
The barren plaintaine, and the walnut sound;
The myrrhe that her foul sin doth still deplore:
Alder, the owner of all waterish ground.



W. G. ER

seem to get on very happily without it, the tree being in Scotland the *Eller*, while in France it is the *Aulne*, in Denmark the *Elle*, in Sweden the *Al*, and in Italy the *Alno*. Botanically it is the *Alnus glutinosa*. *Alnus* is its old Roman name, and may be found in the writings of Pliny and other ancient authors. Some more modern writers, however, ignoring this most natural reason for the use of the generic title, profess to find a derivation for it in the Celtic *al*, near, and *lan*, a river, or even go to a Hebrew source, *aelon*, a word meaning vigorous.

The leaves of the alder are of very rounded form, and have their edges serrated ; when young they are decidedly sticky to the touch, hence the specific name *glutinosa*. "The leaves of this tree," says an old writer, "are in shape somewhat like the Hasell, but they are blacker, and more wrinkled, very clammy to handle, as though they were sprinkled with honie." They are of a very dark and sombre green and retain this colour while most of the other trees are bedecked in all the splendours of Autumn.

The stamen-bearing catkins of the alder are produced about the middle of September, and then await the arrival of the pistil-bearers in the following Spring. In the males the catkins are built up of three-lobed scales, each protecting three flowers, and each flower having four stamens. These catkins are of considerable length, and, when fully matured, are cylindrical, pendent, and of a dark red colour. In the earlier stage, as seen in the upper part of our illustration, Plate XXVI., they are somewhat tapering, and more or less erect. In the pistil-bearing catkins the scales are slightly three-cleft, and each sheltering two flowers. These catkins are small, barely an inch in length, and ovate in form. They

ultimately become woody, very like diminutive fir-cones, and remain on the tree long after the seeds are shed.¹ It is in this stage of their history that we see them represented in the lower portion of our drawing. The rich red of their earlier days becomes ultimately a dull brownish-black.

The wood of the alder is almost imperishable if kept continuously under damp conditions. This valuable property was well known to the ancients, as passages in Virgil, Vitruvius, and other classic authors, abundantly testify. The Dutch have largely employed it in their watery land, both in their dykes and as the substructure on which much of Amsterdam and other of their towns are reared. Venice, again, rises from its lagoon on foundations that are largely piles of alder. Its wood, too, makes exceptionally good charcoal, so that it is largely cultivated for the manufacture of gunpowder. When the wood is of any considerable size, it is in repute with the cabinet-makers, as it is beautifully veined, and under ordinary conditions takes its share in various rustic requirements. The whole plant is very astringent, and its bark has in consequence been used in tanning leather, and for the preservation of fishing-nets and cordage, and has had some little repute for dyeing purposes,² though in these latter days more efficient materials are readily available. It was held to be of virtue as a tonic in the treatment of agues and intermittent fevers,

¹ The blossome or floures are like the aglets of the Birch tree: which being vaded, there followeth a scaly fruit closely growing together, as big as a Pigeons egge, which toward Autumne doth open and the seed falleth out and is lost.—GERARD.

² The barke is much vsed of poore country Diers, for the dying of course cloth, cappes, hose, and such like into a black colour, whereunto it serveth very well.—GERARD.



1111

and its leaves put into the boots of the traveller were thought to preserve him from becoming footsore and to give him great power of endurance.

GLADDON (IRIS FÆTIDISSIMA)

The fruit of the Gladdon, or fætid Iris, forms the subject of our twenty-seventh illustration. This gladdon, the *Iris fætidissima* of the botanist, is a very near relative of the yellow flag, a plant that has recently engaged our attention, and which may be found figured in Plate XXV. It is in some country districts called, with full force of vituperation, the stinking iris, and it will be noticed that in its scientific name nothing but the strength of a Latin superlative suffices to express its obnoxious character. All this, however, is a little uncalled for, for while some persons, gifted with a fine sense of smell, heap the most slighting epithets upon it, others, perhaps no less discriminating, and of a finer charity to see good where possible, compare its odour to that of roast beef. Whereat one can only recall the old reminder of how tastes are found to differ. This vilified odour only arises when the plant is bruised.

While the yellow flag prospers by the sides of our streams the gladdon is a lover of the woods and pastures. It is abundant in many parts of the south and west of England, but becomes much rarer as we travel north, and finally disappears. The particular specimens we figure we obtained from the Isle of Wight; we have also seen it plentifully in Dorsetshire, Somersetshire, and elsewhere.

The gladdon flowers in May, and these flowers, of a rather dull violet-blue, are succeeded by the capsules. These, on ripening, cleave into three valves and reveal the brilliant orange seeds that render the plant so especially attractive in the Autumn.

ELDER (*SAMBUCUS NIGRA*)

The Elder, of which, on Plate XXVIII., we represent the rich clustering fruit, will doubtless be familiar to all our readers, sometimes pressed into the farmer's service as hedge-making material, and at others living a life of independence and aspiring to the dignity of a tree. When arborescent it is much branched, and has often a gnarled and venerable appearance, when growing in an exposed position, that perhaps its age does not quite warrant. Such matters, however, are but relative, and an elder, the twentieth of the age of an oak, may be as aged as the monarch himself, and sinking beneath the weight of years. The old wood of the elder is curiously hard, while the younger stems are in their interiors mere pith.

These stems, so readily hollowed, we need scarcely remind those who were once boys, or those happy maidens who are blessed with brothers, are the raw material of the erst valued pop-gun. If any of our readers are, after all, ignorant on this point, Shakespeare, at least, was not, for what says he in *Henry V.*?—"That's a perilous shot out of an elder gunne, that a poore and private displeasure can doe against a monarch." Beaumont and Fletcher, in *Philaster*, also introduce this hedgerow



ELDER

artillery—"If he give not back his crown again, upon the report of an elder-gun I haue no augury." It was an old belief that it was an elder-tree Judas selected to hang himself upon.¹ Spenser speaks of it as "the bitter elder," and we find many uncanny beliefs centring around the tree.

The elder may often be seen growing vigorously on old walls² as it seems to have a great power of adaptability, and to need little root-hold for its nourishment and support, and we need scarcely remind our readers anew that it may often be encountered as a hedgerow plant. It cannot, however, under these circumstances be considered a very great success, as its long, pliant branches and generally open growth offer too little resistance to marauders.

The elder is indigenous and is found in the earliest plant lists as the *ellen*, *ellarn*, *ellam*, or *eller*. In France it is the *Sureau*, while its Italian title, *Sambuco*; the Spanish, *Sauco*; and the Portuguese, *Sabugueiro*, are all evidently derived from the old Latin name, *Sambucus*. Some would tell us that this Latin word is derived from *Sambyx*, the reputed first finder of the plant, but, without undue

¹ Look you, he shall be your Judas, and you shall be his elder-tree to hang on.—BEN JONSON, "Every man out of his humour."

² The Ancients have affirmed that there are some Herbs that grow out of Stone; Which may be, for that it is certaine that Toads have bin found in the Middle of a Free-Stone. We see also that Flints, lying upon the Ground, gather Mosse: And Wall-Flowers, and some other Flowers, grow vpon Walls: But whether vpon the Maine Bricke, or Stone, or whether out of the Lime or Chinkes, is not well obserued: For Elders and Ashes have beene seene to grow out of Steeples: But they manifestly grow out of Cleftes. And besides it is doubtfull, whether the Mortar it selfe putteth it forth, or whether some Seeds be not let fall by Birds.—BACON, *Sylva Sylvarum*, 1629.

depreciation of his discovery, it would be as difficult, one would imagine, to indicate the time or place of this striking find as to say who first discovered a rook or a flint stone. Others have it that the name is derived from the *sambucus*, a primitive musical instrument which some would tell us was strung like a guitar, but which seems more probably to have been of bag-pipe type, that had its pipes made out of hollowed elder-stems, but it is much more probable that in such a case the plant gave the name to the instrument than that the reverse took place. Still, it is a pretty problem to be threshed out, the question at stake being—Did the *sambucus* give its name to the *sambucus*? or, on the other hand, discarding this idea, was the *sambucus* so called from the *sambucus*? When this knotty question is settled there remains yet another—If the *sambucus* really was of bag-pipe type, could it be truthfully described as a musical instrument at all?¹

The leaves of the elder are, as our illustration shows, of pinnate form, and ordinarily consist of two lateral pairs of leaflets and a terminal. One occasionally finds a very curious variation where the leaflets are deeply cut into very numerous and irregularly formed segments, or, as it is technically called, laciniated. We found a good example of this in a hedge near Worthing while preparing our illustrations, but the form is so entirely abnormal that one could not well here introduce it. Gerard, in 1633,

¹ The Lincolnshire bag-pipes. I beheld these as most ancient, because a very simple sort of Musick, being little more than an Oaten pipe improved with a bag, wherein the imprisoned wind pleadeth melodiously for the Inlargement thereof. It is incredible with what agility it inspireth the heavy heels of the Country Clowns, probably the ground-work of the poetical fiction of dancing Satyrs.—FULLER.

figures and describes this, declaring that "the jagged Elder tree groweth like the common Elder in body, branches, shootes, pith, floures, fruit, and stinking smell, and differeth onely in the fashion of the leaves, which doth so much disguise the tree, and put it out of knowledge, that no man would take it for a kinde of Elder vntill he hath smelt thereunto, which will quickly shew from whence he is descended: for these strange Elder leaues are very much jagged, rent or cut euen vnto the middle rib."

The flower clusters of the elder are generally five-branched, and consist of very numerous creamy-white, five-lobed flowers. These have an odour that to many persons is very objectionable, and especially when the plants are numerous,¹ and thickly covered with flowers. To this abundance of blossom succeeds an equal profusion of fruit, small individually, globular, and of a deep purple-black. The stems at this season are often of a deep crimson colour, and this, with the varying tints of the foliage touched by the fiery fingers of Autumn, plus the great mass of luscious-looking berries, results in a rich colour-harmony that is very attractive. The rustic housewife gathers these berries and prepares from them a sort of wine, that so far as our recollection serves, since we have had no care to renew an acquaintance made many years ago, is a horrible preparation. It is curious that Worlidge, in his *Mystery of Husbandry*—our edition is dated 1675—makes no mention of this, though he greatly commends "Syder" "to lessen that great consumption we make of French wines, which we drink to the enriching of a Foreiner, the impoverishing of our selves, and the

¹ The bank where flowering Elders crowd.—THOMPSON, "Spring."

great prejudice of our healths, especially by the corroding Claret," and greatly commends "Wine of Plums, Raspberry Wine, Wine of Currans," and other home-grown beverages.

The elder has been held of great medicinal repute, the various parts of the tree being extolled by our forefathers, generation after generation, as curing almost everything. "The Decoction of the Root of Elder in Wine," affirms the author of that delightful book, *Adam in Eden*, "cureth the Biting of Venemous Beasts, as also of a mad Dogge; the berries boyled in Wine perform the same effects: the Haire of the Head washed therein is made black. The Iuyce of the green Leaves applyed to the Inflammation of the Eyes asswageth them, and the Leaves boyled till they be tender, then mixed with Barly meale asswageth inflammations in any other part, helpeth places that are burnt with fire or scalded with water, and easeth the paines of the Gout, being beaten and boyled with the tallow of a Bull or Goat, and layd warme thereto. The Powder of the seedes first prepared in Vinigar and then taken in Wine for certaine dayes together is a meanes to abate and consume the flesh of a corpulent body. Should I give you all the Vertues of Elder at large I should much exceed the usuall Limits of a Chapter, and therefore I shall only give you a Brevias of them, and referre you to that learned peece of Dr. Martin Blockwich where you may satisfie yourselfe perfectly of euery particular. There is hardly a Disease from the Head to the Foot but it cures. It is profitable for the Head-ach, for Ravings and Wakings, Hypochondriack and Mellancholly, the Falling-sicknesse, Catarrhes, Deafenesse, Faintnesse, and Feavours. The young shoots boyled like Asparagos, and the young Leaves

and Stalkes boyled in fat broth draweth forth mightily Choler, and so do the tender Leaves eaten with Oyle and Salt." About the best medicinal use we seem able to put the plant to nowadays is the fabrication of elder-flower water as a pleasant cooling application to inflamed or weak eyes.

BILBERRY (*VACCINIUM MYRTILLUS*)

On open moorlands and bleak commons, up to some four thousand feet above the sea, one may often find in profusion the little Bilberry, the *Vaccinium Myrtillus*. Several early writers speak of its being found on Hampstead Heath, and it may still occur there. We have met with it in abundance in Surrey and Sussex, but it is more especially found in the north, where the extent of wind-swept moorland is so much greater. It is but a small plant, thickly covered with small leaves not unlike those of the box, and little, delicate-looking, waxen, bell-like, drooping flowers, of a pale pink. To these in turn succeed the berries, at first green, then red, and finally, black. These ripened berries when growing are covered with a beautiful bloom, but this is to a great extent lost when the children, "going bilberrying," gather them by the thousand and bring them to market. The fruit has a very pleasant acid taste, and deeply stains the lips; but, refreshing as the berries are when picked and eaten on the mountain side, they are much better when cooked. They are sometimes called bullberries. From a certain crispness when bitten they are sometimes called crackberries, while another common name is whortleberry, sometimes contracted and corrupted into hurts.

Would our readers place themselves beneath our guidance we could readily show them in abundance these "hurts" in the wild moorland districts around Leith Hill, the highest eminence in Surrey, a breezy land of gloriously extensive prospects, having in one direction the sea as its horizon, and our stroll should include a visit to what, with all its pleasant possibilities of reaping a goodly harvest of these welcome whortleberries, is locally known as Hurts Hill.

It will be recalled how Shakespeare, in the *Merry Wives of Windsor*, refers to the bloom on the fruit—"Cricket, to Windsor chimnies shalt thou leap; there pinch the maids as blue as bilberries." In *Adam in Eden* we read that the berries are "an excellent Medicine, for those that are troubled with an old Cough, but if they be eaten by those that have a weak Stomach they will much offend it. Painters, to colour Paper and Cards, do make a kind of Purple blew colour, putting thereto some Allome and Galls, whereby they can make it lighter and sadder as they please. Some poor folk do take a Pot full of the juyce strained, whereunto an Ounce of Allome, four spoonfulls of good Wine Vinegar, and a quarter of an Ounce of the wast of the Copper forgings, being put together and boyled all together into this Liquor, whilst it is reasonable, but not too hot, they put their Cloth, Wool, Thred, or Yarn therein, letting it lie for a good while, which being taken out and hung up to dry, will have the like Turkey blew colour: and if they would have it sadder, they will put thereunto, in the boyling, an Ounce of broken Gauls." Poor Gauls! In the far-off school-boy days, when we were wrestling with *Cæsar de Bello Gallico*, we bore them

scant affection, but we never wished them a fate quite so bad as this!

BLEABERRY (*VACCINIUM ULIGINOSUM*)

A closely allied plant to the bilberry is the Bleaberry, *Vaccinium uliginosum*. It is very similar to the last, but has smaller flowers and rather larger berries. The fruit ripens somewhat later, and is scarcely so acid in flavour. It has the same grey bloom. It may readily be distinguished from the bilberry by its foliage. In the bilberry the leaves are smooth on each side and toothed along their margins, while in the present plant they have a downy, glaucous under-surface, and their margins unbroken by serrations. As the bleaberry is found on marshy ground, it is sometimes called the bog whortleberry. Both these plants supply valued food to the grouse and other birds. "Blae" is a north-country word meaning livid, pinched, blue-looking, and these berries are bleaberries because of the blue-grey down that is upon them.

COWBERRY (*VACCINIUM VITIS IDEEA*)

Yet another *Vaccinium* is the Cowberry—*V. Vitis Idæa*. Its stem, as befits a mountain and moorland plant, is short and sturdy, and, in May and June, bears at its extremity a cluster of little campanulate flowers, of waxen texture, and of pale flesh colour. In September we find the ripened fruit, a many-seeded, globular berry, and scarlet in colour; much like the perhaps better-known cranberry. It is somewhat harsh and bitter to the taste in its fresh state, but when the fruit is made into jelly, or otherwise

passes under the hands of the cook, it becomes very palatable and acceptable. The plant is an evergreen, very compact in growth, branching freely, and has its numerous clusters of flowers pendant from the ends of the branches. From the colour of its fruit it is sometimes called the red whortleberry.

The meaning of the generic name, *Vaccinium*, is not absolutely clear, but it has been reasonably supposed to have been somehow corrupted from the Latin *Baccinia*, a word meaning a plant that bears berries freely. The specific names of the plants, *Myrtillus*, *uliginosus*, and *Vitis Idæa*, are bestowed because the bilberry has very myrtle-like leaves; because the bleaberry is a plant of the marshes; because Linneus chose to call the cowberry the Vine of Mount Ida: wherefore, we cannot say.

STRAWBERRY-TREE (ARBUTUS UNEDO)

The last two plants that we have referred to must be sought in the great bleak moorlands and on the rocky slopes of northern England, or Wales, or away, farther north yet, amongst the mountain scenery of Scotland. Our next plant, the Strawberry-Tree, the *Arbutus Unedo*, if we would see it in a truly wild state, entails a visit to the west of Ireland. Here, however, it is in abundance, and contributes much to the charm of the scenery, delightful as that is, around Glengariff and the lakes of Killarney. Hooker, Bentham, and other authorities entirely accept the strawberry-tree as being indigenous to Ireland, but it is seen at its best in the south of Europe, and it has been suggested that in a past long since forgotten, one result, maybe, of a pilgrimage,



Prunella vulgaris L.

or of a summons to Rome, the monks of Mucross Abbey may have introduced it ; and the plant, finding itself in a soil and climate congenial to it, settled down, and gradually asserted its right to a place in our Flora.

The flowers of the strawberry-tree are produced in August, the fruit ripening in the following Summer. These flowers are of a pale greenish-white often tinged with pink, and grouped in clusters at the ends of the stems. They are in form much like the bells of a heath, or of the lily of the valley.

The berry is of a crimson red colour, globular, and of a curiously granulated surface, and suggesting, at a casual glance, a strawberry. On cutting it across we find it to be five-celled and many-seeded. We have, in Plate XXIX., a drawing of the foliage and fruit. Ovid writes of "the arbutus laden with blushing fruit." The berries, as we see in our illustration, are pendant.

When the tree was brought across from the Emerald Isle, to find a welcome place in our English shrubberies and gardens, seems not to be at all known. Parkinson merely says, we see, in his *Theatrum Botanicum*, published in 1640, that "it came to us from Ireland" ; while Evelyn, writing in the reign of Charles II., declares that "the arbutus is too much neglected by us ; making that a rarity which grows so common and naturally in Ireland. One name of the plant is the Cain's Apple, the unpleasant inference being that the globular crimson fruits are a reminder of the life-blood of the murdered Abel.

Though the fruit is sometimes eaten, no hint as to its strawberry-like appearance suffices to save it from being called by various critics harsh, tasteless, unpalatable, most

mawkish, vapid, and insipid. Turner, in 1568, says "it is a fruit of small honor." It is, however, not by any means despised by the thrushes, blackbirds, and other feathered visitors. Pliny, Dioscorides, and other early writers warn their disciples against eating the fruit too freely.

Very few "vertues" are ascribed to the tree. One old writer, however, goes so far as to declare that a water distilled from its leaves is "a sacred preservative and antidote against the plague and poisons." If this be alone its plea for recognition to our gratitude it is surely ample.

Why the Romans called the strawberry-tree the *arbutus*¹ does not appear. They also called it the *unedo*, and these two classical names have been placed in juxtaposition and made the present botanical name of the plant. Both these names are used by Pliny, and he explains the latter by declaring that the fruit appeals to one's taste so little that it is a case of *unus*, one, and *edo*, I eat, that being all you-need-o!

BUTCHER'S BROOM (*RUSCUS ACULEATUS*)

The Butcher's Broom, *Ruscus aculeatus*, though singularly modest and retiring looking from the dull green of its stems and foliage, is a plant of considerable interest, from the peculiar position of the flowers, the blossom rising on a short stalk from the centre of the leaf. The flowers appear in April, some being stamen-bearing, others pistil-bearing. They are diminutive in size and of a dull

¹ Horace, for instance, has the line "*Nunc viridi membra sub arbuto stratus*," stretched beneath the verdant arbutus. The reference to its desirability as a resting-place derives its force from the shade-giving powers of the tree. We find Virgil, too, referring to its value as a shelter from the sun.

greenish-white colour, looking like little stars affixed to the leaves, and as the leaves are considerably larger, and of a dark sombre green they form an excellent background for their display. The foliage is evergreen, very rigid in character, and terminating in a very acute point. The plant was called by the ancient Greeks the flowering myrtle, a shrub it considerably resembles. In Germany it is the *Myrtendorn*, while in France its prickly character has earned it the name of *petit Houx*, little holly. This prickly foliage, plus its rigid and much-branching stems, account for one of its old English names, the knee-holm, while its more common popular name arises from its former use in cleansing the blocks of the butchers, for which its stiff character and the scarifying action of its leaves would make it well suited.

In the early Autumn the three-celled berries appear in the places vacated by the pistilliferous flowers. The berries are of a bright scarlet colour and as large as small cherries. These, therefore, from colour and size are very conspicuous, and, like the flowers, are excellently displayed by the sombre leaves that serve as a foil to their brilliancy of colouring. This fruit is rather sweet and agreeable to the taste, but it is not prudent to indulge at all freely in it.

The butcher's broom is found fairly commonly on heathy ground, and in hedges and woods in the south and west of England, and especially on a gravelly soil. Its young shoots have been commended as a welcome substitute for asparagus, but the plant, as one ordinarily sees it, looks about as tempting a delicacy as scrap-iron.

THORN APPLE (*Datura Stramonium*)

Though the Thorn Apple, the subject of Plate XXX., possesses absolutely no claim to rank as one of our indigenous plants, it is not uncommonly met with throughout southern England on waste ground, by the country roadsides, and on rubbish heaps, and it has been fully enrolled amongst our wild plants. Of no other wild plant can we speak so definitely as to its claims to be a native or otherwise, for we know that it was introduced into England in 1590; it is on record who sent its seeds, and where from, and to whom they were sent. It is found in nearly all temperate and sub-tropical countries, and is as much at home in the New World as the Old.

Why it should be called the thorn apple our illustration amply attests. In the United States it is in many parts of the country one of the commonest of plants. Botanically it is the *Datura Stramonium*, *Datura* being applied to it by Linneus from its Arab name. Linneus, himself a Swede, received specimens of this and other plants from his fellow countryman, Forskal, a naturalist who, at the cost of the King of Denmark, went on a scientific expedition into Egypt and Arabia. The specimens he sent home had their Arabic names appended to them, and in this particular case the Eastern name was, practically, adopted. Hence, from this scientific title *datura*, an old English name for the plant is the dewtry; we find it, for example, thus called in the pages of *Hudibras*; the illustrative passage is, from the context, unfortunately unquotable. The herbalists of Italy called the plant *stramonium*, but why they did so does not



THORN APPLE

quite clearly appear. It is also often in England called the stramonium. Harte, for instance, a little-known poet, in dwelling on the plants that grew around the door of the Palace of Death, writes—

Nor were the Nightshades wanting, nor the power
Of thorned Stramonium, nor the sickly flower
Of cloying Mandrakes, the deceitful root
Of the monk's fraudulent cowl.¹

The thorn-apple has a many-branched, herbaceous stem, and rises to a height of some two feet or so. The plant is an annual. The leaves are large and angular, and of a dark green colour, the veins on them being strongly marked. They are very irregular in form, no two being alike. In our illustration we only give the upper leaves of a stem; the lower leaves would be quite six inches long. The whole plant when bruised has a nauseous smell.

The flowers are tubular in form, or, rather, funnel-shaped, as they expand widely at their mouths. They are about three inches long, and pure white in colour, rising from a long, tubular calyx, pale green in colour, and acutely pentangular. The whole plant is very poisonous, and so it is regarded with disfavour, but justice is justice after all, and one must admit that the flowers are quaintly elegant and attractive.²

The fruit is a large, erect, egg-shaped capsule, thickly covered with blunt spines. It is at first green, but on the

¹ This last line is a paraphrase for the monk's-hood, another poisonous plant. "'Tis not the cowl," the proverb tells us, "that makes the monk."

² This dangerous narcotic plant clothes itself with such an elegant indented foliage, and garnishes its branches with corollas of such graceful and negligent a shape, and of so pure a white, that all suspicion of its deleterious nature seems lulled to rest, whilst, like the *Lamæ* of old, its charms only allure that its powers may destroy.—PHILLIPS, *Flora Historica*.

ripening of the seeds turns more or less brown, and finally dries and withers into a strong sepia colour. In one of our examples in the illustration the capsule is green and yet closed, and in the other we see its valves opening for the approaching dispersion of the mature seeds, while the section across the fruit shows how beautifully these seeds are packed away in the capsule. The seeds, it will be seen, are very numerous, and, if gathered in their ripe state, germinate very freely in one's garden. They are the most powerfully deleterious part of a very dangerous plant, though those who are so foolish as to eat the seeds or boil the leaves for dinner should scarcely throw all the blame on the thorn apple. A case is on record of a child who eat some of these seeds and subsequently became blind and mad, snapping at those about her and shrieking terribly.

The medical value of the thorn-apple has been greatly extolled, but while such a plant, in the hands of experienced and skilled practitioners, may prove of benefit, the utmost caution is even then necessary in its use, while in the hands of the ignorant it is very terrible in its effects. In one case recorded in the medical books a man made a decoction from two of the capsules, soaking them in milk, and on dosing himself suffered from paralysis of the whole body, and became delirious. After some hours he fell into a sound sleep, and presently recovered his senses and retained his life. It is probable that after this experience he let thorn apple severely alone. It is not at all a plant for amateur doctors to meddle with, but in the hands of the physicians it has its uses, one of the best known of these being the employment of its dried leaves for the relief of

asthma. A prescription that has been well commended for the relief of this distressing ailment is a mixture in equal parts of powdered lobelia, stramonium leaves, nitrate of potash, and black tea. This being well mixed and sifted must be placed in a saucer and ignited, the invalid inhaling the resulting smoke.

HENBANE (*HYOSCYAMUS NIGER*)

A plant equally dangerous, and growing in the same sort of places as the thorn apple, is the Henbane. It thrives especially upon chalk or sand, and appears to be especially partial to the neighbourhood of the sea. We have found it, for instance, on the chalk downs at the back of Brighton, and came across a particularly fine plant of it in the front garden of an empty house along the sea front at Worthing. It claims a place in our regard in these present pages from the curious nature of its fruit.

The stem of the henbane is from one to three feet high, a good deal branching, and rather thickly clothed with clasping leaves. These are of a pale dull green, what our ancestors would describe as sad-coloured, covered with soft hairs, malodorous. The whole plant is covered with fœtid, glandular, viscid hairs, and is generally uncanny and unwholesome-looking. Culpeper, we see, assigns it to Saturn.¹

To our ancestors the influence of the stars on human

¹ Much of superstition was imported into plant-study in earlier days, and one of the forms it took was a belief in the influence of the stars upon plants. Such a plant as the henbane, we see, was deemed saturnine; hellebore again "is an herb of Saturn, and therefore no marvel if it has some sullen conditions with it." Many other plants were under the same malign influence, while others were under the dominion of Jupiter, Venus, Mars, and

life and the affairs of men was a very real thing indeed, and those who claimed the power of reading the celestial signs had abundant opportunities of having their skill tested. Lilly was perhaps one of the best known of these, and in his book—our copy, we see, bears the date 1659—gives us great cause for wonderment at the credulity of the age in which he lived. Winstanly's *Book of Knowledge* is also a book to refer to for those interested in such matters. It ran through many editions; our copy is that of 1685. One can scarcely imagine that a man having lost his dog would desire the starry heavens to be searched for its recovery, yet this was one of the tasks that Lilly was set to perform, and he tells us, as follows, how he fared :

“The Quere unto me was, what part of the City they should search; next, if he should ever recover him. The sign of Gemini is west and by south, the quarter of heaven is west; Mercury, the significator of the Dog, is in Libra, a western¹ sign, but southern quarter of heaven, tending to the west. The moon is in Virgo, a south-west sign, and verging to the western angle; the strength of the testimonies examined I found the plurality to signifie the west, and therefore I judged that the Dog ought to be westward from the place where the Owner lived, which was at Temple Barre; wherefore I iudged that the Dog was about Long Acre or upper part of Drury Lane. In regard that Mercury, significator of the beast, was in a sign of the same triplicity that Gemini his ascendant is, which signifies

other stars. Even as in the days of the week we yet preserve the memories of the gods of our Saxon forefathers, so in the colloquialism of to-day we retain a far-off echo of those old astrological beliefs, people being yet dubbed jovial, mercurial, or saturnine, while some unfortunately are lunatic, for they have come beneath the evil sway of the moon.

London, and did apply to a Trine aspect of the cusp of the sixth house, I iudged the Dog was not out of the lines of communication, but in the same quarter ; of which I was more confirmed by the Sun and Saturn, their Trine aspect. The signe wherein Mercury is in is Libra, an ayery signe. I iudged the Dog was in some chamber or upper room kept privately or in great secrecy ; because the moon was under the Beames of the sun, and Mercury, Moon, and Sun, were in the eight house, but because the Sun on Monday following did apply by Trine dexter to Saturn, Lord of the ascendant, and Moon to Sextile of Mars ; having exaltation in the ascendant, I intimated that in my opinion he should have his Dog againe, or newes of his Dog upon Monday following, or neer that time ; which was true ; for a gentleman of the querem's acquaintance sent him the Dog the very same day about ten in the morning, who by accident coming to see a friend in Long Acre, found the Dog chained up under a table, and sent him home as above said, to my very great credit."

The henbane is in flower from the beginning of June, the corolla being somewhat funnel-shaped in form, and of a dingy pale yellow colour veined with dull purple. The flowers are arranged in a long succession of blossoms at the extremities of the stems, and all turn in one direction, these stems being somewhat pendulous. The calyx is tubular and five-cleft, and very strongly veined, and firmly enclosed within this we presently, after the passing away of the blossom, find the capsular fruit. This is two-celled, and opens very curiously, when the seeds have come to maturity, by means of a convex lid. The capsule is many-seeded, and these seeds ripen some time between,

August and October. The plant is an annual. As there is a long succession of blossoms to be gradually expanded along the stem, so there is naturally, a long succession of capsules to be gradually ripened. As the capsules develop, so the enclosed calyx increases in size and becomes more woody in its nature. A branch of henbane capsules lends itself very readily to skeletonising; and when we come across any group of skeleton leaves we shall ordinarily find with them the capsules of the poppy and the henbane.

To those who would like to try some skeletonising we would advise the gathering of the material, leaves or fruits, in the Autumn, as at this season the fibrous substance is strong and firm, and less likely to break than if gathered earlier. Leaves of a resinous nature should be avoided, as they will neither become amenable to treatment nor allow others with which they are placed to do so. The selected material should be placed in a large shallow pan into which a sufficient amount of boiling rain-water to cover the leaves is poured. The use of boiling rather than of cold water is that it quickly destroys the vitality of the plants. The pan must then be placed for some six weeks in the open air in a position where it will get plenty of sunshine, fresh rain-water being added as evaporation renders it necessary. The things should be gently stirred from time to time, and when they are seen to be shedding their epidermis they must be placed individually beneath a tap and gently washed in slowly running water: those that are found to be not yet ripe for treatment are returned for a while to the pan. To bleach them they must be exposed to the fumes of sulphur, or washed in chloride of lime.

To those who fear that their patience and enthusiasm may not be equal to this six weeks' strain another method may be suggested. Dissolve three ounces of washing-soda in two pints of boiling water, adding to it an ounce and a half of quick-lime. Let this be boiled for some ten minutes and then decant the solution. When we are ready with our leaves, boil this solution again, and as soon as it is in a state of ebullition drop them in, boiling them for an hour or so and being careful to add hot water to repair loss from evaporation. The leaves should now be easily skeletonised by gently manipulating them, one by one, in a basin of warm water. When we are satisfied with our work thus far it remains only to bleach, and this can readily be effected by dropping each of the leaves or seed-vessels for about ten minutes into a bath having the proportion of one drachm of chloride of lime to one pint of water.

Yet a third way is to boil our material for about a couple of minutes and then drop it all into a strong solution, slightly warm, of permanganate of potash, and in an hour or so the leaves may be carefully stripped of their epidermis by means of a small brush and of much patience. Diluted sulphuric acid should be used to bleach them.

Botanically the henbane is the *Hyoscyamus niger*. The generic name is from the Greek words meaning hog and bean, from a belief that swine will eat the plant, while the popular name henbane is equally the statement of a belief that fowls, if they value their lives, had better not. Matthiolus¹ says that "fowls that have eaten the seeds

¹ Matthiolus, his name stripped of its Latin dress, was Pietro Andrea Mattioli, an Italian botanical writer of great repute in his day. He was born in the year 1500. His chief work was his *Commentaries on the Materia Medica of Dioscorides*.

perish soon after, as do fishes also." On the other hand, the older English writers call the plant the henbell, and it is so far back as the Anglo-Saxon lists the *henne-belle*. It has been conjectured that the "bell" has reference to the somewhat bell-like form of the enlarged calyx, but this is always seen on the plant in a position that throws its mouth upwards, not at all a bell-like position. Still, in favour of this view we must mention that another old name for the plant is the *symphoniaca*, a name derived from the *symphonia*, a series of bells of varying sizes suspended from a beam and struck by a hammer. This throws no light on the "hen," and the probability is that we are on the wrong track altogether, and that the name has no reference at all to hen, or bell, or bane in the sense we ordinarily attach to those words. Prior, in his book on the names of our British plants, gets so far as introducing a Celtic deity, *Belenus*, as sponsor.

The henbane has for many centuries been held in high repute as a narcotic, soporific, and anodyne, and yet holds its position in the *Pharmacopœia*. Gerard, we note, says that "the leaves, seed and iuyce taken inwardly causeth an vnquiet sleepe like vnto the sleepe of drunkenesse, which continueth long, and is deadly to the party." This suggests the thought that perhaps henbane is best left alone.

That the plant may legitimately be called the bean of the hog seems as open to question as that it be considered the bane of the hen. One venerable authority declares that "swine having fed thereon, are very much disturbed thereby, yea, are in danger of their lives, if they wallow not themselves in water presently thereupon: neither do

they go into the water to wash themselves, but to seek after Crevises, by the eating of which they recover." These crevises are what we nowadays call cray-fish, in French *écrevisse*. Whereupon another venerable authority says: "For my part I can scarcely allow of this, because I never saw any hogs feed upon this plant, much lesse to go into the Rivers to catch Crevises: for in the mire wherein they commonly wallow there be none."

According to the Doctrine of Signatures "the Husk wherein the seed of Henbane is contained is in figure like to a Jaw-tooth, and therefore the Oyle of it, or the Juyce of it by it self, being gargled warm in the mouth is very effectually in easing the pains of the Teeth."

DWALE (ATROPA BELLADONNA)

In the Dwale, or Deadly Nightshade, Plate XXXI., we have yet another plant possessed of the most powerful properties, and therefore to be dealt with with all due caution. It may from time to time be found, and especially on a chalky soil, and it would no doubt be much more common than it is, were it not for its evil repute, which results in its eradication, and its medicinal value, which leads to any stray plant being carried off at sight by the herbalists. The plant may often be found near the ruins of our ancient abbeys and monastic houses, and it is very reasonably suggested that in many cases its occurrence is a survival from the old herb gardens of the monks.

The dwale grows ordinarily some two to three feet high, though we have seen it quite four feet in height. The branches have a way of drooping towards their

extremities. One is bound to confess, its evil repute notwithstanding, that it is distinctly, in its fruiting stage, a striking and handsome plant. One curious feature is that the leaves, while growing in pairs, are very unequal in size; their veining is very strongly marked, and they are of a very deep green in colour.

The flowers are of a curiously lurid and unwholesome-looking dull purple colour, grow singly on the stems, and are often more or less pendent. The plant may be found in flower from about June to August. The berries, ripening in September, stand out very effectively from the five-pointed star made by the calyx segments of brilliant green at their bases. They have a very glossy, polished surface, and are of a rather sweetish taste. Their attractive character, looking as they do to the uncritical eyes of young children like cherries or big black currants, has led to many serious accidents. In the lower portion of our illustration we see one of these berries cut open, and showing the seeds all packed carefully away within it. The making of these fruit sections is often very interesting, and the results illustrate to the full a statement that we made some few pages back, that in Nature nothing falls into its place by chance, but that all is the outcome of a wonderful order and system.

For those who have lunched "not wisely but too well," off these fruits of the dwale, the following uncomfortable consequences may be predicted—a complete loss of voice, continuous restless motion, an inability to swallow, but yet a great feeling of thirst, the vision impaired, a catching at imaginary objects, delirium passing presently into insensibility, and, finally, death.



DWALE

Botanically the plant is the *Atropa Belladonna*, a curious combination introducing the name of the most dreaded of the Fates, Atropos, whose function it was to cut the thread of human life,¹ and the Italian words signifying beautiful lady. The first, in view of the very dangerous nature of the plant, calls for no explanation; while the second, the specific title, refers to the use that was made of the plant in Italy and elsewhere, as an aid to beauty, the herb, deadly as it is, being employed from its curious property of dilating the eyes, or as a cosmetic for the complexion. The old English name, dwale, is probably from the Dutch word *dwaelen*, to be delirious, though it has also been asserted that we derive it from the French *deuil*, mourning. Amongst the suggestive names we find attached to the plant by the early writers are *lethale*, *furiosum*, and *maniacum*.

The root, the leaves, the fruit, all possess very active properties that, misdirected, may lead, as we have seen, to fatal consequences, but which find their valued place in medical practice. When one falls a victim to lumbago a large belladonna plaster will be found of benefit, and some belladonna liniment well rubbed in is of great efficacy in relieving muscular pains, while a tincture of

¹ The lands and the riches that here we possesse
 be none of our owne, if a God we professe,
 But lent vs of him, as his talent of gold,
 which being demanded, who can it withhold?

God maketh no writing that iustly doth say
 how long we shall haue it, a yeere or a day
 But leaue it we must (how soeuer we leeue)
 when Atrop shall pluck vs from hence by the sleeue.

TUSSER, *Five Hundred Pointes of Good Husbandrie*, 1573.

the plant often allays the oppression of asthma. Atropine, a preparation obtained from the root, is a well-known agent that, amongst divers other uses, is largely employed by oculists for dilating the pupil of the eye, to aid them in operations for cataract and other eye troubles. It is probably to the dwale that Shakespeare refers in the well-known passage, "Have we eaten of the insane root that takes the reason prisoner?" It is curious that horses, sheep, rabbits, goats, pigs browse on the foliage with impunity, while many birds find in the berries a welcome food.

JUNIPER (*JUNIPERUS COMMUNIS*)

On dry, barren hillsides,¹ sandy heaths, and open woods,² or on the great expanses of our chalk downs, one may find the Juniper flourishing and clothing the waste places with a quaint and characteristic vegetation. Though it may occasionally be found as a small tree it is more ordinarily but a bush, anything, in fact, from about six inches to four feet in height, according to the bleakness or the sheltered nature of its position. It is also liable to be considerably grazed down whilst still young and tender, by sheep, and it is, as the hardness of the conditions under which we usually find it would lead one to expect, a rather slow-growing plant.

¹ And where low-tufted broom,
Or box, or berry'd juniper arise.

DYER, "The Fleece."

² Our woods with juniper and chestnuts crown'd,
With falling fruit and berries paint the ground;
And lavish Nature laughs, and strews her stores around.

DRYDEN, "Seventh Pastoral."

We read in the Bible how Elijah fled into the wilderness of Beersheba from the face of King Ahab, and how he lay and slept under a juniper-tree, and the plant is also mentioned in divers other places in the Scriptures, but the word as translated is wrongly given. The Biblical juniper, a desert shrub growing some ten feet in height, is in reality a kind of broom, that, as in the days of the prophet, affords welcome shelter to the weary and sun-smitten traveller.

The juniper is very rigid in its general growth and much branched, this rigidity and angularity of growth, this throwing out of many small branches rather than a few larger ones, being a marked feature in plants exposed to the sweeping blasts that search the bleak hillside, and a necessary result of the hardness of the conditions against which they have to contend. When the wood attains to a workable size it is in considerable request for veneering, and for the fabrication of small fancy wares of one sort or another, being very hard, very pleasantly aromatic, of a fine red colour, beautifully veined, and taking an excellent polish.

The leaves of the juniper are evergreen, very numerous, long in proportion to their width, and arranged in spreading groups of three together. They are so rigid as to be almost spiny in character, of a greyish colour above, and of a dark green on their under-surfaces, a curious reversal of what one finds to be the general rule in foliage, that the lower surfaces are lighter than the upper.

The stamen-bearing flowers are in small ovoid catkins on one plant, and the pistillate flowers in small globose catkins on another, the flowering season being in Spring. The individual flowers are very minute, but the general

colour-effect is whitish-yellow, and the staminate flowers give forth large quantities of yellow pollen.

The berries are globular in form, and of a dark purple-black, but covered with a greyish bloom. They are about the size of a large pea, and each, when opened, is found to contain three hard seeds. They remain for two years on the plant, the first year remaining green and the second ripening into black, so that we find examples of each condition at the same time. One old author, whom we may perhaps, without fear of the law of libel, call more fanciful than reliable, would persuade us that the plant is called juniper from *junior*, younger, and *parere*, to bring forth, because "as the first berries be ripe, it bringeth forth younger and junior berries to them."

The berries when tasted have a warm, pungent, sweetish taste, and a fragrant essential oil is extracted from them. Before pepper was so readily obtainable as it is to-day our ancestors employed the ripe, dry, crushed seeds of the juniper as a substitute, and this is still a good deal used in matters culinary in Germany and elsewhere abroad. The berries have also been employed, when roasted, in place of coffee, or used for fumigatory purposes in hospital wards. We read in a book over three hundred years old that on being burned "the Wood of Juniper yieldeth a very sweet scent which freeth from Infection, and driveth away all Noisesome Serpents, Flies, Wasps, &c." Many birds, thrushes, grouse, and others, are very partial to these berries. It is, however, as a flavouring to Geneva, a baleful liquid that has had its name in England abbreviated to gin,¹

¹ Phillips, in his *Companion to the Orchard*, writes somewhat pungently "So much is the flavour of the berries admired by the lower orders of

that these juniper berries find chief employment. They are largely collected in Savoy, Austria, and elsewhere throughout the Continent, and hundreds of tons of them find their way annually to Holland and England, the great seats of the manufacture of this Hollands or Geneva.

Why this stuff made in Holland should be called Hollands seems fairly evident, but why it should be also known as Geneva does not so immediately appear. The problem, however, is not a geographical one at all. Gin is so called because the plant we call juniper is in Holland the *genever*. It is in France the *genièvre*, and in Italy the *ginepro*. In France a bright sparkling beverage called *genévrette* is produced by fermenting equal parts of juniper berries and barley together.

It was for centuries a custom in many parts of Europe, and it doubtless still holds, to place a few of these aromatic juniper branches on the fire to drive away evil spirits and shield the house from witchcraft, and they are also employed for the more prosaic duty of smoking hams.

Preparations from juniper are still officinal and take their place amongst the paraphernalia of the modern doctor, but their use is small indeed as compared with their ancient and mediæval reputation. Mithridates, the renowned king of Pontus, took each morning, as an antidote against infection or poison, twenty leaves of rue, a little salt, two walnuts, two figs, and twenty juniper berries, all beaten up together! Such a prescription had need possess

Londoners, that it would be difficult to name any complaint that they would not be afflicted with for the sake of a plentiful supply of the cordial to which it is imparted."

sovereign virtue as some set-off against its horrible nastiness. "The Berries of Juniper being boyled," we are advised by one of these venerable herbalists, in "Wine or Honeyed Water, and drunk, is an effectuall remedy for Chollick, but especially the Chimicall Oyle drawn from the berries, foure or five drops thereof being taken in a Morning in Broth or Beere, and ten or a dozen of the ripe Berries eaten every Morning fasting. The Berries taken in Wine are very effectuall against the biting of Vipers or Adders, as also against the Plague or Pestilence, or any other Infection or Poyson. They are good for the Cough. Shortnesse, of Breath, Convulsions, or Cramps. They strengthen the Braine, helpe the Memory exceedingly, and fortify the Sight." Reference to any of these old authors, from Pliny and Dioscorides right through the centuries to Gerard, or Parkinson, and their fellows, would readily supply us with any number of additional testimonies to the healing value of the juniper, but we may be content to judge from sample and not insist on more, especially as these old writers had a terrible way of copying from each other, and while we think we are gathering the wisdom of Lyte or Culpeper we are really getting at much more than second-hand the fancies of Hippocrates or Theophrastus, Galen or Aristotle.

MISTLETOE (*VISCUM ALBUM*)

Mistletoe, the subject of our thirty-second Plate, and the *Viscum album* of the botanist, must surely be a plant so well known that any elaborate description of it appears almost a mockery, a slight on the powers of observation.



MISTLETOE

of our readers. From its early connexion with Druidic worship and its exceptional mode of growth, the plant has been regarded as more than a little uncanny, while on the other hand, its intimate association in later days with the festivities of social life¹ have given it a special interest. Though, however, we claim for these later days a use of the mistletoe that is wholly secular, purely social, having as its end and aim alone decorative charm and innocent happiness, there can be but little doubt that this modern application of it is based on a custom that has lasted through the centuries from the days when, at the conclusion of the rites of Druidism, the sacred plant was distributed amongst the worshippers and by them suspended in their homes as a charm against all evil things. Hence the plant has been always under the ban of this old association with heathenism, and, amidst the other plants that decorate the church at the great Festival of the Birth of Christ, the mistletoe finds no place. This ancient connexion with pagan worship might now well be forgiven it, but the exceptional associations connected

¹ And well our Christian sires of old
Loved when the year its course had rolled,
And brought blithe Christmas back again
With all his hospitable train.
Domestic and religious rite
Gave honour to the holy night ;
On Christmas-eve the bells were rung ;
On Christmas-eve the mass was sung ;
That only night, in all the year,
Saw the stole'd priest the chalice rear.
The damsel donned her kirtle sheen ;
The hall was dressed with holly green ;
Forth to the wood did merry men go,
To gather in the mistletoe.

SCOTT.

with its secular use have since grown up and its employment in the church might not tend to edification, or awaken thoughts altogether adapted to the *genius loci* when seen suspended in close proximity to the family pew. It is just one of those cases that sometimes arise where things lawful are not always expedient, and so, while holly and ivy and laurel and their fellows find ready entrance at the church door the mistletoe must be content to remain outside.

Hence, too, in our old cathedrals and stately churches, while the stone carving, in the capitals and elsewhere, shows loving appreciation of natural beauty in the abundant presentment of oak, maple, hawthorn, ivy, buttercup, and many other plants of charming decorative service, we know of but one example of the use of the mistletoe, and are greatly surprised that there should be even that one. It may be seen carved on a tomb in Bristol Cathedral. The mistletoe has really great decorative possibilities, and we wonder that it has not found a readier use amongst our designers.

Herrick, full of quaint fancy, finding ever valuable lessons in the commonest and most unlikely things, sees in this neglected mistletoe a beautiful emblem of his dependence upon the care of Providence—

Lord, I am like the mistletoe,
Which has no root, and cannot grow,
Or prosper, save by that same tree
It clings about; so I by Thee.

The mistletoe belongs to a family that is chiefly tropical, and is an excellent illustration of a parasite, a plant deriving its nourishment and power of growth from some

other plant.¹ While one's ideas as to parasites, human or otherwise, do not err on the side of special esteem for them, it was just this parasitic character that gave this plant its sacredness in the eyes of the Druidic priesthood, since, unlike all other plants, it was not born of earth and its defilements, but was a sacred heaven-born thing, and, when found growing upon the sacred oak, was regarded as a direct gift of the gods to man.

The mistletoe is found growing, more or less freely, on many different kinds of trees, as the aspen, pear, alder, maple, rowan, hazel, ash, sycamore, medlar, plane, horse-chestnut, service, acacia, walnut, poplar, lime, hawthorn, even the dog-rose and azalea, but more especially on the apple. In some old neglected orchards almost every tree may be seen bearing it, and its effect on the tree is wholly prejudicial.² The mistletoe is a very hardy plant, and when it has once got possession retains it, neither boisterous wind nor hard frost seeming to hurt it at all.

Only a very few authentic cases are on record of the growth of the mistletoe upon the oak, and this great rarity of occurrence would, naturally, greatly increase the reverence for it wherever so found. We must remember, however, when we dwell on its extreme rarity, that in

¹ Theophrastus maintained that mistletoe was an exudation from the trees it was found on—" *Quasi cornua ex ossibus animalium.*"

² "There is a great Deficiency in the ordering of Orchards, in that they are not well pruned, but full of Mosse, Mistletoe, and Suckers," as we read in *The Compleat Husbandman, or a Discourse of the whole Art of Husbandry, both Forraign and Domestick*, "wherein many rare and most hidden Secrets and Experiments are laid open to the view of all, for the enriching of these Nations," the scraping away of the mistletoe off the apple-trees being one of these. The book was written by one Samuel Hartlib, and published "at the Crane in Paul's Churchyard" in 1659.

earlier days the greater part of our land was covered with forest, and that the far greater number of oak-trees then than now would give corresponding increase of possibility of finding oak-grown mistletoe. Some writers declare that it was not the mistletoe at all, but another parasitic plant of the same family, the *Loranthus Europæus*, that was really the sacred plant. This is a common enough plant on the Continent, growing on oak and other trees, but it is not found in England. This hard fact of its non-occurrence here certainly appears at first glance a fatal blow to the *Loranthus* theory, but those who uphold the belief get over the awkward fact by asserting that on the suppression of Druidism, every vestige of this plant, owing to its association with the old pagan rites, was extirpated, and so England knows it no more. This extirpation, however, would be an exceedingly difficult operation, even when we have made full allowance for new-born religious zeal. If we could imagine the Archbishop of Canterbury thundering forth anathemas against the foxglove, for instance, as a plant wholly diabolic, and, stranger still, carrying the whole nation with him in his denunciations, the doom of *Digitalis Satanica* would be by no means sealed, and it would be altogether premature to conclude that the time had come when its name should be erased from our Flora.

Vullamy, in his *Grammar of the Irish Language*, asserts that the Druid veneration for the mistletoe arose from reverence for the number three, not only the berries of the plant, he declares, growing in triplets, but also the leaves. One weak point in this statement is that there appears to be no proof forthcoming from him or any other writers as to this sacredness amongst the Druids of the number three,

while a second is that the berries of the mistletoe cluster together in groups of varying number, and the leaves are in pairs !

Pliny, discoursing in his book centuries ago on the mistletoe, is also our one authority, Vullamy notwithstanding, on its association with Druidism, and we trust that the following quotation¹ from his writings may be forgiven its length on account of its interest :

“ Forasmuch as wee are entred into a discourse as touching Misselto I cannot overpasse one strange thing thereof. The Druidæ (for so they call their Divinours, Wise Men, and the State of their Clergie) esteeme nothing in the world more sacred than Misselto, and the tree whereon it breedeth, so it be on Oke. Now this you must take by the way. There Priests or Clergiemen chose of purpose such groues for their divine Service, as stood onely upon Okes ; nay they solemnize no sacrifice nor perform any sacred ceremonies without branches and leaves thereof, as they may seem to be well enough named therein Dryidæ in Greeke, which signifyeth as much as the Oke Priests. Certes, to say a truth, whatever they find growing vpon that tree over and besides its owne fruit, be it Misselto or any thing else, they esteeme it is a gift sent from Heaven, and a sure signe by which that very God whome they serve giveth them to understand, that he hath chosen that particular tree, And, no marveile, for in very deed Misselto is passing scarce, and hard to be found vpon the Oke ; but when they meete with it they gather it very devoutly and with many ceremonies ; for first and foremost they observe principally

¹ Our translation is that of Philemon Holland, given to the world in the year 1601, a book full of delightful quaintness of language and expression.

that the moone be just six daies old, because shee is thought then to be of great power and force sufficient. They call it in their language All-Heale, for they have an opinion that it cureth all maladies soever, and when they are about to gather it, after they have well and duly prepared their sacrifices and festivall cheare vnder the said tree, they bring hither two young bullocks milke white, such as never yet drew at plough or waine, which done, the Priest arrayed in a surplesse or white vesture, climbeth vp into the tree, and with a golden hook or bill cutteth it off, and they beneath receive it in a white souldiours cassocke or coat of armes : then fall they to kill the beastes aforesaid for sacrifice, mumbling many oraisons and praying devoutly that it would please God to blesse this gift of his to the good of all those to whom he had given it. So vain and superstitious are many nations in the world, and oftentimes in such frivolous and foolish things as these."

The mistletoe was known to the Anglo-Saxons as the *mistiltan*, a word derived from *mistl*, different, and *tan*, a twig, indicating its parasitic nature, and its unlikeness to the tree upon which it is found, and it appears to us distinctly interesting that amidst the momentous changes, social, political, and religious, that have taken place since Anglo-Saxon days this word should have been handed down, generation after generation, practically unchanged. In Germany it is the *Mistel*, and in France the *gui de chêne*, the latter name asserting a distinctive association with the oak that facts, as we have seen, do not bear out.

The mistletoe grows very freely in many districts in the south and west of England, but the home production

is by no means adequate to the Christmas demand for it, for while numerous goods trains laden with absolutely nothing else arrive from Herefordshire and elsewhere to the all-demanding Metropolis, these supplies are largely supplemented by steamboat cargoes from abroad. We have seen the French boats arrive with their decks and holds laden with crates of it, and the specially fine pieces that it seemed a pity to pack or compress, tied all round the rigging and waving in the breeze. A friend of ours, resident some few years ago in Deans' Yard, had a noble piece of mistletoe growing on an old apple-tree in her garden, almost under the shadow of Westminster Abbey, and it is possibly there still. If any of our readers would like to grow their own mistletoe, all that is necessary is to take a ripe berry between one's fingers, crush it so as liberate the seed, and then press it into a crack of the bark of the tree that is to play the part of host. This crack must be on the under side of the bough, or the rain may wash the seed away or some bird devour it. Its growth begins with the first Spring, and in about four years it will be a fine bushy mass, but we must bear in mind that the more successful we are in our growth of mistletoe the more effectually we are damaging the tree upon which we place it, as its roots, branching freely, penetrate into the very heart of the wood.¹ The mistletoe in destroying the tree brings about its own death. If we find a tree that has been thus killed, we see on the decay of the parasite that the wood of the host has been

¹ The trees, though summer, yet forlorn and lean,
O'ercome with moss and baleful Misseltoe.

SHAKESPEARE.

bored and chambered out as by a teredo or the destructive larva of the goat moth.

Paley, in his *Natural Theology*, utilises the mistletoe as one of several instances that he gives of evidence of design in nature. "What we have to remark in it," he writes, "is a singular instance of compensation. No art hath yet made these plants take root in the earth. Here, therefore, might seem to be a mortal defect in their constitution. Let us examine how this defect is made up to them. The seeds are endued with an adhesive quality so tenacious, that if they be rubbed on the smooth bark of almost any tree they will stick to it. And then what follows? Roots springing from these seeds insinuate their fibres into the woody substance of the tree; and the event is that a mistletoe plant is produced next winter. Of no other plant do the roots refuse to shoot in the ground; of no other plant do the seeds possess this adhesive generative quality, when applied to the bark of trees."

The branches of the mistletoe become woody when old, and are attached by a thickened base to the bough from which they spring. They branch off very freely into pairs, and form in the aggregate a compact rounded clump. The leaves are thick, almost leathery in substance, in pairs, and of a pale yellowish-green. The plant is in flower in March, April, and May, the male and the female flowers being on different plants. The males have four short, thick petals widely spreading and triangular in form. In the centre rise the four stamens. These staminate flowers are from three to five together in a cup-shaped fleshy bract. The pistillate flowers are solitary generally, though sometimes two or three are together in a cup-like bract,

the petals being very minute, and the stigma sessile on the summit of the one-celled ovary. To these pistillate flowers, sedent in the forks of the stems, succeed in October the white and semi-transparent globular berries, each containing a single seed immersed in very glutinous pulp. Sheep in time of dearth find the foliage very acceptable,¹ while the berries afford welcome food to field-fares, wood-pigeons, and many other birds. If not lunched off by a hungry bird, or otherwise interfered with, the berries remain on the plant all through the winter; and as the foliage of the mistletoe is always green, while the leaves of its host fall away with the arrival of Autumn, it is in the winter-time that the mistletoe is most conspicuous and attractive.

A curiously similar plant is the cross-leaved mistletoe, the *viscum cruciatum* of the botanist, a plant that may be found freely enough around the shores of the Mediterranean Sea. It is parasitic; and we have seen it springing from the trees, its hosts, in vigorous spreading masses. The leaves have the same yellowish colour and leathery texture as those of the mistletoe we figure, and are of similar shape and size, and it is only on examination that we detect points of difference, the most notable feature being that the berries are of a somewhat dull crimson-red colour. It is not, we trust, wholly insular prejudice when we express our preference for berries of the colour that our home-grown mistletoe affords us.

Even in the days of such venerable practitioners as

¹ If frost do continue, sheep hardly that fare
Cræue mistle and ivie for them for to spare.

Galen, Hippocrates, and Dioscorides, the medical virtues of the mistletoe were highly extolled, and until quite recent days its reputation remained unimpaired. In the beginning of the fourteenth century we find it greatly commended in a book called *Lilium Medicinæ* as a specific for epilepsy, either taken internally or suspended round the neck,¹ and many physicians of much later date have had great faith in its remedial efficacy in this and kindred affections.

Sir John Colbatch, a noted physician in the reign of George I., wrote *A Dissertation concerning Mistletoe*, which plant he claimed upon his title-page to be "a most Wonderful Specifick Remedy, Calculated for the Benefit of the Poor as well as the Rich, and heartily recommended for the Common Good of Mankind." The date on the title-page is 1720.

"I have been," he says in his preface, "many Years a Debtor to the World, and since I have not as yet been able to pay off my old Scores to my own Satisfaction, the following Dissertation comes out by way of Composition ; which I hope will be accepted in part of Payment, till the original Debt can be discharged. That this came out alone, is from an Impression that I have had upon my Spirits for some Weeks past, that it would be highly criminal in me to let another Mistletoe Season pass without informing the World what a Treasure God Almighty has every Year presented to their View ; and that no body, at least very few, have received any Benefit from it.

¹ The mistletoe was by the monkish herbalists called the wood of the Holy Cross, *Lignum Sanctæ Crucis*, so highly did they esteem its healing powers.

The Article of Convulsions in the Bills of Mortality of this great City, is by much the largest of any, very commonly amounting to about a fifth Part of the whole, from whence it seems plain that a General Anti-Convulsion Remedy is wanting. I have publish'd the Noble Quaities of this Wonderful Medicine in the most plain and familiar manner, that thereby it may be rendered of more publick Vse; and I am not without the greatest Hopes that People of all Ranks will receive Benefit from it. I hope I shall not be blamed for the Earnestness of my Recommendation of this Neglected but Extraordinary Plant, because my only Aim in so doing is to press People to the Vse of that, which every Family may one time or other receive Advantage from. The Performance is rough and unpolish'd, but I have chosen rather to suffer Reproach upon that account than let another Season slip, which I am satisfied would be to the Detriment of many."

The good old Doctor tells us how a terrible case of epilepsy in "one that was most near and dear," and that for five years had baffled very attempt at alleviation, set him on the alert for every possibility of remedy. "Being one day," he tells us, "on a Journey I saw some Hazle Trees plentifully stock'd with Mistletoe. It immediately enter'd into my Mind that there must be something extraordinary in that uncommon beautiful Plant: that the Almighty had design'd it for further and more noble Vses than barely to feed Thrushes, or to be hung up superstitiously in Houses to drive away evil Spirits.

"In reading the scatter'd and imperfect Accounts of the Druids, formerly Priests and Philosophers in this Island and other neighbouring Countries, who were held in the

highest Veneration by People of all Ranks, I conjectured that this Veneration in great Measure proceeded from the wonderful Cures they wrought by means of the Mistletoe. But Mistletoe of the Oak being the only Mistletoe recommended as good for anything, I was in great Straits how to procure a quantity of it, for I did not remember in all my Travels to have seen any of it: so amongst all my Acquaintance I do not know that I have met with above two that have."

This set the Doctor experimenting on the practical basis that if one cannot get what one wants one must see what one can get, the highly satisfactory result being that "from ten Years large Experience I find the ordinary Mistletoe to be the most noble Medicine I ever knew. Mistletoe of the Oak not being to be obtained, I furnished myself with a large quantity of that of the Lime, the Trees in one of the Parks at Hampton Court affording great Plenty." The Doctor certainly gives very detailed accounts of some very striking cures. There is no suspicion of quackery or merely personal gain about his book, and it appears a pity that the matter should have been allowed so entirely to drop out of sight, and with this thought in our minds we are the less apologetic for dealing at such length with it.

Culpeper declares the mistletoe to be under the dominion of the sun, and "it can also be taken for granted that that which grows upon oaks participates something of the nature of Jupiter, because an Oak is one of his trees." It does not seem to have occurred to him that the fact of the mistletoe preferring some twenty other trees to the oak might perhaps make a little difference.

In the ancient forest laws of Howel Dda an ash-tree is valued at fourpence, while a bough of mistletoe is reckoned at thirty shillings, ninety times as much : we may take it that nowadays this proportion is a good deal more than reversed. About the only use that mistletoe can be put to is to make bird-lime of it; but as we see in a book before us that "it may very reasonably be doubted whether any one was ever engaged in using that article whose time could not have been better employed," an expression of opinion that we entirely agree with, it is scarcely worth while to give a receipt for its manufacture.

COLUMBINE (AQUILEGIA VULGARIS)

Plate XXXIII. brings before us the flowers, foliage, and fruit of the Columbine. Its claim to be considered indigenous has been questioned, but it is found set down in Anglo-Saxon plant lists as the *culfrewort*, a word meaning pigeon-plant ; and a plant that can show a recognition and descent from at least the days of Egbert has very fairly made out its claim for recognition in our Flora. The term indigenous is, after all, a very vague one. When England was under glacial conditions, a state of things that many an ice-scored rock testifies to, or when England was under sub-tropical conditions, a state of things that the coal-measures clearly prove, was the columbine "in residence"? If Noah in his famous voyage had drifted out so far west as this would he have found it? If not, it is, we presume, not indigenous!

The whole plant is attractive, whether we look at its

richly-cut foliage, the gaily-coloured and quaintly-formed flowers, or the equally quaint form of its ring of fruits, pod-like individually, but clustering together into a most picturesque aggregation. The columbine flowers about midsummer, but, continuing in bloom for a considerable time, we get, as we have depicted, flower and fruit simultaneously; the fruiting stage being reached while there are many flowers open or opening, and others only yet in the promise of the bud. We have in our illustration given the leaf in its Autumnal garb; during the flowering season it is of a dark bluish-green colour.

It will be seen, by a glance at the lower blossom in our illustration, or, better yet, by an inspection of a living flower, that the blossom is singularly like a group of little clustering birds, hence its name columbine, *columba* meaning in Latin a dove. It is botanically the *Aquilegia vulgaris*. The old writers also, amongst other names, call the plant *Aquileia*, *Aquilina*, and *Columbina*. Some one centuries ago thought that the clustering forms that suggest to others the heads of doves were no less suggestive of the claws of an eagle, in Latin, *Aquila*, but the name is by no means so happy as the popular title. Some mediæval folk of a botanico-astrological turn of mind called our plant the *Herba leonis*, "the herbe wherein the lion doth delight," the reference of course being not to the lion of the African desert but to his *confrère* in the Zodiac, and to the time of flowering of the plant.

In its wild state, dwelling in woods and coppices, and on the railway banks, the columbine flower is of deep rich purple colour, but it is a plant that lends itself to consider-



COLUMBINE

able variation under cultivation.¹ "They are set and sowne," says Gerard, "in gardens for the beautie and variable colour of the floures : sometimes blew, often white, and other whiles of mixt colours, as nature list to play with her little ones." In the hands of the florists the spurs have been in some varieties greatly modified, and extended to much more than their normal size, thus giving the flowers a charming quaintness of effect.

The columbine, from its deep purple colour, while it was yet a wildling, and the gardeners had not metamorphosed it² was the symbol of grief and desertion :

The columbine, by lonely wanderer taken,
Is then ascribed to such as are forsaken.

As such it presented itself to Brown, the author of the *British Pastorals*, from whom we quote, but in almost all symbolism a variation of significance is possible ;³ and to Drayton the flower is no emblem of the love-lorn, but a

¹ Bring hither the pink and purple Columbine,
With gylliflowers.

SPENSER.

The columbine was a favourite plant with Spenser. In his *Garden of Beauty*, after dwelling on the rosy lips, the ruddy cheeks, and the beautiful eyes of a certain fair damsel, he compares "her neck like to a bunch of cullambines," which seems to come perilously near bathos.

² In a florist's catalogue before us we see that one variety is marked as having blue, white, and yellow flowers ; another with bright golden blossoms ; another as being vermilion and yellow.

³ In symbolic colour, for instance, white may be the badge of perfect purity or the emblem of craven fear. Red may be the emblem of glowing love or of blood-thirsty cruelty. The peacock, now the emblem of worldly pride, was for centuries the symbol of the Resurrection, and the lion may be the emblem of the Lion of the tribe of Judah, of St. Mark the evangelist, of royal magnanimity, or the symbol of Satan himself seeking whom he may by treacherous wiles and ambuscade devour.

rich adornment for the love-favoured, the love-bestowing fair one, who shall have bestowed upon her "a goodly chaplet of azured columbine," while her coronet shall be wreathed with sweetest eglantine, and all goodly things pressed into the service to do her honour.

The columbine was, like the better-known badge of the broom, one of the heraldic cognisances of the royal House of Plantagenet. One finds it sometimes in old stained-glass illuminations and the like, as the device of divers nobles. It may be seen, for instance, in an easily accessible example, in the spandrils of the brass of Sir Peter Courtenay in Exeter Cathedral. He died in the sixth year of the reign of King Henry IV.

The fruit of the columbine is constructed of five carpels grouped together, and these we find, on opening them, to be full of smooth, dark, shining seeds. These seed receptacles presently open of themselves on maturity, and the seeds fall to the ground. They germinate very freely, so that the plant, once fairly established, is not easily dispossessed of its holding.

In one portion of our garden it is our delight to grow divers plants that we have transported from hedge or moorland, river-bank or forest. Here may be found primroses, foxgloves, wild geraniums, alkanet, coltsfoot, the celandines, strawberry, grass of Parnassus, yellow iris, snapdragon, stone-crop, cinquefoil, Solomon's seal, lilies of the valley, daffodils, globe flower, bryony, bindweed, bird's-foot trefoil, hop, woody night-shade, bramble, blue cornflower, valerian, leopard's-bane, moneywort, and many other interesting wildlings. Amongst these will be seen the columbine, and we find it sur-

rounds itself with so goodly a progeny that it is absolutely necessary in the interests of other things to do a little judicious eradication.

It was held by Tragus and others that the seeds of the columbine given with saffron in a little wine were remedial for those suffering from jaundice, while the leaves were boiled in milk as a remedy against sore throat. However this may be, Linnæus records cases of children that have lost their lives through being overdosed with it. Leaves, root, flowers, seeds, have all been pressed into the service of the professors of medicine. One Pauli asserts that he cured children of small-pox and measles by administering columbine seeds in powder to them ; and one Scopoli, not to be outdone, declares that he was equally successful. Another man commends a decoction of the leaves in water as a gargle for inflammation of the throat ; but the plant has now no place in the paraphernalia of the disciples of the healing art and lives in peace, having no longer any attraction to the herbalist collecting his simples.

It would be evidently impossible within any reasonable compass to deal with all the various fruit forms that may be found in our country rambles, nor would there be any great gain in doing so. Our object has been rather to take the leading forms and those that may be considered fairly typical. We propose, therefore, next to deal with the scarlet poppy, since its "heads" form an excellent illustration of the globular capsule, as those of the campion do of the flask-like form. The parsnip again, and the shepherd's needle, that we come to in due course, are illustrations of that great order of umbel-bearing plants

that includes the fennel, celery, parsley, and carrot of our vegetable gardens, and the hemlock, water dropwort, hog's-fennel, hog-weed, and many other species amongst our wild growths. In like manner we presently deal with the broom as representative of the great order of pod-bearers, and therefore standing for the peas, scarlet-runners, lupins, and the like of our gardens, and the birdsfoot trefoil, kidney-vetch, furze, and many other pod-producing plants in our fields and hedgerows.

One repeatedly comes across the statement that we have but two scarlet wildflowers in Britain—the poppy and the pimpernel ; but such a statement requires a considerable amount of correction, since there is more than one kind of British poppy that is scarlet, while on the other hand the pimpernel, sometimes emphatically called the scarlet pimpernel, has yet nothing like the depth and intensity of colour in its blossoms that we find in the poppies. It is not really scarlet at all, but what may be perhaps termed a terra-cotta red, or, may be, salmon-colour. The colour is a very refined and delicate one, and defies the limited nomenclature of the colour-man. When it comes to trying to imitate it, in painting the flower, we may perhaps best think of it as a colour that would be scarlet if more intense. We cannot call it a pale scarlet, as there is no such colour : scarlet is scarlet and it is nothing else. The flowers of the pheasant's eye, magnificent in strength of colour as they are, are more crimson really than scarlet.

POPPY (PAPAVER RHŒAS)

The Poppy is very much in evidence on our railway embankments and waste ground, but more notably yet amongst the farmer's corn and other crops. Beautiful as it is, it can only by severe utilitarians be denounced, we are afraid, as a noxious weed.¹ The same may be said of the charlock that clothes the arable lands with a rich mass of yellow, to the delight of the artist and the disgust of the farmer. At the same time some little cleansing of the land is possible, and to see a field one glorious sheet of scarlet or of gold is not an indication of good farming.

Why a poppy should be so called does not appear. We must not forget that no names come fortuitously; all have a significance, but, naturally, by lapse of time this original significance is sometimes lost to us. It was said, somewhat severely, of a certain book that was regarded as a classic, that, as it was now never read, its position in our literature was assured, and the poppy, having been so called for centuries, will doubtless still be a poppy in popular nomenclature for centuries more, no one knowing or caring why. In Anglo-Saxon days it was the *popig*. It is by some old authors called the corn-rose, a name admirably descriptive of its favourite habitat, but entirely wanting in point as suggesting any sort of comparison in growth, form, colour, or anything

¹ Poppies nodding mock the hope of toil.

CRABBE.

Where the dark poppy flourish'd on the dry
And sterile soil, and mock'd the thin-set rye.

CRABBE.

else, with the rose. It is also sometimes called the cop-rose. Prior, in his *Popular Names of British Plants*, suggests that this is "from its red rose-like flower, and the cop or button-like shape of its capsule." Those who find this explanation sufficient are almost to be envied; for the flower is not at all rose-like, while buttons, even if we are willing to think of them as cops, are yet of all sorts of shapes. Other names are cheese-ball, the globular head suggesting a spherical cheese, and headache from the presumed effects of the odour of the flower.¹

Botanically our plant is the *Papaver Rhœas*. The first name descends to us at all events from the days of Pliny, but those who do not find in this a sufficient justification for the name invite us to believe, which we personally decline to do, that it was so called "because the plant was administered with pap to induce sleep." All the poppies are very narcotic² in property, the opium poppy being notably so. The specific name *Rhœas* signifies a pomegranate, as the capsules somewhat resemble that fruit in their form.

On the summit of the capsule are still retained the rays of the stigma, making a very pleasing star-like form, and immediately beneath these rays will be seen a series of little apertures through which the seeds, when ripe, very speedily find their way. In two of our British

¹ Corn poppies, that in crimson dwell,
Called Headaches from their sickly smell.

CLARE.

² Not poppy, nor mandragora,
Nor all the drowsy syrups of the world,
Shall ever medicine thee to that sweet sleep
Which thou ow'dst yesterday.

SHAKESPEARE, *Othello*.

poppies, the *P. Argemone* and the *P. dubium*, the capsules are not globular, but elongated. The capsules, ere they are fully ripe and hardened into a crisp, dry condition, contain a good deal of milky juice, as we find on making our section. Were it not that the quantity yielded is too small to repay cultivation, these poppy-heads would furnish us with British-grown opium.

The petals of the poppy are particularly fugitive ; if the flowers be gathered they soon lose their charm, many of the petals shattering at once,¹ and the others quickly withering.

BUTTERCUPS (RANUNCULUS ACRIS)

The fruits of the various species of Buttercup are interesting in form, and will repay some little observation. While all are built up on the same general idea, there is a very interesting variation of detail. The idea of gathering fruit from buttercups may appear somewhat chimerical ; had we said blackberries instead of buttercups one could have better entertained the thought. In popular language the word fruit suggests the idea of something juicy and tempting-looking, while some would limit their use of the term yet more, and practically insist that a fruit must be something edible. In truth, however, whatever seed-bearing form succeeds the flower is a fruit, a pea-pod or a vegetable marrow as much as an apple, a dry, untempt-

¹ Pleasures are like poppies spread,
You seize the flower, its bloom to shed.

ingly-looking sycamore samara as fully as the juiciest pear. The fruit, it must be understood, is always based on the pistil, and when the other constituent parts of the flower, petals, stamens, and so forth, their duty done, have withered away, the pistil develops into the seed-vessel, often very greatly enlarging in bulk, and modifying its form. Within this seed-vessel are the seeds, many or few, and these are either liberated by the opening of the fully-developed receptacle for them, as in the poppy, broom, and thorn-apple, or the whole thing on maturity comes to the ground, as in the case of the apples that we may see lying at the foot of the trees. In this latter case the enclosing envelope gradually decays, and the seed is set free to germinate and set up an independent existence.

The fruits of all our species of buttercup are built up of a series of fleshy carpels radiating from the centre and arranged into a globular, or sometimes elongated, head ; sometimes rounded at their outer extremities, at others terminating in a small beak, sometimes quite smooth, and in other species wrinkled or covered with small tubercles. The fruits of the spearwort, *Ranunculus Flammula*, the lesser celandine, *R. Ficaria*, or the goldilocks, *R. auricomus*, are excellent examples of the globular form, while the celery-leaved ranunculus, *R. sceleratus*, has its very numerous carpels arranged in a very dense cylindrical head. The fruit of the corn crowfoot, *R. arvensis*, is composed of a few large carpels that are covered on both sides with hooked prickles : it is a particularly quaint form. Buttercups are called ranunculuses, a word derived from *rana*, a frog, because they are ordinarily found in low marshy ground beloved of frogs, but the corn

crowfoot is an exception and should be sought for in corn-fields. All the species are of a very acrid nature, but the corn crowfoot, inoffensive little thing as it looks, is the most poisonous of all our buttercups: it is therefore a matter of some little interest to us that our millers should carefully cleanse their wheat from this and other extraneous matters. The plant is called crowfoot from a fancy that the shape of the foliage in this and the allied species somewhat resembles a bird's foot, while buttercup is suggested by the golden cup-like forms of the flowers.

It may be somewhat of the nature of news to some of our readers that the word buttercup is what the old grammarians called "a noun of multitude," and signifieth many flowers. To people not a few, who have given no special heed to the matter, since it is not given to all men to know all things, a buttercup is simply a little yellow cup-like flower that each early summer-time is very conspicuous, and that has somehow got bracketed off with another flower, the result being that "buttercups and daisies" stand as a sort of symbol or shorthand for the idea of the Summer wild-flowers, as the primrose does of those of Spring. We can well remember what a shock it was to our sense of the proprieties when, half a century ago, we found that a buttercup could be a white flower. When in classic times they would seek to express the extreme of improbability, nothing seemed so apt as the idea of a black swan; a white buttercup appeared to be almost a parallel phenomenon to ourselves, and yet we have lived to see both.

One of the earliest of Spring flowers is a buttercup, the little celandine that stars the brown earth with its

golden blossoms; and throughout the whole floral year buttercups of one sort or another are always with us. In the early summer the quiet pools and gently-moving streams are one great sheet of white from the countless blossoms of the water-buttercups, while the forest-banks are gay with the golden flowers and graceful foliage of the wood crowfoot. The meadows in May and June are no longer a mass of verdure to the eye, but are transformed into glowing gold by the alchemy of Nature, through the masses of bulbous crowfoot, while high away on the corn-land, as we have seen, the dry and arid ground has its representative buttercup, the corn crowfoot. Some, like the meadow crowfoot, have flowers of brilliant golden yellow; while others, as the celery-leaved ranunculus, have their blossoms of paler tint. Some, like the meadow crowfoot, again, have their leaves richly cut into radiating segments and deeply serrated, a form that one may call the typical buttercup form of foliage; while the lesser celandine has them heart-shaped, and the spearwort has them nearly a foot long, but an inch or two in breadth at most, and scarcely or not at all notched on their margins. Some, like this same noble spearwort, have blossoms that a half-crown would not more than cover; while others, as those of the corn crowfoot, a sixpence would suffice to veil from view. Most of them have five-petalled flowers, but in the little celandine we have counted any number of petals in its blossoms up to fourteen. It will be seen, then, that to declare that one has seen a buttercup in flower is scarcely in itself sufficient, as one may in so doing provoke the question, "And which one was it, out of our twenty British species, that you saw?"

PARSNIP (PASTINACA SATIVA)

In Plate XXXIV. we have a drawing of the Parsnip—a plant that many persons would at once associate in their minds with the kitchen garden, but which is, nevertheless, a true wildling—and the source from whence the cultivated parsnip was derived. In the wild plant the root is small, hard, and stringy, and not at all open to the amenities of the culinary art, though on gathering it we find it having in form and odour a suggestive resemblance to the parsnips of the gardener. In the garden we have seen roots dug up of eighteen inches circumference round the crown and two feet long. The wild parsnip is found freely enough in many parts of the country, on the banks, edges of fields, or waste ground, but has a distinct preference for a chalky or gravelly soil. The plant we figure we gathered in a quite ideal situation for it—a wild, open, breezy downland country, with the blue sea for our horizon, and immediately in front of us a great chalk pit gleaming in almost dazzling whiteness in the sunshine, and its floor a mass of *débris* overgrown with grass and wild thyme and great patches of the yellow blossoms of the parsnip.

Its blossoms are seen when examined singly to be very small, but, being massed together into heads, contributing their share in the general floral display. As will be seen from our illustration, they are yellow in colour, and are borne in clusters of some eight or ten rays to the general flower-head. This arrangement is known as umbellate, and these umbel-bearing flowers form a very large natural order, the *Umbelliferae*, that includes many

valuable plants, and others, such as the hemlock, of the most poisonous nature.

The name seems to be with equal propriety given as parsnip, or parsnep, in the various text-books, any six that favour the one spelling being balanced by half a dozen that prefer the other, and in the older authors we may find pasnep and divers other variations. These, however, were the days before Civil Service Examinations, when a man was free to spell as he liked, no man daring to make him afraid. The plant was cultivated by the Romans, and it is recorded in the society gossip of his day that the Emperor Tiberius was specially partial to a dish of parsnips. To the Romans the plant was the *Pastinaca*, a name that we find in Pliny and other writers, and which has gradually, as it has come down the ages, been corrupted into parsnip. When our gardener would set out young plants, such as lettuce or cabbage, he makes a series of holes with a tool called a dibble to insert their roots in, and when the gardener in old Roman days had a similar task, he used a precisely similar tool, only instead of calling it a dibble he called it *pastinum*, and in its size and shape it was so very like a parsnip root that the parsnip was called *Pastinaca*. The parsnip has for centuries been cultivated as a welcome food both for man and beast, but it has no great nutritive powers.¹ It contains a considerable amount of sugar, but in this respect the beetroot surpasses it, so that no great commercial use has been made of it.

¹ Gerard declares that "The parsneps nourish more than doe the Turneps or the Carrots, and the nourishment is somewhat thicker, but not faultie nor bad." Those, therefore, who like to take their nourishment thick will still pin their faith on parsnips.



PARSNIP.

In the Middle Ages it was considered the correct adjunct to the salt fish of the days of abstinence, a combination that we believe still holds, as a curious survival, in some parts of the country, haddock and parsnips being as much in accordance with the fitness of things as lamb and mint sauce or any other blend sanctioned by conservatism and immemorial usage. A kind of beer is made by mashing up the roots with hops and then proceeding to fermentation, and a more aristocratic beverage known as parsnip wine is also in repute in some rural districts. Gerard quaintly tells us that "there is a good and pleasant food or bread made of the roots of Parsneps, as my friend Mr. Plat hath set forth in his booke of experiments, which I have made no triall of, nor meane to do."

Dioscorides, who as an authority is at least venerable if not reliable, affirms that deer are preserved from the attacks of serpents by sedulously eating wild parsnips, and thus becoming poison-proof; whereupon mankind, by observance of this, equally protect themselves from the venom of serpents and scorpions by drinking wine in which the aromatic seeds of parsnips have been steeped. Bacon, in *Sylva Sylvarum*, published in the year 1629, reports as a curious fact that "roots, such as Carrets and Parsnips, are more Sweet and Lushious in Infectious Yeeres than in other Yeeres." He had observed, too, that "in the Plague of the last Yeere there were seene in divers Ditches and low Grounds about London many Toads that had Tailles two or three Inches long at the least: Whereas Toads (vsually) have no Tailles at all. Which argueth a great Disposition to Putrefaction in the Soile and Aire,"¹ and

¹ His book is a most interesting one; on the surface amusing, yet pathetic

therefore, incidentally, an unusually good crop of unusually good parsnips.

CARROT (*DAUCUS CAROTA*)

The bracketing together of parsnips and carrots by Bacon reminds us that in the Carrot, an equally common wild plant, we have another very typical plant carrying its flowers and fruits in this umbellate fashion. It is the parent of the cultivated carrot of our gardens. It should be found flowering during June, July, and August, throwing up numerous heads of white flowers. These heads are flat-topped, but as the fruit begins to ripen the head grows more and more concave, until it becomes at last quite cup-like in form. This peculiarity gives the plant one of its popular names, the bird's-nest, and in Holland and Germany it bears a name of similar import. In the wild state it thrives best on calcareous soils, attaining to a height of some two or three feet, and noticeable from its disks, some three to five inches in diameter, of white blossoms, and its richly-cut foliage. Parkinson, writing in 1643, says that the ladies of his day wore the leaves of the carrot in their hair as an adornment. In the Autumn the foliage changes into brilliant yellow and scarlet, and becomes sought after

in its honest struggling through the darkness to light. He tells us, for instance, that "it is strange that is generally received, how Poysonous Beasts affect Odorate and Wholesome Herbs: As that the Snake loueth Fennell: that the Toad will be much vnder Sage: that Frogs will be in Cinquefoile," and then—thinking it out, and daring to set his opinion against that of many men of recognised weight and authority—he hazards the idea that "it may be, it is rather the Shade or other Couerture that they take liking in than the Vertues of the Herbe." We can all think so now, but it is more difficult to be the first to question long-standing beliefs.

from its beauty for table decoration, etc. A Surrey farmer told us that more than once he found trespassers cutting the leaves from his carrots, so he determined that he would do so instead, and sending up large consignments of these leaves to Covent Garden, he, to quote his own words, "got big money for them."

The root of the wild carrot is of a yellowish-white colour, woody in texture, acrid to the taste, yet having most unmistakably the typical carrot odour. The carpels that form the fruits are flattened in form and bearing four very bristly ridges on their surfaces. They contain a powerful volatile oil, and are very aromatic to the smell and taste,¹ being held superior in strength and efficacy to the cultivated ones for medicinal purposes. The carrot, except that its boiled roots are still sometimes used for soothing poultices, is not now employed in medical practice ; but in earlier days, including in this elastic and comprehensive term anything from the days of Augustus Cæsar to George the Fourth, it was held in great estimation in medicine. As an article of food carrots are wholesome and nutritious, consisting largely of starch and sugar. Horses and cattle are very fond of them, and we can most of us, we suppose, remember with what entire satisfaction our rabbits munched them up. Botanically the carrot is the *Daucas carota*, *Daucus* being the Greek name, dating back before the Christian era—

¹ Plants (for the most part) are more strong, both in Taste and Smell in the Seed than in the Leafe and Root. The Cause is, for that in Plants that are not of a Fierce or Eager Spirit, the Vertue is increased by Concoction and Maturation, which is euer most in the Seed: But in Plants that are of a Fierce and Eager Spirit they are stronger whilst the Spirit is enclosed in the Root: And the Spirits doe but weaken and dissipate when they come to the Aire and Sunne. As we see it in Onions, Garlike, etc.—BACON, *Sylva Sylvarum*.

while *carota* is the Latin word for the plant, and as venerable as the other, the generic title.

CRANBERRY (*VACCINIUM OXYCOCCOS*)

Growing luxuriantly on the peat mosses and boggy moorlands and in the fen country one may find the beautiful little Cranberry. Though recorded as far south as Sussex, its true home is in the northern counties, since it is there that the conditions are most freely found that are essential to its well-being. Many districts, too, in the eastern fenlands that once bore it abundantly know it no more, since drainage and the subsequent cultivation of the land have entirely changed the local conditions. Many beautiful bog plants are on this account approaching extinction, and such splendid butterflies as the Swallow-tail are growing much scarcer than one at all likes to contemplate. One of the results is that while England used once on a time to grow all her own cranberries, they are now, being largely used in matters culinary, imported in immense quantities, over fifty thousand gallons a year, from Russia, Spain, Germany, Hungary, and Sweden. What are also called cranberries come very freely from the United States of America. They are not, however, quite the same, but a closely-allied species, *Vaccinium macrocarpa*, growing much more erect than the true cranberry, and having larger berries.

The cranberry creeps over marsh and fen, seldom growing more than three or four inches high, and spreading very freely. It has a goodly number of names descriptive of its habitat, being known in different parts of the country as the marsh-wort, marsh-whortleberry, fen-berry, fen-

grapes, marsh-berry, moss-berry, moor-berry, bog-berry, and bog-wort. Why it should be called cranberry is not so immediately obvious, and as two or three different reasons are given we may not uncharitably assume that nobody knows: all are so unsatisfactory that it is really not worth while to set them forth.

The stems of the cranberry are very slender and delicate, and clothed with small evergreen leaves, much like those of the thyme. They are almost white beneath, and their upper surface is rolled back at the edges. The flowers, borne singly on long slender stems, hang pendent, and are of a delicate rose-colour, the four segments of the corolla being thrown back, as we see in the flower of the potato, or the woody nightshade. The plant is in flower in May and June. The berries are ripe by August. They are globular in form and crowned by the four little teeth of the withered calyx. They are red in colour, and many-seeded, while their flavour is open to question, being acid and astringent, with a certain dash in it that some people enjoy and others do not. Hooker, we see, declares that "the fruit is highly agreeable"; a sober botanist as he is, and not at all given to rhapsodies, affirms further, that it makes "the best of tarts." It is at all events pronounced to be very wholesome and strongly antiscorbutic. They will keep a long time if gathered in dry weather and then put into well-corked bottles. The botanical name of the cranberry is *Vaccinium Oxycoccus*, the latter half of the name being compounded of two Greek words signifying sharp or acid, and a berry. A considerably older author than Hooker affirms of cranberries that "they take away the heate of burning agues, and also the drought, they

quench the furious heate of choler, restore an appetite to meate which was lost by reason of cholericke and corrupt humours, and are good against the pestilent diseases. The juice of these also is boyled till it be thicke, with sugar added that it may be kept, which is good for all things that the berries are, yea, and far better." On the Continent they are by fermentation made into a kind of wine, and they are also converted into a pleasant acidulous cooling beverage for the hot weather, or, rather, for the relief of the thirst that the hot weather induces.

One curious result of the war in 1570 between Germany and France was its effect on the marketing of all kinds of wild fruit. Thousands of barrels of hedgerow and moorland gatherings are in the ordinary course of events exported every year from Germany to France. These, bilberries, cranberries, bird-cherries, and the like, form, it is not obscurely hinted, a very important element in the production of claret and other vintages. There being no foreign market for these in war-time, the fruit, arriving in cartloads in the various towns of the Fatherland, became a mere drug in the market, and beautiful strawberries, raspberries, and other wild fruits were going for a mere song, whatever that standard of value may be. Before the war the export value from Hanover alone was over three hundred thousand francs a year, chiefly, of course, the result of child labour.

BEAR-BERRY (*ARCTOSTAPHYLOS UVA URSI*)

Another graceful little plant, though one must go to Scotland, Ireland, or the North of England to see it, is the Bear-berry. It delights to grow amongst the heather

and on dry rocky slopes, being quite at home up to three thousand feet above the sea. Its botanical name has a rather formidable appearance, *Arctostaphylos Uva Ursi*. The first name, however, is but bear-berry over again, only this time in a Greek dress, while the second name is again bear-berry, but now set forth in Latin. The generic name was bestowed on the plant by Adanson, a celebrated French botanist, who published his notable work, a book on the families of plants, in the year 1763. One curious feature in his nomenclature, though the present is an exception, is that many of the names he gives are to all appearance meaningless, or so obscure and recondite as to be entirely pointless.¹ Clusius, a Dutch botanist, who wrote in 1601 his best-known book, *A History of Rare Plants*, is responsible for the specific name. Whether we take Greek or Latin or English, we arrive at the same idea that the fruit of the plant is a delectable item in the food of bears. It may perchance be objected that there are no bears, at least of the quadrupedal type, in Durham or Cromarty, but we must always beware of falling into the fallacy that because a plant is undoubtedly British it is British alone, and in Northern Europe, Northern Asia, Northern America, where the plant is as much at home as in North Britain, bears are no less at home. It is sometimes called bear's bilberry or meal-berry, in Danish *meelbær*, from the mealy character of its fruit.

¹ Thus the gentianella, a graceful little yellow-flowering plant of the turf-bogs, he called *Cicendia*. It has been suggested that this is from the Greek *kikiunos*, curled hair, or from the Latin *cis* and *candeo*, to burn within, though what curly locks or internal combustion have to do with this charming little plant it would be impossible to explain. Another plant, the hedge parsley, he called *Torilis*—wherefore, no man knoweth.

The stems of the bear-berry are procumbent, branching and spreading very freely, so that the plant when found at all is ordinarily in large masses, covering a considerable area of ground. The leaves are evergreen, small, less than an inch in length, ovate, unnotched at their margins, stiff and rigid in their character, and having a glossy surface. They are very numerous, and set closely together on the stems, and if we taste one we find it somewhat bitter and austere. They have long been used in medicine, and still retain something of their ancient reputation. They are gathered in large quantities, and when dried are used as an astringent tonic. They contain a large amount of tannin, and Linnæus tells us in his *Flora Lapponica* that these leaves are picked in great quantities in the north of Sweden, and sent down to Stockholm and other towns for the use of the tanners.

The flowers are of a delicate rose-colour, tubular, very like a heath-bell or lily-of-the-valley flower in form, and with spreading five-cleft mouth. They may be found in May and June, growing some five or six together at the ends of the stems. The berries that succeed them are of course necessarily also clustered at the termination of the branches, and should be sought by bears, botanists, and others during September. They are small, globular in form, bright red in colour, and having a shining surface. On cutting one open across its centre we see five radiating cells, and in each of these a hard, brown seed. The berry has at its base the five sepals of the calyx, not crowning the fruit, as we have seen it doing in the cranberry. The fruit is fairly fleshy, but of the mealy or floury texture and appearance that we have already referred to. On

tasting it we find it almost tasteless, but such flavour as it has, while somewhat bitter and austere, is yet not altogether unpleasant. Most animals, cows, horses, and the like, leave these berries untouched, but to the grouse and other birds they are very welcome and are much sought after.

CROWBERRY (*EMPETRUM NIGRUM*)

The Crowberry, another pretty little moorland plant, must not go unmentioned. It is commonly to be found on the mountains, on the great stretches of moorland of Scotland, where it is the badge of the McLeans, in Ireland, and in the north and west and centre of England, though not known down south. It is abundant in that noble stretch of wild country known as Cannock Chase. Here in Autumn we may find the great moorland glowing with crimson heath, while the bilberry, the cowberry, and the cranberry are all to be found abundantly, and, as freely as any, the dark glossy fruits of the crowberry. The Chase is a far-stretching plateau some six to seven hundred feet above the sea, a glorious wind-swept piece of wild nature. The surface soil is chiefly gravel and stone, that has been described with some graphic force as the riddlings of creation, offering, therefore, little or no temptation, one would have thought, for enclosure. Large tracts have, however, of late years been ploughed up, a proceeding little to the benefit of any one, and, so far as it goes, destructive of a wild beauty that might well have been suffered to remain, and which we, Staffordshire-born, can only deeply regret any loss of.

The crowberry is a trailing and widely-spreading plant, its long slender branches covering much ground to the

almost entire exclusion of anything else. The plant has a very heath-like appearance, its small evergreen leaves being very simple in character and crowded on the stems. The edges of the leaves are much rolled back, and from the upper surface invisible. The flowers, a reddish-purple in colour, are very minute, and spring from the axils of the leaves, being found freely towards the extremities of the stems. The flowering season is in May, and the flowers are diœcious, the staminate flowers being on one plant and the pistillate on another. In each we find a ring of small scales as a base or cup, in the one case three rather prominent stamens springing from it, and in the other a short style, crowned by a nine-rayed stigma.

The fruit is a fleshy globular berry, growing in clusters, and ripening by about the beginning of September. It is purplish-black in colour, glossy in surface, and about the size of a pea, and, as it grows in these little groups around the stem, distinctly attractive to the eye. To the taste these berries are unpalatable, and if partaken of at all freely, give rise to headache and other unpleasant indications that they are not a particularly wholesome article of diet for mankind, though the grouse, ptarmigan, and other moorland birds seek them eagerly. The plant is called the crowberry from its glossy black fruits, or sometimes the crakeberry, the old Norse word for a crow being *kraka*. In Denmark the plant is known as the *krakebär*, and as we have found many of our popular plant names to have descended from Anglo-Saxon times, so, without doubt, crakeberry is a memorial of the days of Danish invasion. Botanically the crowberry is the *Empetrum nigrum*: the first name, Greek in its origin, referring to the home of the plant

amidst rocks and stony places ; while the second, Latin in its source, reminds us of the nigrescent character of the fruit.

BROOM (SAROTHAMNUS SCOPARIUS)

The Broom, *Sarothamnus scoparius*, the subject of Plate XXXV., may be freely met with throughout the British Islands where the conditions are favourable to its well-being. It is equally at home all over Europe, in Northern Africa, and in the west of Asia. All it asks is dry sandy waste ground, railway banks, commons, hillsides, no matter how sterile and poor the soil, how arid the environment. It will grow, and flourish too, where many plants decline to even exist, on the sand-hills that in many places skirt the sea and are exposed to the full force of the gales. It is therefore planted in Holland and elsewhere, that its roots may assist in binding the loose sand together to form a barrier and a defence against the encroaching sea. On the shores of the Bay of Biscay great plantations of pine-trees have been formed to protect the land in their rear from being overwhelmed by the drifting sand, and the seedling pines are effectually guarded from being buried by being sown behind hedges of broom. It is in Scotland the badge of clan Forbes.

In the first folio of the *Tempest* we read, " Now would I give a thousand furlongs of sea for an acre of barren ground, long heath, browne firrs, anything ; " and it was suggested by Sir Thomas Hanmer in 1774 that what Shakespeare really meant and wrote was " ling, heath, broom, furze, "—anything, no matter how humble or how useless, that indicated dry land.

Hartlib, writing in the year 1659, wisely enough declares that "furze, broom, heath, these can hardly be so destroyed, but at length they wil up againe: for God hath given a peculiar propriety to every kinde of earth, to produce some peculiar kind of Plants, which its wil observe euen to the world's end."

The broom varies in height from a foot or two to eight feet or more, but one ordinarily finds it a shrub of some four feet high or so. Its branches are long and straight, evergreen and furrowed. Though they be somewhat rigid-looking they are yet very flexible, and conquer the searching blasts that sweep over them, not by sturdy resistance, but by judiciously yielding. As these stems are very fibrous they have been employed as a material in the manufacture of paper. Tusser, we see, says, "pluck broome, broome still; cut broome, broome kill." How far this may be true we cannot say, but we do know that the plucking of broom owing to its tenacious fibrosity¹ is a very difficult task. Broom tugged at and wrenched apart would, we imagine, suffer more injury than if clearly severed with a stout knife.

The leaves of the broom are somewhat inconspicuous, the general verdant look of the shrub being largely owing to the mass of green branches. The lower leaves are on short stalks, and made up of three leaflets, while the upper ones are stemless, and only of a single leaflet. Those who are so unfortunate as to suffer from the "blacke iaundice" will be glad to know of the remedy commended by Fitz-

¹ We cannot, we are afraid, quote precedent for the use of this word, but it seems to just express the idea we want to convey, a somewhat pronouncedly fibrous condition. Dictionary makers will kindly note for their new editions.



BROOM.

herbert. "Take as many handfuls (as you thinke good) of the dried leaves of Broom gathered and brayed to powder in the moneth of May, then take vnto each hand full of the dried leaues one spoonful and a halfe of the seed of Broom braied into powder: mingle these together, and let the sicke drinke thereof each day a quantitie first and last, vntill he find some ease. The medicine must be continued and so long vsed vntill it be quite extinguished: for it is a disease not very suddenly cured, but must by little and little be dealt withall."

The flowers of the broom will be found in profusion in the Spring and early Summer. They are large and of a bright golden yellow, and make a grand display. They grow singly or in pairs on the stem, but the stems are so numerous and so freely blossom-bearing that the whole shrub is transformed into a mass of glowing yellow. Amongst some "Prognosticks" that we find in a book some two hundred and fifty years old is this—that "if the Broom be full of Flours it usually signifies Plenty." This is a dictum of a particularly cheering character, since the years are few indeed when the broom is not thus seized with a spirit of optimistic prophecy. The flowers of the broom are five-petalled, and of the papilionaceous, or butterfly, type that we find characteristic of the great natural order to which it belongs, and including such well-known plants as the furze, rest harrow, melilot, the various clovers, bird's-foot trefoil, kidney-vetch, sainfoin, tufted vetch, everlasting pea, broad bean, and scarlet runner. In all of these we find the form shown in our illustration, a broadly-displayed petal called

the standard ; beneath this two others, known as the wings ; and within and below these are yet two others, that together form the keel.

Gerard and other old writers warmly commend the flower-buds as a pickle. "They are to be gathered, and laid in pickle or salt, which afterwards being washed or boyled, are vsed for sallads, as Capers be, and be eaten with no lesse delight." We also read that "that worthy Prince of famous memorie Henry 8, King of England, was woont to drinke the distilled water of Broome floures against surfets and diseases thereof arising." The great worthiness and illustrious memory of this famous sovereign are points that the author, living in the reign of his daughter, thought it well to make quite clear.

The fruit of the broom is a pod, a form as characteristic of the fruit as the butterfly flowers are of the blossoms of this great order. These pods in the broom are flat, and from an inch and a half to two inches long ; smooth on their sides, but hairy along their edges. They are full of seeds, and as these approach maturity the pods become a dark brown. Later on, when the seeds are all discharged and the pods yet remain on the plant, they turn to a cold grey-black. When the seeds are ready for dispersion we may hear the crackling of the pods all around us as the valves fly open and eject the seed. In our illustration it will be seen that the upper pod has thus opened with this curious elasticity and propelling force.

This question of seed-dispersion is of the greatest interest and worthy of the closest study, as an illustration of the

wonderful variety of Nature, and the workings of all sorts of strange means to a definite end, but it is impossible here to deal at any length with a subject so wide. We would only remind our readers how we have seen the acorn, by the action of the boisterous wind, thrown as from a catapult; and how by this same action of the wind, under gentler suasion, the dandelion and thistle-heads float in the air until a congenial resting-place be found; how naked coral islands become clothed with vegetation by seeds floated in protective investments through a thousand miles of salt ocean, or by seeds adherent to the feet of the birds that visit them; how seeds, hooked and burred, are transported on the coats of wandering animals; how others, like the maple, the lime, or the ash, are winged. We have noted, too, how, by elasticity of action, the seeds of the touch-me-not are scattered, and we may see this same principle again very beautifully in the spring-like action that liberates the seeds of the herb-Robert. Nature is full of beautiful contrivance. In the case of the broom, herb-Robert, and many other plants, it is the drying of the parts that liberates the spring and sets it into motion, but in the Rose of Jericho, for instance, the reverse is the case; the seed-vessel is driven along the dry sands by the action of the wind, until, meeting with a moist spot, it opens and sheds its seeds in that only place amid the parched plain where provision exists for their vegetation.¹

¹ These are contrivances for a great and valuable end, which we can especially appreciate, because we can compare them with our own designs: and as well might the inventor of the catapult and the cross-bow doubt his own ingenuity and intentions as those of the Creator.—MACCULLOCH, *The Attributes of God*.

While many of our plants have various names, and are equally known by any of them, the broom is the broom alone; no change of dialect, no provincialism, no local usage, changes this. It was in Anglo-Saxon days the *brom*, and we are told in every text-book that the name arose from this plant being of special use in the manufacture of brooms for sweeping purposes.¹ The botanical name, *Sarothamnus*, dwells again upon this domestic service, seeing it is compounded of two Greek words, signifying to sweep, and a shrub, while *scoparius* is derived from *scopæ*, meaning small twigs, the inference again being that these same small twigs are just the things for making brooms. The name broom has been so entirely in use as a plant name, that it has gained an individuality of its own, and seems to have wandered away from all suggestion of housewifery; but we shall realise the intimacy of its connection therewith if, instead of calling our present plant the broom, we call it *besom*. *Besom* or no, it is a charming plant, and one could readily, from Chaucer, Shakespeare, Spenser, Dryden, Thomson, Scott, Wordsworth, Cowper, and many another nature-lover, find testimonies of their appreciation of its beauty.

Turning back, however, to matters more prosaic, we find the broom of great utility in thatching cottages and ricks,² and when better fuel is not obtainable, broom is again capable of playing a useful part in rural economy. A decoction of broom-tops has until quite recently been

¹ And returning vnto the same he founde it in dede sweped cleane with bromes, but altogether emptie.—Luke xi.—UDALL.

² He made carpenters to make houses and lodgynges, of great tymber, and set the houses lyke streetes, and covered them with rede and brome, so that it was like a lytell towne.—FROISSART.

in use among the doctors, *decoctum scoparii* being mentioned approvingly in a manual of *Materia Medica* in our possession, dated 1853. These tops have a bitter and nauseous taste ; but even if many medicines have a nauseous taste, it does not necessarily follow that things of repulsive flavour are therefore medicines. This we admit is a truism, but it needs setting forth all the same. One finds, for instance, people constantly assuming that, since quinine is a tonic, other bitter things are tonics no less, a point that by no means follows. Our forefathers, before the general introduction of the hop in brewing, availed themselves of the bitterness of the broom-tops as a flavouring to their home-brewed beer, while the seeds were sometimes roasted as a substitute for coffee.

FURZE (ULEX EUROPEUS)

Furze, gorse, and whin are three names for the same thing, though we often find that this fact is not realised. We saw recently some bye-laws issued by a corporation, in which any damage to the "gorse, furze," and other plants in their park, was forbidden. We ventured to remonstrate, and were rebuked for "splitting straws," and so the notice stands. In Holland's translation of Plutarch we find another illustration of this repetition : "We must not alwaies choose that which is easie to be had and willing to be gotten, for we put by gorse and furzen bushes, we tread underfoot briers, though they catch hold of us."

The prickly nature of the furze is the point that the poets, like the rest of us, dwell on. Browne, in *Britannia's*

Pastorals, puts together the "furzy tuft" and "breake of thorns"; Somerville writes of the "prickly furze"; and Fawkes, in his translation of Theocritus, declares truly enough that

Thorny furzy hills should ne'er be trod
With legs unguarded, and by feet unshod,

SHEPHERD'S NEEDLE (SCANDIX PECTEN)

The subject of our last illustration, Plate XXXVI., is the Shepherd's Needle, a plant that, from the farmer's point of view, is only too abundantly to be found in cornfields and amongst his root crops. To those who, in these days of unlimited competition, are not preoccupied with the idea of getting their livelihood from the land, it appears a graceful little plant enough, not very attractive, but with a certain quaint charm and delicacy that appeals. This arises from its very finely-cut foliage, from its heads of pure white blossom, and, notably, from its very striking-looking fruits. It flowers straight away from June to November: our drawing, we see from our diary, was made in October. We get almost all through the Summer and Autumn months both blossoms and fruits simultaneously, the early flowers having passed on to the fruiting stage, while other blossoms have scarcely begun to think of putting in an appearance at all. Though the plant be only an annual, its eradication is by no means easy, since it seeds so freely and so persistently. The plant was by some of the old herbalists commended as a pot-herb, and they also, though that goes almost without



SHEPHERD'S NEEDLE

saying, ascribed various healing virtues to it; but at present, as no one believes in it either as meat or medicine, it blossoms undisturbed.

In mediæval days many plants were dedicated to the Virgin Mary, so one is not at all surprised to find that one old name for this little plant is Our Lady's Comb. To those who held such an ascription superstitious the name of Venus was held preferable, and thus our plant is also Venus' Comb. Other people, caring little for such high-sounding dedications, were content to call the plant the shepherd's needle. This alteration of the name from Our Lady to Venus is probably sometimes a reaction from mediævalism. In some cases this feeling would appear to be carried much further. Thus we have noticed that some of the children in the New Forest call the Lungwort Joseph and Mary, while others call it donkey's-ears, and it seems at least possible that the Puritans gave such "vulgar" names as the latter to show contempt for the religious names bestowed by the monks. The plant has a multiplicity of names, but if we bear in mind that some folk thought its fruit like a comb and others like a needle, that some had a pleasure in church association, some in classic mythology, and some in the affairs of daily life, and that the Latin for a court is *pecten* and for a needle is *acus*, we shall have little difficulty in ringing the changes, and realising how this modest little plant can be *Pecten Veneris*, *Acula*, *Acus Veneris*, *Acus pastoris*, Shepherd's Needle, Lady's Comb, Venus' Comb, Beggar's Needle, or Crow-needle. Even this list does not exhaust the names that have been bestowed upon the plant. In referring to the broom we pointed out that, while some plants have many names by which they seemed to be equally well known, the broom

was everywhere the broom and nothing but the broom. The shepherd's needle may certainly stand as a representative of the many-named.

We have introduced the shepherd's needle in our series since it is so excellent an illustration of a beaked fruit. Other good examples of this form will be seen in the numerous wild geraniums, that from this feature are ordinarily called crane's-bills.

As one wanders along our peaceful country lanes, by the sides of quiet streams, over the open moorland, in the shade of the woodlands, by the margin of the sounding sea, everywhere one is surrounded by objects of beauty. Our present care has been to find somewhat of interest yet remaining when, the time of flowering being over, it is too hastily assumed that little or nothing attractive is left. It is manifest that such an aspiration could be but little more than suggestive of the field open to study. Many curious forms must perforce go unillustrated, undwelt on, and having indicated, as we trust, a pleasant path, others at their will must walk therein. The great waving pods of the horned poppy, the quaint "cheeses" of the mallow, the curious heart-like fruits of the shepherd's purse, the feather-like globes of the thistle, the rugged heads of the teasel, the burrs of the goose-grass or the hedge-parsley, the ribbed fruit of the hemlock, the triangular nut of the black bindweed, are but a few illustrations that at once occur to us as further examples of the wonderful variety of fruit form in Nature.

We commenced our work with a regret that many of those who study plants should give almost exclusive attention to their flowering period; and we conclude with the earnest

hope that our book, which has been to us so pleasant a task, may be so fortunate as to transfer something of this pleasure to our readers, and may lead them to see that the time of fruition no less than the time of preparation has also its interest and its charm. "The works of the Lord are great, sought out of all them that have pleasure therein," and an appreciative study of Nature brings with it its own rich reward.

INDEX

So essential did I consider an Index to be to every book, that I proposed to bring a Bill into Parliament to deprive an author who published a book without an Index of the privilege of copyright, and, moreover, to subject him to a pecuniary penalty.—*Campbell's Lives of the Chief Justices of England.*

- ABNORMAL chestnut cluster, 128
 Acacia, Mistletoe on, 205
Acer campestre, 148, 151
Acer pseudo-platanus, 148
Acer rubrum, 152
 Achilles, Ashen spear of, 137
 Acorns as food, 103
Acorus Calamus, 164
Acus Pastoris, 247
Adam in Eden, Extract from, 12, 34, 36, 46, 93, 113, 157, 160, 178, 180
 Adanson, Plant names of, 235
 Adder and ash-tree, 141
Æsculus Hippocastanum, 128
Affectionate Shepherd, Barnfield's, 21
 Agincourt, Victory of, 69
 Alder, 170, 205
 All-Hallows, Eve of, 28
 All-heal, 208
 Almonds and raisins, 29
Amaradulcis, 34
 Amsterdam on alder piles, 172
 Antidote of Mithridates, 201
 Apollo, Ivy-crowned, 48
Aquilegia vulgaris, 216
Arbutus Unedo, 182
 Archery and the yew, 69
Arctostaphylos Uva Ursi, 235
 Artichoke-gall, 108
Arum maculatum, 96
 Ascham, The *Toxophilus* of, 69
 Ash, 136, 151, 157, 205
 Asparagus, Substitute for, 185
 Aspen, Mistletoe on, 205
 As Pliny saith, 157
 Asthma and Stramonium, 189
As You Like It, Extract from, 113
Athenian Mercury on Pliny, 157
 Athole, Duke of, 122
Atropa Belladonna, 197
 Atropine, 198
 Attraction of the rural life, 3
Attributes of God, Macculloch, 243
 Austen's *Treatise of Fruit Trees*, 14
 Austin, destruction of timber, 138
 Autumn, Keats on the, 26
 Autumn, season of fruition, 2, 3
 Azalea, Mistletoe on, 205
 BACCHUS, The ivy-crowned, 48
 Bacon, Extract from, 9, 50, 68, 89, 107, 155, 175, 229, 231
 Badges, Floral, 237, 239
 Bagpipes, Fuller thereon, 176
 Barberry, 92
 Barnfield's *Affectionate Shepherd*, 21
 Bartolinus on brewing, 121
 Barton on the ivy, 49
 Basyll, To plant, 10
 Beaked fruits, 248

- Bearberry, 234
 Beaumont and Fletcher, Quotation
 from, 175
 Bedeguar on rose, 22
 Bed-stuffing, Leaves as, 112
 Beech, 109, 137
 Beggar's-needle, 247
 Ben Jonson, Extract from, 175
Bianco spino, 7
 Bible plants, 146, 153, 199
 Bilberry, 179, 237
 Birch, 131
 Birchen-rods, 136
 Bird-cherry, 95
 Birdlime, 59, 160, 215
 Bird's-nest, 134, 230
 Bittersweet, 34
 Blackberry, 80
 Black bindweed, 248
 Black bryony, 50
 Black mulberry, 147
 Blackness of ash-buds, 139
 Black nightshade, 37
 Blackthorn, 52
 Blair on the yew, 73
 Bleaberry, 181
 Bloomfield's *Farmer's Boy*, 104
 Bog-berry, 233
 Bog whortleberry, 181
 Bogwort, 233
Bonnet de prêtre, 57
Book of Knowledge, Winstanly's, 190
Botanologia, Extract from, 64
 Brimstone butterfly, 19
 Bristol Cathedral, Tomb in, 204
Britannia's Pastorals, Browne, 217,
 245
 Broom, 220, 239
 Browne, *Pastorals*, 217, 245
 Bryant, *Flora dietetica*, 39
Bryonica dioica, 50
 Bryony, Black, 50
 Bryony, Red-berried, 50, 218
 Buckinghamshire beeches, 110
 Buckthorn, 17
 Buff-top moth, 127
 Bulbous crowfoot, 226
 Bull-berries, 179
 Bulliard on poisonous plants, 96
 Burnham Beeches, 116
 Burns, Quotation from, 11, 54, 223
 Burrs of the goose-grass, 248
 Butcher's broom, 184
 Buttercup, 223
 Butter from beech-nuts, 115
 Buttons of plane-tree, 154
 CÆSAR DE BELLO GALLICO, 180
 Cæsar on the beech-tree, 110
 Cain's apple, 183
 Camberwell beauty butterfly, 135
 Canadian autumn, 152
 Canker-rose, 22
 Cannock Chase, 237
 Carrington on the ivy, 49
 Carrot, 220, 230
Castanea equina, 128
Castanea vesca, 124
 Celandine, Lesser, 224, 225
 Celery-leaved ranunculus, 224, 226
 Chaldean tree-worship, 11
 Charles de Guise, Device of, 49
 Charlock, 221
Chatigna, Dish of, 128
 Chaucer, Extract from, 7, 10, 20, 69,
 78, 104, 147, 151
 Cheeses of mallow, 248
 Children in the Wood, Tragedy of, 82
 Christmas festivities, 49, 67, 155, 203
 Christ-thorn, 156
 Churchyard yews, 71
 Cinquefoil, 130-218
 Clare, Extract from, 222
 Claremont holly, 157
Clematis Vitalba, 13, 78
 Cloud-berry, 84
 Clusius, *History of Rare Plants*, 235
 Coal-supply, 138
 Cockchafer on oak, 109
 Coffee substitutes, 115, 167, 200, 245.

- Colbatch on mistletoe, 212
 Coleridge, Quotation from, 132
 Coles, William, his book, 12, 36, 97, 121, 136
 Columbine, 215
Comedy of Errors, Extract from, 47
Companion to the Orchard, Extract from, 89, 93, 200
 Compensation, Paley on, 210
Compleat Husbandman, Extract from, 205
Confessio Amantis, Extract from, 26
 Conserve of roses, 21
 Corn-crowfoot, 224, 226
 Corn-rose, 221
Cornus sanguinea, 74
Corylus Avellana, 27
 Cow-berry, 181, 237
 Cowley, Quotation from, 103
 Cowper, Extract from, 49, 79, 114, 137
 Cows killed by yew, 63
 Crabbe on poppy, 221
 Crackberry, 179
 Crakeberry, 238
 Crampons of the ivy, 47
 Cranberry, 181, 232
 Crane's-bill, 248
Cratægus Oxyacantha, 13
 Crecy, Victory of, 69
 Creech, *Lucretius*, 63
Cronycles of Froissart, 90
 Cross of Calvary, 10
 Crowberry, 237
 Crowfoot, 225
 Crow-needle, 247
 Cuckoo-pint, 96
Culfrewort, 215
 Culpeper, Extract from, 29, 141, 189, 214
 Cypress, 62
- DAGGER-WOOD, 75
Dartmoor, Carrington, 49
Datura Stramonium, 186
Daucus carota, 231
- Deadly nightshade, 195
 Deepdene beeches, 110
Description of England, Harrison, 105, 138
 Destruction of trees, 107, 137
 Device of Charles de Guise, 49
 Dewberry, 83
 Dewtry, or thorn apple, 186
 Dickens, the Sunbury yew, 73
 Diœcious flowers, 40, 52, 65, 101
 Dioscorides, Writings of, 27, 103
 Dispersion of seeds, 102, 242
 Divination by plants, 25, 27, 241
 Doctrine of signatures, 12, 195
 Dog-berry, 75
 Dog-rose, 22
 Dog-seeking by the stars, 190
 Dogwood, 74
 Domesday Book, 106
 Donkey's-ears, 247
 Dowry of panage rights, 106
 Drayton on Columbine, 217
 Druidic worship, 12, 72, 99, 203, 207
 Dry beaten people, 35
 Dryden, Quotation from, 73, 91, 198
 Drying plants, 22
 Duval, Experiment by Dr., 35
 Dwale, 195
 Dyer, Extract from, 198
- "EDGEHILL" OF JAGO, 136
 Edward III. on shooting, 70
 Edward the Confessor, panage, 107
Eglantier, 20
 Eglantine, 19, 79
 Elder, 174
 Elijah, juniper-tree, 199
 Elm, 157
Empetrum nigrum, 238
 Empty nutshell, Use for, 26
Epine blanche, 7
 Epping Forest hornbeams, 116
Espino blanco, 7
Euonymus Europæus, 56
 Evelyn, Extract from, 28, 109, 148, 183

- Eve of All-Hallows, 28
 Evergreen oak, Acorns of, 106
 "Every man out of his humour," 175
 Exeter Cathedral, Brass in, 218
- FAIRFAX, Extract from, 113
 Famine in England, 104
Farmer's Boy, Quotation from, 104
Fausse platane, 148
 Feast of Tabernacles, 67
 Fen-berry, 232
 Fennel, 126
Ficus sycamorus, 147
 Field-rose, 22
 Fir-cones as dessert, 121
Five Hundred Pointes, Tusser's, 197
 Flag or Iris, 165
 Flail, 157
 Fletcher on the yew, 73
Flora Dietetica of Bryant, 39
Flora Historica of Phillips, 187
Flora Laponica of Linnæus, 236
 Floral badges, 237, 239
 Flower-odours, 143, 177
Floure and the Leafe of Chaucer, 20, 147
 Fodder, Iris as, 167
 Fœtid Iris, 173
 Forest ponies tree-planting, 102
Forest Scenery of Gilpin, 109
Forest trees of Selby, 158
 Formal hedge-clipping, 60, 68, 151
Fragaria vesca, 87
Fraxinus excelsior, 139
Froissart, Extract from, 90, 244
 Fruit, what it is, 223
 Fuller on the bag-pipes, 176
 Fungoid growths, 112, 150
Furiosum, 197
 Furze, 220, 245
- GARDENER'S ivy varieties, 43
 Gatter, 75
 Gay, *Pastorals* of, 82
- Generall Historie of Plantes*, 18, 38, 64, 87
 Geneva, why so called, 200
Genièvre, 201
 Gentianella, 235
 Gerard, Extract from, 18, 21, 31, 38, 44, 53, 55, 64, 65, 77, 87, 114, 129, 145, 147, 159, 172, 177, 194, 217, 229
 Gilpin, Extract from, 62
Ginepro, 201
 Gladdon, 173
Godfrey of Boulogne, Extract from, 113
 Goldilocks, 224
 Goldsmith, Quotation from, 8
Gonopteryx rhamni, 19
 Googe, his book, 10, 59
 Gorse or whin, 245
 Gothic, Plant-carvings in, 13, 152, 204
 Gower, Quotation from, 26
Grammar, Vullamy's, 206
 Great maple, 147, 148
 Grief, Symbol of, 217
 Growing mistletoe, 209
 Guelder-rose, 29, 58
Gui de chène, 208
- HACK or hag-berry, 95
 Hampton Court mistletoe, 214
 Harlington yew, 61
 Harrison, *Description of England*, 105, 138
 Harte on stramonium, 187
 Harte on yew, 62
 Hartlib, Extract from, 138, 205, 240
 Haws, hawthorn-berries, 9, 144
 Hawthorn, 4, 145, 205
 Hazel, 23, 157, 205, 213
 Headache flower, 222
 Heads of the poppy, 219
 Hedge-parsley, 235
 Heg-berry, 95
 Hemlock and sheep, 63
 Henbane, 120, 189

- Henbell, 194
Henry V., Extract from, 174
Herba leonis, 216
Herbal of Dodonæus, 18
 Herbs growing out of stones, 175
 Hercules of the woods, 136
 Herebachius and his book, 59
 Herrick, Extract from, 67, 204
 Hicket, Cure of the, 80
 Hindberry, 87
 Hips as a banqueting dish, 21
Histoire des Plantes Vénémeuses, 96
Historia Mundi of Pliny, 64
History of Rare Plants of Clusius, 235
 Hog-bean, 193
 Holland's translation of Pliny, 64, 132, 207
 Holly, 82, 155, 203
 Holm, 82, 156
 Homer, reference to ash, 137
 Honeysuckle, 76
 Hood, *Ode to Autumn*, 62
 Hooker on cranberry, 233
 Hop, 38, 218
 Horace, Extract from, 184
 Horubeam, 115
 Horned poppy, 248
 Horse as a prefix, 129
 Horse-chestnut, 128, 205
 Horses killed by yew, 63
 Howel Dda, Laws of, 215
Hudibras on dewtry, 186
 Hulver, 82, 156
Humulus Lupulus, 41
 Hurts or bilberries, 179
 Husbandman's tree, 137
 Hyacinth fruits, 43
Hyoscyamus niger, 193

Ilex aquifolium, 156
 Ilicine, 159
 Imbrication of scales, 120
Impatiens fulva, 168
Impatiens noli-me-tangere, 169

 Importation of timber, 138
 Ina, Laws of, 107
 Indigenous—What is it? 215
 Inebriated butterflies, 135
 Insects on oak, 109
Iris fetidissima, 173
Iris pseudacorus, 164
 Iris, The yellow, 164
 Ivy, 43

 JACK-HOP, 40
 Jago, "Edgehill," of, 136
 Joseph and Mary, or lungwort, 247
 Judas and the elder, 175
 Judgment of Paris, 112
June's Husbandrie, Extract from, 41
 Juniper, 198
Juvenilla, Quotation from, 49

 KEATS, Quotation from, 26, 132
 Keys of the ash, 140
King Lear, Extract from, 8
King Richard II., Extract from, 64
 Kirk White, Quotation from, 11
 Knee-holm, 185
Knight's Tale, Extract from, 78
 Knot-berry or Cloud-berry, 84

 LACINIATE elder, 176
 Lady of the Woods, 132
 Lady's comb, 247
L'Allegro, Quotation from, 11
 Lament of Mary Queen of Scots, 54
 Larch, 122
Larix europæa, 122
 Lauder on beech, 109
 Laws of King Ina, 107
 Leaves as bed-stuffing, 112
 Lesser celandine, 224
 Lethale, 197
 Lightning, Protection from, 9
Lignum Sanctæ Crucis, 212
Ligustum vulgare, 16
 Lilly, astrologer, 190
 Lime, Mistletoe ou, 205, 214

- Lincolnshire bag-pipes, 176
Lingua passerina, 140
 Linnæus, *Flora Lapponica*, 236
 Lithy-tree, 60
 Lobel, botanist and physician, 40
 Long bow, Use of the, 69
Lonicera periclymenum, 78
Loranthus Europæus, 206
 Love-charms, 28
 Lowe's *Yew-trees of Great Britain*, 72
Lucretius, Extract from, 63
 Lungwort, 247
Lupus salictarius, 42
 Lyte's translation of *Dodonæus*, 18
- MACCULLOCH, *Attributes of God*, 243
 Maclean, badge of clan, 237
 Maggot in nut, 26, 27
 Make-peace, 136
 Malic acid, 93
 Mandrake, 187
Maniacum, 197
 Mant on plane, 153
 Maple, 151, 163, 205
 Marsh-berry, 233
 Marshwort, 232
 Maser-tree, 152
 Mast of beech, 114
 Mast of oak, 104
 Matthiolus, writer, 27, 193
 Manndeville, Extract from, 10
 May or hawthorn, 7
 Maypole, 8
 Meadow clover, 76
 Meadow crowfoot, 226
 Meal-berry, 235
 Mealy-bush, 60
 Medlar, 145, 205
Merry Wives of Windsor, Extract from, 180
 Mexican Tree-Worship, 11
Midsummer Night's Dream, Extract from, 79
 Milton, Quotation from, 11, 79
- Mistletoe, 47, 160, 202
 Mithridates, Antidote of, 201
 Moir on the yew, 73
 Monk's-hood, 187
 Monœcious flowers, 102, 113, 115, 119, 124, 127, 134
 Moor-berry, 233
 Moore, Quotation from, 11
Morbus terrestre, 87
 Morocco leather, 18
Morus nigra, 147
 Moss-berry, 233
 Mountain ash, 142
 Mountain bramble, 84
 Mulberries from chestnut-trees, 126
 Murray, Lord, his patent, 131
Myrtendorn, 185
Mystery of Husbandry, Extract from, 7, 177
- Natural History of Bacon*, 9
Natural Theology of Pliny, 210
 Needles of Pine, 119
 Nineveh, Sculptured slabs of, 11
 Norden's *Surveyor's Dialogue*, 137
 Numa, Books of, 133
 Nut-weevil, 26
- OAK apples and galls, 107
 Oak, The monarch, 99, 137, 163, 205
Ode to Autumn, Hood, 62
 Offa and panage, 107
 Oil-bearing fruits, 75, 114
 Old-fashioned hedges, 81
 Old-Man's-Beard, 14
Oliver Twist, Extract from, 73
 Omens from plants, 25, 27, 67
 Opium, Home-grown, 223
 Ople-tree, 31
 Orfila on the nightshade, 38
Othello, Quotation from, 222
 Our Ladys Comb, 247
 Ovid on the Judgment of Paris, 112
- PALACE OF DEATH, Extract from, 187

- Paley's *Natural Theology*, 210
 Palm Sunday and the yew, 67
 Panage rights, 106, 107
Papaver Rhæas, 222
 Papilionaceous plants, 241
Paradise of Plants, Coles, 136
 Parasitic plants, 47, 204
 Paris, Judgment of, 112
 Parkinson, Extract from, 60, 147, 183
 Parrot, to kill, 63
 Parsnip, 227
Pastinaca sativa, 228
Pastorals of Gay, 82, 198
 Peacock butterfly, 135
 Pear, Mistletoe on, 205
Pecten Veneris, 247
 Pedunculate oak, 100
 Pepper, Substitute for, 200
 Peter-keys, 140
Petit Houx, 185
 Phillip, *Flora Historica*, 187
Pinus sylvestris, 116
 Piprage or piperidge, 94
 Plane, 153, 205
Platanus Orientalis, 153
 Pliny, Reference to, 42, 64, 68, 87,
 123, 141, 156, 184, 207
 Poets on the yew, 66, 72
 Poitiers, Victory of, 69
Polenta, A dish of, 128
 Pop-gun making, 174
 Poplar, Mistletoe on, 205
 Poppy, 219, 221
Popular Names of British Plants, 222
Potentilla reptans, 130
 Prim or primprint, 16
 Primrose capsules, 43
 Prior, Extract from, 62, 222
 Privet, 15
 Proverbs on the ivy, 50
Prunus communis, 53
Prunus Padus, 95
 Purple Emperor butterfly, 109
Pyrus aucuparia, 142
Pyrus torminalis, 145
 QUARANTINE flag, 165
 Queen Mab's Chariot, 26
Quercus pedunculata, 100
Quercus robur, 100
 RABBITS and carrot, 231
 Raffaele's "Transfiguration," 123
Ranunculus, Species of, 223, 224
 Raspberry, 85
 Raspis, 87
 Red Admiral butterfly, 135
 Red-berried Bryony, 50, 52
 Red-underwing moth, 109
Rhamnus catharticus, 18
 Roasting chestnuts, 128
 Roebuck-berry, 85
 Roman introduction of chestnut, 124
Romant of the Rose, Extract from, 151
Rosa arvensis, 22
Rosa canina, 22
Rosa rubiginosa, 22
 Rose-elder, 30
 Rose of Jericho, 243
 Rowan, 142, 145, 205
Royal George, Timbers of the, 117
Rubus chamæmorus, 84
Rubus cæsius, 84
Rubus fruticosus, 84
Rubus idæus, 85
Rubus saxatilis, 85
Ruscus aculeatus, 184
 Russian leather, 135
 SACRED groves, 11
 Saint Jerome and Zacchæus, 146
 Saint Leonard's Forest, 110
 Salt-fish and parsnips, 229
 Salvator Rosa's pictures, 125
 Samara form of fruit, 150, 153
Sambucus nigra, 175
 Sap green, The pigment, 18
 Sap of sycamore, 149
 Sap of the birch, 135
Sarothamnus scoparius, 244
 Saturnalia, The, 67, 155

- Saturn, Planet of, 189
 Savernake beeches, 109, 111
 Saxon Chronicle, The, 104
 Scarlet maple, 152
 Scarlet poppy, 220
 Scotch pine or fir, 116
 Scott, Quotation from, 62, 203
 Seeds, Dispersion of, 102, 242
 Selby on *Forest Trees*, 158
 Serpent and ash-tree, 141
 Service, 145, 205
 Sessile-fruited oak, 100
 Shakespeare, Quotation from, 8, 26, 47, 64, 79, 113, 136, 174, 180, 198, 209, 222
 Shenstone, Quotation from, 79, 136
 Shepherding and sentiment, 113
Shepherd's Calendar of Spenser, 8
 Shepherd's needle, 246
 Shrew-ash, 141
 Silchester, Excavations at, 55
 Skeletonising of leaves, 192
 Sleep produced by hops, 42
 "Slip-shucks," 25
 Sloe or blackthorn, 54
 Snowball tree, 31
Solanum Dulcamara, 32
Solanum nigrum, 37
 Somerville on furze, 246
 Sorb-tree, 146
 Spangles on oak, 108
 Spanish chestnut, 124
 Spearwort, 224, 226
 Spellings of the word "yew," 68
 Spenser, Quotation from, 8, 20, 69, 137, 175, 217
Spindelbaum, 57
 Spindle-tree, 56
 Spring, Thomson, 8, 177
 Squirrel's hoard, 25, 102, 127
 Stadthius, Amsterdam, 117
 Stanley on the yew, 73
 Starch-making, 97, 131
 Stellar influences, 189, 214
 Stone-bramble, 85
 Storers and standils, 137
 Stramonium, 187
 Strawberry, 87, 218
 Strawberry-tree, 182
 Sunbury, Yew at, 73
Surveyor's Dialogue of Norden, 137
 Sussex smelting furnaces, 138
 Swallow-tail butterfly, 232
 Sweet Briar, 19
 Sweet Sedge, 164
 Swine's flesh as food, 104
 Sycamore, 146, 170, 205
 "Syder" as a drink, 177
Sylva Sylvarum, Extract from, 51, 89, 107, 155, 175, 229, 231
 Symbolism, 217
Symphoniaca, 194
Syrupus e Coralliis compositus, 94
Syrupus pilosella, 91
Systema Agriculturæ of Worledge, 87, 110

Taming of the Shrew, Extract from, 24
Tamus communis, 50
Task, Cowper's, 114
 Tavern sign, The ivy as, 50
Taxus baccata, 68
 Tea substitute, 55
 Teazel-heads, 248
Tempest, Extract from, 47, 239
 Tennyson, his nature-study, 139
Theatrum Botanicum, Extract from, 60, 183
Theocritus, Extract from, 246
 Theophrastus, Views of, 10, 205
 Thomson, Extract from, 79, 177
 Thorn-apple, 186
 Tibur, The building of, 156
 Timbers of the *Royal George*, 117
 Title-page, *Adam in Eden*, 36
 Toads and stones, 175
 Touch-me-not, 168, 243
Toxophilus of Ascham, 69
 Tragedy of Children in the Wood, 82

- Tragus, his book, 148
 Trailing dog-rose, 22
 "Transfiguration," Raffaella, 123
 Traveller's Joy, 13
Treatise of Fruit Trees, Austen, 14
 Tree of life, 12
 Tree worship, 11
 Trunk of beech, 112
 Trunk of yew, 61
 Tunbridge ware, 158
 Turner's *Botanologia*, 64
 Turner's *Herbal*, 87, 153, 184
 Tusser, Extract from, 41, 46, 81, 89, 105, 138, 197, 211, 240

 UMBEL-BEARING plants, 227
 Unchanging character of fir-woods, 119
Uredo, the strawberry-tree, 184
 Unity in variety, 167

Vaccinium, Genus of, 179, 181, 232, 233
 Venice built on piles, 123, 174
 Venus' comb, 247
 Venus of the Woods, 136
Viburnum Opulus, 31
 "Village Schoolmistress" of Shenstone, 136
 Virgil, Reference from, 24, 31, 61, 137
 Virginian creeper, 44
 Virgin Mary, Dedication to, 247
 Virgin's bower, 14
Viscum album, 202
Viscum cruciatum, 211
Vitis septentrionalium, 40
 Vitruvius, Reference to, 123
 Vullamy on mistletoe, 206

 WALL-PAPER designs, Blocks for, 158
 Walnut, Mistletoe on, 205
 War, Effects of, 234

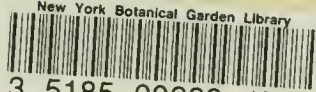
Wasser Schwerlilie, 166
 Water buttercup, 226
 Wayfaring-tree, 58
 Westminster mistletoe, 209
 Wey, American plant on, 168
 Whin or gorse, 245
 White bryony, 52
 Whitethorn, 54
 White vine, 52
 Whortleberry, 179
 Wiborg, experiments with yew, 63
 Wiclif, Extract from, 90
 Wild garden, Our, 218
 Willow-wolf, 42
 Wine as an irrigator, 155
 Wines of our ancestors, 177, 229
 Winged fruits, 135
 Winstanly, *Book of Knowledge*, 190
 Witchcraft antidote, 144
 Witchen-tree, 144
 Witches' Cauldron, *Macbeth*, 64
 Witches' knots on birch, 134
 Withers on the ivy, 49
 Woodbine or wood bind, 78
 Wood crowfoot, 226
 Wood of the Holy Cross, 212
 Wood-leopard moth, 109
 Woodville, Experiment by Dr., 35
 Woody nightshade, 32, 218
 Wordsworth, Quotation from, 66, 118, 132
 Worlidge, Extract from, 7, 87, 177
 Worthing, plant-finds, 176, 189

 YDRASIL, The mythologic, 142
 Yellow iris, 164, 218
 Yew, 60
Yew-trees of Great Britain, Lowe's, 72
 Yoke-elm, 115

 ZACCHÆUS, Tree of, 146

PRINTED BY
HAZELL, WATSON, AND VINEY, LD.
LONDON AND AYLESEURY.

New York Botanical Garden Library



3 5185 00222 4515

