

ENGLISH WILD FLOWERS



J. T. BURGESS.



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1. Crow Garlic. 2. Bitter Vetch. 3. Lotus.
4. Scarlet Horned Poppy. 5. House-leek.
6. Vetchling. 7. Bird's-foot.

ENGLISH WILD FLOWERS

TO BE FOUND BY

THE WAYSIDE, FIELDS, HEDGEROWS, RIVERS, MOOR-
LANDS, MEADOWS, MOUNTAINS, AND SEA-SHORE.

BY

J. TOM BURGESS, F.S.A.,

Author of "Angling," etc., etc., etc.

"Who loves not
These fairy people of the leafy woods?
Children of storm and sun! climbers of
The mountain-side! or loiterers on the bank
Of the young rivulet!"

With Numerous Illustrations and Coloured Plates.



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PREFACE.



I HAVE tried to make this little volume worthy of being thought the indispensable companion of those who care to make the acquaintance of the flowers which blossom by the wayside, make gay our fields, haunt the brooks and streams, and stud alike with beauty the moorland and the mountain.

Included are a few pages descriptive of the different forms of roots, leaves, flowers, and flower-stems, together with a brief summary of the principles of classification adopted by botanists, in order that those who wish to collect specimens of the wild flowers for a herbarium may have some guide for their classification and arrangement. They will be assisted in this by the Index, where,

in addition to the common and scientific names of the flowers, the natural order they belong to is added, together with the season and the locality in which they bloom. The Table of Contents gives the names of the flowers in the order they become features in the landscape in their appropriate seasons.

J. T. B.





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ENGLISH WILD FLOWERS.



THE STORY OF THE WILD FLOWERS.

LET us listen to the silent voices of the flowers of the wayside, and interpret the mission of the "wildings of Nature" which dwell in the woodland glades, spangle the dewy meads, adorn the moorland with perennial beauty, and smile with gladness by the streamlets and the rivers. Lessons of deep significance may be learned from these "stars of earth."

"From the first bud, whose verdant head
The winter's lingering tempest braves,
To those who, 'mid the foliage dead,
Shrink latest to their annual graves,
Are all for use—for health or pleasure given;
All speak in various ways the bounteous hand of Heaven."

Who has not read the charming little story of Picciola?—how the little flower sent its tiny and tender

leaflets to kiss the sun between the harsh prison stones at Fenestrella, to carry a message of truth, of holiness, and of beauty to a maddened and despairing soul; how it spoke, in "language quaint and olden," of mercy and of peace. The clouds of infidelity rolled away before the little messenger of an all-seeing Providence,—the lesson of the prison flower brought conviction to the heart of one who had denied his Maker. The flowers of the field are the very emblems of trusting and confiding love. You may crush them, and they only reproach you with a sweeter odour. They have ever a smile to welcome you. They speak of gladness to the pure heart, and of purity and trusting faith to the sorrowing and sin-stricken soul. They smilingly and equally greet the peasant and the peer; they know no distinctions of persons. They bloom alike for the murky court as for the parterre of unlimited luxury. To every true heart they become hallowed messengers from heaven.

How many a town-dweller has blessed the flowers that blossom so freely in God's garden when some holiday has called him to the moor! How many a poor and weary mechanic has wandered to the green hills, to breathe the pure air and renew his communion with

the gay flowers which gladdened his youth, and which even now kindle holy sympathies in his breast, and teach him that he has a spirit that can soar nearer to heaven, and purify the dross of his life! The field flowers seem to bloom for him. They are free to him. They speak to him, perhaps, of a sunny childhood and of hopeful manhood. They are entwined round our lives. Their varied hues, forms, and loveliness speak to the heart. We would cherish them, and learn from each grassy stem the story of its life, and from each sunny flower gather the honey of its history. Each drooping bud and each sturdy tree is full of interest. They breathe, live, and speak. Let them not speak in vain. Let us be their humble interpreters as we journey by the quiet hedgerows, over the wild moor, or through the silent glades of the chequered wood, and by the mossy bank of brook and river. It will be found that there is not a plant but will reveal some peculiar beauty, some exquisite adaptation, to reward the attentive observer. We are told,

“ ’Tis wise to let the touch of Nature thrill
Through the full heart ; ’t is wise to take your fill
Of all she brings, and gently to give way
To what within your soul she seems to say.”

As we pass along these pleasant paths we shall find a vast store of knowledge to which the old wild flowers of Britain are the key—the hidden spring which discloses much that would otherwise lie hidden. We shall find each locality has its special favourites. As we walk along the shady lane we shall find the character and varieties of the flowers sometimes suddenly change. Fresh species show themselves, old ones disappear, as the soil becomes sandy, rocky, or clayey, as it become dry or marshy. The mere cutting of a trench, or the levelling of a ditch, will bring to light an entirely different flora. I once saw thousands of the most beautiful foxgloves (*digitalis purpurea*) growing by the side of a cutting in a marsh, where no foxgloves had grown in the memory of man. The common coltsfoot starts up in railway cuttings, or on coal-pit banks, side by side with two or three varieties of the *equisetum*, or mare's-tail grass, known, but not welcomed, through the Midlands as "joint grass." It would appear as if the germs of life had lain dormant for ages, waiting the genial influence of sun and shower to bring them into life. Every geological strata, each change of landscape, has its special flowers; and some of the most beautiful and lovely linger round

the ruins of our old abbeys, where they were once loved and cultured by the old monks, who were not only the first "cullers of simples," but were our first gardeners and admirers of floral beauty. The sheltered dingle and the bleak hill-side are equally frequented by special flowers, which are found nowhere else. On the other hand, some plants, like the common groundsel and plantain, are nearly universal, and follow man in all his wanderings. I would clear the pathway which leads to the intimate knowledge of these wild children of Nature from thorny technicalities, and as the student's guide and friend point out some of their hidden beauties. As we journey along, the way will be found increasingly interesting. We shall unveil many a mystery, and bring to light not only much of the old life of the people who named and loved these flowers to whom their uses were indeed "household words," but we shall find the plant itself, from the moment it thrusts forth its tender rootlet through the seed-shell into the earth, until it casts its matured seed forth again, to go wherever "the wind listeth," full of wonder and delight.

"Such delight I found
To note in shrub and tree, in stone and flower,

That intermixture of delicious hues
Along so vast a surface, all at once,
In one impression, by connecting force
Of their own beauty imaged in the heart."

WORDSWORTH.

Nor are the uses of these plants confined to æsthetic teaching; they have a material value. The humblest amongst them plays its part not only in the economy of the universe, but in some degree ministers more or less to the comforts or necessities of human life. The humble lichen is closer allied to the imperial purple than we dream of. In the infant days of commerce it was eagerly sought after, for it was one of the ingredients used in producing the famous purple dye of Tyre and Sidon. Ptolemy tells us of voyages to the Irish coast to procure these humble wild plants, and it is curious to note that at present the coast of Clare is remarkable not only for its lichens, but for the fact that they grow on a species of alum shale, which is likely to add to their value for dyeing purposes. The Lichen (*Rocella*) is still gathered, as it was in the days of Pliny, for the purpose of dyeing woollen cloths red or purple. The *R. tinctoria* afforded the first dye for blue British broadcloths, once so universally used; and to this humble plant was due the

purple tinge when viewed against the light. *R. fuciformis* is, however, but little inferior to its better-known brother. These form the orchil or archil dye of commerce. The Crab's-eye Lichen (*Lecanora pallescens*), common in the north of England, and conspicuous by its dirty white patches on rocky surfaces, is yet used for the same purpose in France. Another, but a brownish-hued branch of the family, *L. tartarea*, is the Cudbear of commerce, and is a considerable item of rural industry in Scotland. Many of the mosses are gathered for economic purposes. The fine Club Moss is used as a mordant in rural dyeing, whilst the common club moss is of value to the pyrotechnist.

The seaweed family, the castaways of every storm, are not only of use as manure, but they enter largely into the economy of human life. Before chemistry had discovered an economic method of making soda from salt, the burning of sea-wrack for *kelp* was a source of considerable wealth to the inhabitants of the north of Scotland. Carrageen Moss (*Chondrus crispus*) is gathered in large quantities, and bleached, either for use in the sick-room, or to be boiled as food for cattle. Dulse, or, as the Irish call it, *dillesk* (*Rhodymenia*

palmata), is eaten in many parts of Ireland and Scotland, and its purple ribbons are hawked about the streets. The *laver* is a preparation of the common *Porphyra*, and is sold in Ireland under the name of *slowcaun*; but its taste and appearance is so peculiar as to be an object of disgust to many, though considered a great delicacy by others. The green laver (*Ulva latissima*) is not considered equal to the purple variety.

We find, too, along the sea-shore, as in our hedge-rows, many an inmate of our gardens and well-known vegetable. The Lilyworts furnish us the oldest and most delicate of our culinary vegetables, *Asparagus officinalis*, which grows plentifully in several places near the sea. The isle of Portland, and Kynance Cove, near the Lizard in Cornwall, are noted localities. This vegetable was known to the Romans, and is mentioned by Pliny. Another variety of lilywort is sold at Bath, under the name of Prussian asparagus. This plant (*Ornithogalum pyrenaicum*) grows plentifully in the neighbourhood of the city of Aquæ Solis, but it is doubtful if it is indigenous. The same doubt hangs over Spinach (*Spinacia oleracea*), though it has been cultivated for more than three hundred years in this

country. I found a variety growing wild on an island which is called Spinach Island, between the Cove of Stradbally and Dungarvan. Celery (*Apium graveolens*) is a universally recognized native of our salt marshes, where its strong smell, stringy fibres, and suspicious reputation scarcely leads the observer to suspect the white and delicate table vegetable so familiar to us. The Sea-Kale (*Crambe maritima*), the white flowers of which have so strong a smell of honey, grows wild among the sand and shingle of our coasts. This vegetable was known to the Romans, and was by them salted down for long voyages. The Wild Cabbage (*Brassica oleracea*) grows near the sea-side, but the Wild Turnip (*Brassica campestris*) is found inland. The Sea-Beet (*Beta maritima*) is the parent of more than one variety of garden beet and of mangold wurtzel. Its leaves are often eaten as spinach. Along our hedgerows we find the Wild Parsnip (*Pastinaca sativa*), and the Wild Carrot (*Daucus carota*) is found indigenous on light sandy soils. There are many plants which in their wild state furnish vegetables. The tops of Nettles are frequently used in spring-time in the country. In many parts of Lancashire they are sold for making nettle beer and for mixing with porridge.

In Ireland they are frequently used as greens, and so is the *Pushoch dwee*, as the *Sinapis arvensis* (Common Charlock) is called in Munster. The charlock is allied to the family of Mustard Plants (*S. nigra* and *S. alba*), the seeds of which when crushed yield the well-known condiment. Another British plant is the Horse Radish (*Cochlearia armoracia*), which, though acrid, is not poisonous; the roots of *Aconitum napellus* have, however, been fatally mistaken for it. The Water-cress (*Nasturtium officinale*) is also a native of Britain; but whether we can claim the Parsley as indigenous is open to discussion, though every boy knows that it grows wild in many parts of this old realm of ours.

We yet find in some remote country districts the relics of a bygone economy in the use of many plants for food or medicine. Boys yet hunt for the delicious Pig Nut (*Bunium flexuosum*), the luxury of Caliban. Diet drinks are made of the "sunflower of spring," as Ebenezer Elliot calls the well-known Dandelion (*Taraxacum dens leonis*), the early leaves of which, slightly blanched, are a not-to-be-despised addition to the early spring salad, neither is the Salad Burnet (*Poterium sanguisorba*), the flavour of which is not

unlike cucumber. The tubers of "lords and ladies" of the hedges (*Arum masculatum*) furnish a preparation similar to arrowroot. The tubers of the *Orchis mascula* and other ophreous orchids furnish a fecula known as salep. The once common Rampion is the root of the *Campanula rapunculus*. The common Rock Samphire affords one of the best of domestic pickles, and is the subject of a very pretty story told by the late Professor Burnet, of the use even of a smattering of botanical knowledge, if it only extends to the habits of the plants. In November, 1821, a vessel was wrecked near Beachy Head, and the crew washed overboard. Four of the sailors managed to scramble on to some half-sunken rocks, and there await the death with which a rising tide and the raging sea threatened them. Nought could be seen in the darkness of the night. The encroaching waves drew nearer and nearer, until hope was nearly gone, when one of the "despairing creatures, to hold himself more firmly to the rock, grasped a weed, which, even wet as it was, he well knew, as the lightning's sudden flash afforded a momentary glare, was not a *fucus*, but a root of samphire, a plant which never grows submerged." This was more than "an olive-branch of peace, a mes-

senger of mercy: they knew that He who alone can calm the raging of the seas, at whose voice alone the winds and the waves are still, had placed His landmark, had planted His standard, there, and by this sign they were assured that He had said to the wild waste or waters, 'Hither shalt thou come, and no farther!'" This scrap of knowledge gave them comfort to wait until the dawn came, when they were seen from the cliffs and rescued.

The teachings of the wild flowers extend further than this. They carry us into the homes of our ancestors. The homely Rush takes us back to the annual rush-bearings, which are still kept up in the north. The fragrant Mint and Pennyroyal furnished, with rose-leaves, elder-leaves, and even violets, the cosmetics of old English ladies, who turned the flowers of the Coltsfoot and Cowslip into wine, and had great faith in the virtues of Ground Ivy, Camomile, and Wormwood. Agrimony, Yarrow, Betony, and Goosegrass yet hold a place in the popular medicines of the poor.

Numerous plants tell us of bygone festivities, of well-dressing, decking of town crosses, of weddings, and of funerals. There was a special floral calendar,

about which I shall have something to say by-and-bye ; for not only had they special flowers for Easter, Whitsuntide, and Christmas, but for nearly every saint's day as well. There was a reverent love mixed up with these customs. We can trace it in the somewhat fanciful names given to plants according to their supposed peculiarities. Thus the Scabious (*Scabiosa succisa*) was called "Devil's-bit," from its peculiar root, which was said to have been bitten by the Evil One. The lesser Celandine (*Ficaria ranunculoides*), one of the most modest and beautiful of the buttercup tribe, was named "Pilewort," from its tuberous roots. Even now it is used as a remedy for a very painful disease. In Cochin China it is esteemed as a medicine, and in Sweden and Norway its leaves are used as a table vegetable. The Foxglove, or "fairy bells," is another instance of a quaint fancy. The Pennywort (*Cotyledon umbilicus*) and a thousand others might be given as examples of that strange mixture of quaint conceit, poetic fancy, and close observation which distinguished our forefathers.

Some of the names speak of bygone dainties. How expressive is the term "Poor man's pepper," and "Sauce alone!" Salad Burnet, Corn Salad, Hedge

Mustard, and Winter Cress all indicate the natural yearning for "green stuff" necessary to counteract a long course of salt meat, ere gardeners were common in the land. Many of the names tell of real or imagined uses of the plants. "Fullers' Teazel," "Dyer's Weed," "Glasswort," are easily understood; others were associated with particular seasons, as "Snow-drop," "St. John's Wort," "Maythorn," and "Spring Cresses." Many names were obviously suggested by the structure and their likeness to some well-known part of the animal kingdom, as "Hare's-ear," "Mousetail," "Cowslip," "Crowfoot." The "Woodbine" takes us to the climbing plant of our rural lanes; "Lily of the Valley," "Meadow Rue," "Brooklime," "Shoreweed," all speak of the habit or home of the plant. Others bespeak the presence of a religious feeling, and many names are associated with "Our Lady" and Mary, the Apostles and the Saints. Others betoken the presence or remembrance of old superstitions, and in "Enchanter's Nightshade" there may be a hidden secret locked, while the poetic feeling peeps out in "Foxglove," or "Folk's-glove," "Thrift," "Speedwell," and "Forget-me-not."

There is a world of historic knowledge connected

with these humble plants. The oak and the mistletoe carry us back to the old Druid ages ; indeed, the very word "Druid" is derived from the Greek word signifying "oak." The Vervain and the common St. John's Wort, before mentioned, were either connected with druidical rites, or had a halo of superstition thrown round them, the meaning of which has lingered until the present time in distant country nooks. Vervain, or Kervain, is still believed to be efficacious in cases of defective vision and of diseases of the bladder. But to make it effective as a "herb of grace" and of "good luck," to be worn about the body, it must, says a correspondent of "Notes and Queries," be gathered with certain formalities, first crossed with the hand, and then blessed thus :

"Hallowed be though, kervein,
 As though growest on the ground,
 For in the mount of Calvary
 There though was first found.
 Though healedst our Saviour Jesus Christ,
 And stancedest His bleeding wound ;
 In the name of Father, Son, and Holy Ghost,
 I take thee from the ground."

The common Dog Rose (*Rosa canina*) was noted by Julius Cæsar in his account of the invasion of Britain, and it is yet the prettiest object of our hedgerows.

They formed the distinctive military badge of the Houses of Lancaster and York; but long ere this a more humble plant, the common Broom—(the old *Planta genista*) had given a name to a famous race of English kings, the Plantagenets. The various species of Heath were used by Highland clans as badges in war. The story of the sweet Forget-me-not is told by Miss Strickland in her “Lives of the Queens of England.” She says that “the royal adventurer, Henry of Lancaster—the banished and aspiring Lancaster—appears to have been the person who gave to the *Myosotis arvensis*, or forget-me-not, its emblematic and poetical meaning, by wearing it, at the period of his exile, on his collar of S.S., with the initial letter of his *mot* or watchword, *Souveigne vous de moy*; thus rendering it the symbol of remembrance, and, like the subsequent fatal roses of York and Lancaster and Stuart, the lily of Bourbon, and the violet of Napoleon, an historical flower. Few of those who at parting exchange this touching appeal to memory are aware of the fact that it was first used as such by a royal Plantagenet prince, who was, perhaps, indebted to the agency of this mystic blossom for the crown of England. It was with his hostess, at that time wife of the Duke of Bretagne,

that Henry exchanged this token of goodwill and remembrance." The Hawthorn, the "sweet-smelling May," calls back memories of the Tudors, who assumed it as their insignia, in remembrance of the crown of Richard III. being found in a fruited hawthorn-bush after the battle of Bosworth. The very spot is yet pointed out by tradition on Crown Hill, near Stoke Golding. There is a touching legend of the hawthorn in connection with the unhappy Mary Queen of Scots, for it was her favourite tree during life, and a thorn named "Queen Mary's Thorn" remained until 1836 at Duddingstone, when it was overthrown by a violent storm. The whole volume of Nature is full of similar reminiscences. The Rue reminds us of Ophelia; the Hemlock of Socrates; while the poets have woven a garland of them all. I cannot here unfold all these stores of learning: I can only indicate by a few jewels the store of wealth which lies in this treasury of knowledge for the earnest seeker. I can only point out the additional interest it gives to the walk—the new world it opens up—the pleasant thoughts and joyous associations, which lend an additional charm to the landscape, and displays new beauties to the awakened soul; for

“Father,
 My heart is awed within me, when I think
 Of the great miracle which still goes on
 In silence round me—the perpetual work
 Of Thy creation, finished, yet renewed
 For ever. Written on Thy work I read
 The lessons of Thy own eternity.
 Lo ! all grow old and die ; but see, again,
 How on the faltering footsteps of decay
 Youth presses—ever gay and beautiful youth—
 In all its beautiful forms.

* * * * *

Oh, there is not lost
 One of earth's charms ; upon her bosom yet,
 After the flight of untold centuries,
 The freshness of her far beginning lies,
 And yet shall live.”

BRYANT.

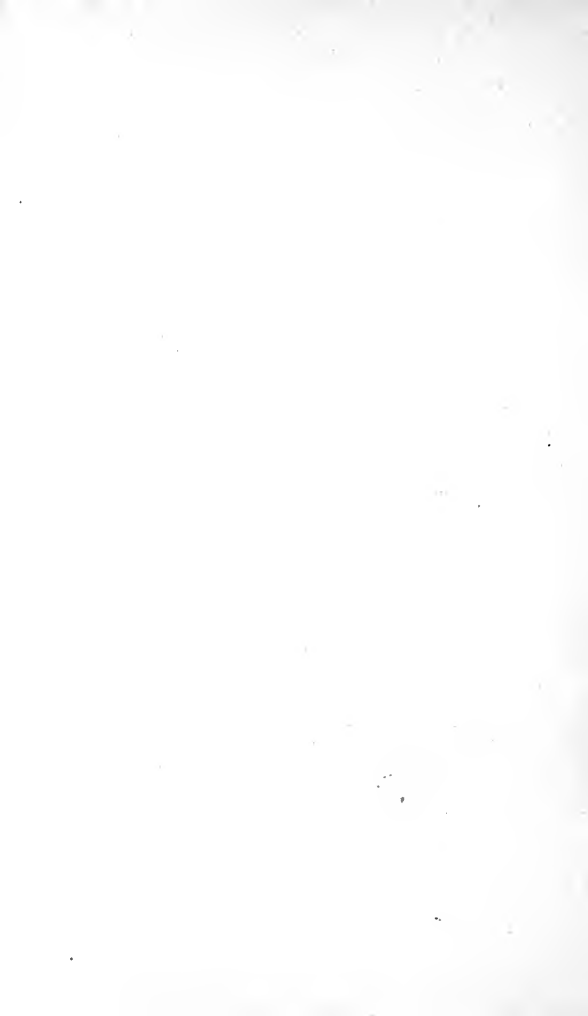


HOW THE WILD FLOWERS GROW.

THE old prophets took the "flowers of the field" as the most natural emblems of the life and immortality of man, and we repeat the words without knowing how true the comparison and how close the analogy between the life of a plant and the life of a man. Under the genial influence of spring weather, the little seed bursts the sheath in which it has been bound and preserved during the long winter months, and sends downwards into the earth a tiny fibre, and upwards into light and air a young stem, to which are attached the first pair of leaves. We see these leaves bespangling the bare loam and dotting the mould on a warm spring day suddenly and without warning. These are the nursing leaves of the young embryo. They are thick and fleshy, and are formed of the bulk of the seed. These *cotyledons*, as the botanists call them, perform a duty peculiar to themselves. They are full of starchy matter, which enables them to feed the young plant until the true aërial leaves appear. These nursing leaves are not only different in texture

and in form from the later leaves, but they differ in various species from one another in a less degree than the true leaves. Through these leaves the little stem bears aloft the plant of the future; and by the aid of the sugary compound called dextrine, formed by the seed-leaves and the moisture of the earth and atmosphere, the rootlets and the plant grow and flourish, until the exhausted seed-leaves wither away, and the plant assumes an independent existence. Prior to this it had a simple parasitical existence. It now changes its organism with a change of diet, and the stage of infancy is past.

From the earth and atmosphere alone the plant now derives its store of food. The rootlet sends forth its tiny white fibres in search of food. The stem ascends into the air, binding as it goes its fibres together in separate cylindrical beds by the bark or skin. At regular and definite points the leaves appear, and through their surface the fibres of the wood permeate as veins, veinlets, and capillaries, connected directly with the fibres of the stem and roots, and thus forming a direct channel of communication from one extremity of the plant to the other. Like the blood in the human veins, the sap is carried through the whole





1. Fly Orchis. 2. Foxglove. 3. Salad Burnet. 4. Scabious.
5. Corn Marigold. 6. Bluebottle. 7. Bittersweet.
8. Mallow.

structure of the plant, to be aërated and spread out by the leaves, which act as the lungs of the plant, throwing out refuse or absorbing new matter from the atmosphere. The process of evaporation and absorption is aided by the peculiar organization of the epidermis or skin of the leaves. The porous openings in the skin are called *stomata*, and are really beautiful self-acting valves. If we take the leaf of a lily, where these stomata are large, and carefully remove the skin and the chlorophyll or leaf-green, and call in the aid of a microscope, we shall see that these valves consist of two oval cells, as a rule, with a slit in the middle, and these open directly into the hollow chambers or air-cavities in the interior of the leaf. By these the necessary gases are absorbed from the atmosphere, and the surplus moisture of the sap evaporated. The growth of the plant is now rapid. New leaves and new rootlets are produced in rapid succession. At first the growth of the plant is accelerated, and then retarded. The "wave of growth," if I may use the term, begins to recede about the middle of the plant. Afterwards the force and energy of the plant is devoted to a new function—that of reproduction. The leaves are crowded into rosettes, or clusters, of dif-

ferent forms and colours, which we call by the name of flowers. The vegetative force of the plant is now at zero—the vegetative stage of youth passed away—for ever in an annual plant, for a season in perennial plants, when the process is again renewed.

In the meantime the plant enters on the period of puberty. The leaves crowd together—their structure changes. The flower appears, which is only the leaves in another shape; and these shapes vary. In some the various parts are well defined; in others they are all blended together, as if Nature laughed in scorn at the attempts man has made to confine her within the fetters of an artificial nomenclature, or to define her handiwork. I will, for the sake of those who have not trodden these paths before, use the convenient distinction of parts to be found in highly organized flowers. These are five in number, but one is only a continuation of the other, so that there are but four sets of metamorphosed leaves—the calyx, the corolla, the stamens, and the pistil. The receptacle is merely the base on which these four parts are situated. The true botanical flower is the pistil and stamens—the popular coloured flower the calyx and corolla.

Let us consider these parts separately. The outer-

most cluster of the floral leaves, and which are generally of a green colour, is called the *calyx*—literally the flower-cup. It is sometimes divided into individual leaves, as the buttercup, daisy, and strawberry show. These are called *sepals*. In some plants, as in the tulip, the calyx is not visible, but the next set of leaves, called the *corolla*, is largely developed. This is the popular part of the flower, and simply means the garland. The single leaves of the corolla are called *petals*: thus the red petals of the rose, and the yellow petals of the buttercup, constitute the corolla of these plants.



Calyx of Celandine.



Corolla of Tulip.

The *stamens* are slender thread-like filaments situated immediately within the corolla. They are very conspicuous in the lily, which has six. In the *stamen* we see the stalk of the leaf converted into a filament, and the delicate portion or blade into a club-like ball or head, which is called an

anther. This anther contains two small lobes or cells, which contain a fine dust, called *pollen*. This is the fertilizing matter of the flower.



Stamen of Lily.

The *pistil* is the central pillar, very conspicuous in the lily and tulip, but is absent in some flowers. It consists of a leaf folded on its mid-rib, the two sides of the *lamina* or blade of which are united at their margins, to form the *ovary*. The summit of this folded leaf, denuded of its epidermis, corresponds to the *stigma* or head of the pistil. The part of the pistil between the stigma and ovary is called the *style*. The pistil, when present, is always in the centre of the flower, and the stamens surround it. The ovary is so named because it contains the ovules, which, after fertilization, are converted into seed.

The process of fertilization takes place when all the flowers are fully expanded and matured. The anthers at first are moist and closed; but as they approach maturity, they become dry, their cells are ruptured, and they discharge their dust-like pollen on the stigmatic surface of the pistil, which is provided with a

clammy juice, to retain the pollen-grains. These grains absorb the exuded fluid, swell out, and finally emit delicate tubes, which penetrate the style, and convey the fertilizing fluid to the ovules in the germen or ovary. Then the miniature plant begins to be formed, and the ovules are gradually transformed into seed. The flowers fade, the leaves wither, and the plant dies; but as it does so it becomes an object of still deeper admiration. Each part which has fulfilled its mission disappears. The new vitality which is established in the ovary absorbs all the vegetative power of the plant. The radish, garden pea, and numerous other well-known plants show this process. The seed-pod is but the enlarged ovary which starts out of the calyx, and as the seed ripens the plant dies. If we take up the seed and open it, we shall see the seed-leaves or *cotyledons*, the eye or *helium*, and the *embryo* or heart. If you take a bean, and leave it in a damp place until it begins to sprout, you will be able to see how beautifully each part fulfils its mission, and prepares to enter on its life's career.

To enable it to do this under the most favourable circumstances, the seed-vessel is so organized that the seeds may be dispersed. The dandelion and the thistle

cast their downy seeds to the wind; the furze bush and the balsam open their seed-vessels with a spring, and project their seeds to a considerable distance; others have their seeds contained in a luscious fruit; others cling—as the burdock and teasle—to every passing thing. Ultimately they find a home, and spring up in all their marvellous beauty, “woven by the magic chemistry of Nature from earth and air, and coloured by the distant sun.”

There are other phases of plant life which can only be indicated rather than defined here. Day by day the plants arise out of a seeming sleep. In the day-time they breathe out oxygen and absorb carbonic acid: thus they fulfil an important function in the laboratory of Nature. At night they give out carbonic acid, but to such a small extent as to render the injurious consequences likely to arise therefrom very small indeed. If we lived in perpetual night, the earth would cease to be habitable; without daylight the plants could not form the chlorophyll or leaf-green. The flowers are coloured by the sun. When the petals are folded together in the bud, they are of a greenish hue, and they only acquire their radiance and beauty by a direct exposure to the sun's rays.

Some flowers go through periodic changes of colour; others change their perfume with the changing hours; others their taste. Many plants are weather prophets: some keep their faces to the sun; others close at periodic times. The goat's-beard, for instance, closes at noonday, and has received the popular cognomen of "Jack Go-to-bed;" and it is very doubtful if its first name is not a corruption of the latter. Linnæus was enabled to construct what he called a "*horologium floræ*," or floral clock, by strict attention to these habits of the flowers. Thus the common morning glory opens at dawn, the star of Bethlehem a little after ten o'clock, the ice plant at twelve o'clock at noon, at which time the goat's-beard and morning glory close, unless, indeed, the day is cloudy, when the latter remains open the whole day. The four-o'clock opens about that time in the afternoon; the flowers of the thorn-apple and the evening primrose open at sunset; and those of the night-flowering cereus when it is dark. The white water-lily closes its flowers at sunset, and sinks beneath the water for the night. In the morning it is buoyed up by the expansion of its petals, and again floats like a Naiad on the surface as before. The slumbering and awakening of plants is not a poetic

fiction: it is a reality. Here we cannot unfold what is known of the cause of this; but when plant life is more profoundly studied, then we may venture to say that human life will be better understood.

“In all places, then, and in all seasons,
Flowers expand their light and soul-like wings,
Teaching us by most persuasive reasons
How akin they are to human things.”



HOW TO KNOW THE WILD FLOWERS.

AS we wander through the deep embosomed lanes on our way to the wild moorland and shady woods, pointing out each herb and flower, marking its beauties, uses, and peculiarities, let us also learn the language of the flowers, by which it tells the family it belongs to, and marks its place in the universe. We shall find this language in the formation of its root, the shape, texture, colour, and marking of its foliage: the stem, the flower, and the mode in which it is attached thereto speak volumes to the eye of the observing. It will be seen that every flower and every plant has not only an individual existence, but each and every one has its appointed place in the universe, filling some mission, belonging to some family—often widely different in appearance—of the vegetable world. The varied form of seed, flower, and leaf, is one mode of recognizing their genus and species. To make these variations intelligible and to avoid long descriptions, it is necessary to use a few scientific terms.

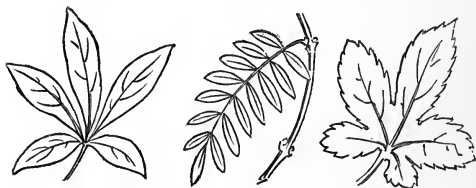
If we take the **ROOT** of a plant, we find that it

generally consists of a body called a *caudex*, and a number of small fibres known as *radiculae*: the one is the *root* proper, and the other the *rootlets*. The simplest and most common form of root consists of a tuft of fibres or capillaries, as the roots of grass and corn generally. The *creeping root* is familiar in the couch-grass, the mint tribe, the common bracken, and other plants. The *spindled-shaped root* tapers gradually, as shown in the carrot, parsnip, &c. The *truncated root* is the spindle root with an abrupt termination, as if bitten off. The *tuberous root* is exemplified in the potato. The *bulbous root* is a round firm mass, from the base of which fibres issue. The bulb itself may be solid, as in the crocus; in concentric rings, as the onion; in fleshy scales, as the white lily.

The **STEM** of a plant is variously spoken of: as simple when it only bears leaf and flowers, and has no branches. Some are forked, some ascend, some are prostrate, and some creep. The angle between the leaf and stem is called an *axil*. When a flower or bud starts from this angle, as in the mistletoe or balsam, it is called *axillary*.

The **LEAVES** or foliage of the plant, ere the flowers appear, afford the only means of recognizing it. When

the leaves spring around the root, as in the cowslip, they are termed *radical*; those that grow up the stem are either *alternate*, opposite, or whorled, as a wheel. They are called simple when there is only one leaf on a stalk, as in the oak, and compound when composed of many leaflets, like the ash. The smaller leaflets attached to the base of the leaves of many plants are



Quinate and Digitate.

Pinnate.

Palmate.

called *stipules*. The presence or absence of these is often an important characteristic of a family. The rose has an oblong stipule, while those in the vetch are often arrow-shaped. Leaves without stalks, as in the ground ivy, are termed *sessile*; when they have a kind of foot-stalk (called a *petiole*), they are termed *petiolate*. A *ternate* leaf has three leaflets on a common stalk, as the famous shamrock and the clovers; a *quaternate*, four leaflets; a *quinate*, five, as in the

cinquefoil; and so on. If the leaflets spring out from the same point, the leaf is *digitate*, as in the cinquefoil; if they are in pairs along the leaf-stalk, as in the rose, it is *pinnate*, or feathered. If the leaflets are again subdivided, as in the parsley, carrot, or fennel, it is then doubly or trebly pinnate.

A leaf is *entire* when there are no divisions, *lobed*



Pinnatifid. *Lobed.*

Runciate.

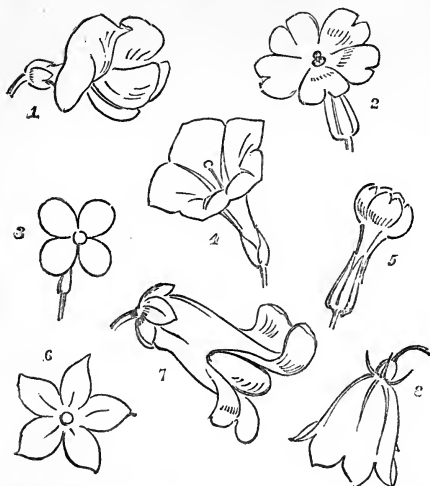
when there are deep and rounded divisions, as in the oak. If the *lobes* are so deep as to extend more than half-way to the mid-rib, it is *palmate*, as the palm of the hand. When so sharply cut as to resemble a *pinnate* leaf, it is *pinnatifid*. If the points of the divisions run back, as in the dandelion, it is *runciate*. A *peltate* leaf has the stalk attached at or near the centre, as in the pennywort and garden nasturtium. When the stalk passes through the leaf, it is termed

*Connate.**Decurrent.**Peltate.**Arrow-shaped.*

perfoliate; but if two leaves are joined together and the stalk passes through them, as in the teasle, it is termed *connate*. When the leaf runs down the stem, as in the comfrey and thistles, it is *decurrent*, and *imbricated* when the leaves overlap each other, like the ling, or the scales of a pine-cone.

In shape the leaves are termed *ovate*, *heart-shaped*, *kidney-shaped*, *arrow-shaped*, *fiddle-shaped*, *lyre-shaped*, *strap-shaped*, and *sword-shaped*. The margin of the leaf may be entire, or *crenate* when the edge is in small rounded divisions, *serrate* when edged like a saw, and *toothed* when in small pointed divisions.

The FLOWER is, however, the keystone to the arch of wild flowers. In the previous chapter the individual peculiarities of the calyx and corolla were just touched upon. The various shapes of the corolla most commonly met with are *salver-shaped*, as the primrose; *funnel-shaped*, as the cowslip; *wheel-shaped*, when the



1. *Butterfly-shaped blossom.* 2. *Salver-shaped.* 3. *Cross-shaped.*
 4. *Trumpet-shaped.* 5. *Funnel-shaped.* 6. *Wheel-shaped.*
 7. *Labiate.* 8. *Bell-shaped.*

tube is short, and the margin quite flat; *bell-shaped*, as the harebell and the hyacinth; *trumpet-shaped*, as in the convolvulus; *cruciferous* (four petals cross-shaped, like the wallflower). The labiate or lipped corollas consist of one petal, as the nettle and sage. If the lip is open, it is said to be *gaping*; if closed, it is termed *personate*. The butterfly-shaped blossoms of the pea and vetch are termed *papilionaceous*, and have

five irregular petals, one large at the top, two at the side, and two at the bottom. The calyx and corolla are not present in all flowers: some have one without the other—some have neither. In any case the word *perianth* is used to express the part of the flower which encloses the stamen and pistils.

But the flowers, with their wonderful stamens and pistils—the former representing the male and the latter the female portion of the flower—are joined to the stem in various ways. This is termed by botanists the **INFLORESCENCE**. The primrose, which has only one flower on a stem, is termed *simple*. If, however, the flowers grow one above another, as in the purple loosestrife or the lavender, it is called a *spike*. If the flowers, however, grow in clusters and have foot-stalks, as currants do, then it forms what is termed a *raceme*: the laburnum is a familiar instance of the raceme, and the lilac is an example of the upright and branching raceme, which is called *thyrs*e. When the flowers are on separate branched stalks, as in the oat and London pride, it bears the name of *panicle*. When the lower foot-stalks are longer than those of the upper, as in the common stock, it is called a *corymb*. The Guelder rose and yarrow are examples of this species



1. *Spike*. 2. *Raceme*. 3. *Cyme*. 4. *Panicle*. 5. *Corymb*. 6. *Whorl*.
7. *Spadix*.

of inflorescence. When the flowers have separate stalks which rise from a common centre, and resemble in form an umbrella, they are described as *umbels*. In the early summer umbelliferous plants, generally white in colour, form a conspicuous feature in the landscape. The wild carrot and the "kecksies" of Shakespeare are

familiar examples. When this bunch of flowers has separate, divided, or irregular foot-stalks, like the branches of a tree, it is called a *cyme*: the cornel and elder flowers will show the arrangement of a cyme. A *fascicle* has the flowers arranged on short foot-stalks, like the sweet-william. The *spadix* shows the flower, as in the arum, enclosed in a large sheath. The early *catkins* are another species of inflorescence. The alder, palm, willow, and hazel catkins afford several examples. The *whorl* designates the flowers growing round a joint in the main stem, as in the blind or dead nettle. Such are the principal forms of inflorescence, which distinguish alike the wild and the cultivated flowers. As the flowers pass away the fruit begins to appear.

The **FRUIT** is the enlarged ovary or seed-vessel. Its forms are various. When it is a dry hollow vessel, like the poppy, it is termed a *capsule*; when formed of two long valves, as the pea, bean, and vetch, it is termed a *pod*; when the pod is longer than it is broad, it is called a *siliqua*, as the stock; when broader than long, as the shepherd's purse, a *silicle*. The *legume* is a long pod with the seeds attached to one seam only; the *berry* a pulpy fruit, as the currant; the *nut* is a dry fruit in a hard shell, as the hazel; the *drupe* a nut

in a covering of pulp like the plum and peach. The *cone* is a species of catkin with hardened scales, well known as the fruit of the pine or fir tribe. The *pome* is a fleshy covering to a capsule and seeds. The apple and pear furnish familiar instances of this species of fruit.

A slight acquaintance with these varied forms will materially assist the lover of wild flowers in recognizing them from the description I have given, and in determining the names of the strange dwellers in out-of-the-way nooks and dingles.

In many instances the name of the family of plants—-which we have added to the common and scientific name in the index—is derived from some peculiarity in the form of the inflorescence, which distinguishes the genera and shows their alliance. Thus carrot, fennel, parsley, hemlock, and other similar plants have their flowers in umbels and are thus called *umbelliferous*. When many small florets are joined in one common receptacle, they are known as compound flowers, and belong to the *composite* family. The daisy and dandelion, the thistle and bluebottle, furnish us with familiar examples of this family. In the last chapter of this manual I have given the names of all the families and an outline of the botanical systems.

In the scientific name of a plant, the first word indicates the *genus*, the second one the *species*. Each particular kind of plant is called a species, and each species is reproduced from seed, sometimes, indeed, varied by soil and culture. Many species closely resemble each other in general structure, as the pansy and the violet, but with the differences well marked. In others the species are numerous, as the hawkbits, willows, sedges; and the ordinary observer is content to know the species only. In a popular book, to attempt to describe these minute differences would be futile, and the scientific student must turn to less elementary books. The scientific names are sometimes arbitrary, but generally they are given with a view of showing some peculiarity in the plant, or of its history. Thus the humble *Linnæa* was named after the great botanist, because it was long overlooked, and flowers at an early age. Many of the names tell of ancient mythology, others of the properties or dwelling of the plant. Thus the everlasting flower is *amarantha*—without decay; the sunflower is *helianthus*. If it dwells in the meadows it is distinguished by the special name of *pratensis*, as *Poa pratensis* is grass of the meadow; *arvensis* tells of the cultivated field; *rupestre* of the

rock; *palustris* of the marsh; *maritima* of the sea-shore; *arenaria* signifies a plant of the sand. These apparently simple explanations will smooth away some of the difficulties which the scientific names possess. A willing student will have no difficulty by the aid of this manual in collecting, arranging, preserving, naming, and classifying the wild flowers of spring, summer, autumn, and winter, which I am about to describe.





Wild flowers of Spring.



“The welcome flowers are blossoming,
In joyous troops revealed,
And lift their dewy buds and bells
In garden, mead, and field ;
They lurk in every sunless path,
Where forest children tread,
And dot, like stars, the sacred turf
Which lies above the dead.”

HOW shall we calendar the flowers? Shall we
show how

“The crocus blows before the shrine
At vernal dawn of St. Valentine”?

or weave a chaplet of “Marybuds” against Our Lady

Day? for the flowers of wood and field were specially dedicated to the saints. When with the first warm rays of a February sun the firstlings of the year awake from their winter's sleep, and venture forth to show the returning animation of the hardy vegetable world, even though there is a hard fringe of snow yet lingering on the skirts of winter's mantle, they whisper forth spring is at hand; for "Lo, the winter is past; the rain is over and gone; the flowers appear upon the earth; the time of the singing of birds is come, and the voice of the turtle is heard in our land."

Ere the fetters of winter are quite gone, the russet drops begin to appear as a pendant fringe on the thin slender bough of the Hazel (*Corylus avellana*)—

"And hazel catkins, and the bursting buds
Of the fresh willow, whisper spring is coming,"

and many a rustic belle uses them as ear-drops, whilst she gathers the pussy-cats of the Palm Willow (*Salix caprea*). Whilst the bullfinch is seeking its mate, the "flower of faithful love," the "day's eye" of the poets, with its "golden bosom fringed with snow," may be found peeping up in the hedgerows ere the snow has left the northern nooks of the cop-

pice. By-and-bye it will deck the meads not only of our beloved England, but of Europe. Italian children will seek it in a warmer clime, and gloat over *Pratolina* (meadow flower), whilst the French boys will tenderly gather *la belle Marguerite*, our own sweet "constellated flower that never sets," the *Bellis perennis* of botanists, the common Daisy of our childhood. The unfortunate Margaret of Anjou chose it as her device, and in the sunshine of prosperity the nobles of her Court wore it in wreaths in their hair or had it embroidered on their robes. Chaucer, and every poet who has followed in his train, has sung the praise of the humble flower which another Margaret — she of Valois, the friend of Erasmus and of Calvin, the Marguerite of Marguerites — had worn to her honour; and not inappropriately, for she could leave the glitter of Courts, to study her Bible and her own heart. Though some historians say it was the marigold and not the daisy that was the device of the "Pearl of Pearls," I am loth to separate the flower and the legend.

We shall have but little difficulty in recognizing the red Dead Nettle (*Lamium purpureum*), with its rough dull green leaves slightly tinged with purple.

It sends up its leaves early in the year, and its reddish purple labiate flowers, set in a whorl, are amongst the first to welcome in the spring, and nearly the last to disappear from the wayside flora. The flowers are not showy or beautiful, but the plant has a good reputation as a styptic, and has long been used as a remedy for stopping the effusion of blood. It is not unlike its neighbour the Stinging Nettle, which is just peeping through the ground, to the delight of rural boyhood, who have visions of nettle porridge before them. The stinging variety is often boiled when young with bacon, and eaten as greens.

The Ground Ivy (*Glechoma hederacea*) is sometimes mistaken for the red dead nettle; but its leaves are kidney-shaped, and it trails along the ground; hence its old name of "Gill Run-along-the-ground." Its odour is aromatic and not unpleasant, and it is in good repute among old-fashioned housewives, who have faith in it as a remedy for coughs and colds. It has also the name of "Ale-hoof" and "Tun-hoof," and brewers have used it to bitter their ale and give it an agreeable flavour. It has been recommended for discases of the eye, of the ear, and of the chest. Old Gerarde recommends it to be boiled in mutton broth,

to help "weak and aking backs." Its violet-purple flowers are great favourites of children.

Close by, amid a star-shower of the seed-leaves of the budding summer flowers, the dark green, shining, arrow-shaped leaves of the *Arum maculatum* start up, stalwart and strong, braving the icy east wind and courting the gales of the gentle south. Once seen, the arum is not soon forgotten: it is widely known under its familiar name of lords and ladies, cuckoo-pint, and wake-Robin. As the spring advances there will arise from the centre of the clustered leaves a tall wreathed column, with a sharp point, which gradually unfolds and shows a singularly-shaped flower known as a Spadix. The column is sometimes of a pale yellow colour, but oftener of a rich purple tint. At its base is a frill of imperfect stamens, and below are the yellow anthers and the ring of pistillate flowers. As the seasons pass on the column will die away, and the anthers or ovaries of the pistillate flowers become the orange-coloured berries which shine brilliantly in the dull autumn weather and in the early winter. Poisonous though every part of the plant is, its white root, which is about the size of a pigeon's egg, contains a farinaceous powder or white flour not

much unlike potato starch or arrowroot, which was much valued when high ruffs were worn, and clear-starching ranked among the polite accomplishments. By continuously washing the starch with water, the acrid matter is carried away, and the powder which is deposited, when dried in the sun, becomes edible, like cassava, which is the purified fecula of the mandioc. This flour was an article of commerce under the name of Portland sago for many years, but even the mode of its preparation is dying out.

Earliest among spring flowers is the Primrose (*Primula vulgaris*), with its crimped leaves and pale yellow blossoms, which stud the high banks and hedgerows, and spread a spangled carpet over the woodlands. By its side

“Sweet violets, Love’s Paradise, that spread
The gracious odours which they couchéd bear,”

throng the southern hedgerows, and give out their sweet perfume. The Scented Violet (*Viola odorata*), the emblem of modest worth, is found of varied colours, from claret, blue, dull red, to pinkish white, and finally white. Sometimes, like the primrose, it spreads its dark blue carpet over a woodland tract, but evidently prefers the warm sunny bank. The perfume

of this flower has always been admired, and the old physicians gave innumerable virtues to the plant. It has been made into conserve, and violet sugar was a famous remedy for weak lungs in the time of Charles II. Violet syrup is an old-fashioned remedy for infant colds yet in use. Violets will impart both their colour and flavour to liquids, and violet vinegar makes an agreeable acidulated drink when mixed with water in the summer weather; the leaves of the violet are also applied to bruises with some success. As the season passes by, the Dog Violet (*Viola canina*) will succeed its sweet-scented brother, and is frequently mistaken for it, though its colour is lighter, and no odour from it "perfumes the air."

A "tender green" begins to peep from the hedge-row Elder in sheltered nooks,

"And the dark pine-wood's boughs are seen
Fringed tenderly with living green."

The sword-like leaves of the Blue-bell are peeping up through the russet leaves of the autumn which yet remain. There will be no difficulty in marking the Lesser Celandine (*Ficaria ranunculoides*), with its bright star-like golden flower, dark heart-shaped green leaves, which are sometimes spotted with black,

but are generally distinguished by growing in clusters, out of which the flowers rise in the early spring. This variety of the *Ranunculus* tribe—for it is not a true member of the family—was a favourite of Wordsworth's. He sung the praises of its "varnished golden flowers,

"Telling tales about the sun
When we 've little warmth or none."

In country districts it is better known under the common name of pilewort—a name given to it from the peculiar tuberous root, which was thought to be useful in a painful disease. It is no longer considered a "herb of grace," and its absence is sometimes wished for by the farmer. Old Gerarde thus describes the plant: "It cometh forth about the calends of March, and floureth a little after; it beginneth to fade away in April; it is quite gone in May, and afterwards it is hard to be found, yea, scarcely the root." This plant is totally distinct from the True Celandine (*Chelidonium*), which belongs to the Poppy family and delights in old ruins.

The white-flowered Dead Nettle (*Lamium album*) may be seen lifting its sturdy head and presenting its whorl of labiate flowers to the early bee and the truant

schoolboy, who sucks the flowers equally with the insect, and also makes a musical pipe of its square stem, which distinguishes it from the True Nettle (*Urtica*) which grows beside it. Where the bank slopes we shall see the leaves of the Wild Strawberry peeping forth, and the Wild Docks (*Rumex*) are beginning to assert their presence. Early in the year we shall find the black catkins of the Alder (*Alnus glutinosa*) on the foot-path where it diverges to the riverside or runs near the tributary brooklet. The long drooping catkins are barren, and the oval-shaped, similar to a fir-cone, produce the seed. The wood of the alder, though light, has the peculiar property of remaining sound for a long period under water.

As the days grow longer, the foliage of the Early Speedwell grows larger and larger, and the sturdy stem of the Bladder Campion, with its grey hairy leaves, shoots upwards side by side with the deeply crimsoned stems and young shoots of the Robert-leaved Crane's-bill—the Herb Robert which we shall find lingering in the shady nooks until the early frost comes again. The five-fingered leaves of the creeping Cinquefoil are clothing their long and naked stems, and the humble Silverweed begins to show itself

close to the foot-path. Higher in the hedge we may notice the purple-tinged leaves of the Honeysuckle, which, early in March, are pretty well covered. The flowers of the Ash (*Fraxinus*) are coming out on its leafless boughs, and the spiry branches of the Poplar look quite green. The resinous buds of the Chestnut (*Castanea*) have opened their sturdy sheaths, and permitted the green leaflets to appear. On the banks the Ferns are uncurling their crozier-like fronds from their grey, brown, and dark scales; and the grass begins to shoot upwards with a delicious greenness.

Near at hand in every hedge, and straggling on to the waste ground, the snow-white flowers of the common Sloe, the well-known Blackthorn (*Prunus spinosa*), begin to appear, heralding the spring. The elliptical leaves do not appear until after the fragrant flowers and their orange-coloured anthers have departed. The shining polished black boughs are much used for walking-sticks; the bark has been used as a febrifuge, the leaves to adulterate beer, and the fruit has a questionable reputation in connection with port wine of a cheap quality, and is not unknown as a rural preserve. As a hedge fruit, and indeed as a wayside

flower of spring, the "white blossomed sloe" must give way to the Bullace (*P. insititia*), the flowers of which are produced in pairs, not solitary like the sloe. The leaves, when they appear, are narrower, and the fruit much larger and of a better quality. Bullaces are common in Rutlandshire, where a yellow-fruited variety is known under the name of White Damsons. They are frequently met with in the London market under this name.

At the latter end of April the two broad, heart-shaped, strongly-veined leaves which have remained in sheltered corners during the winter, send up a cluster of white flowers on a stem about a foot high. This is "Jack-by-the-hedge," "Sauce alone," the Garlic Treacle-Mustard (*Sisymbrium alliaria*). There is no difficulty in distinguishing this plant, for on its leaves being bruised it gives out a strong and unmistakable odour of garlic. It has been used as a salad herb, boiled as a table vegetable, and made into sauce in the same manner as mint; but it is only tolerable in the absence of all other vegetables. There are two other varieties found in Britain—the Wormseed Treacle-Mustard (*Erysimum cheiranthodes*), the leaves of which are narrow and slightly toothed. Its yellow

flowers do not appear until the summer, and may generally be found in the neighbourhood of osiers and willows. The Hare's-ear Treacle-Mustard (*E. Orientale*) is more rare, and frequents the cliffs and fields near the sea, principally in the South-eastern counties.

Along southern hedgerows the small Periwinkles (*Vinca minor*), with their starry blue flowers, shining myrtle-like leaves, garland the bushes. Its larger relative (*Vinca major*) will appear later in the year.

In a close shady nook or near a damp wood we may find the Moschatel (*Adoxa moschatellina*) unfolding its pale green flowers and leaves. It was once known as Bulbous Fumitory, but now its unassuming appearance has given it the name of *Adoxa*, or "without glory." Early in the spring we may see the large greenish-yellow blossoms of the two species of the Wild Hellebore under the hedgerows. They stand out boldly and defiantly, regardless, like their relative, the Christmas rose, of the winter's storms. There is but little difficulty in distinguishing the Green Hellebore (*Helleborus viridus*) from the Stinking Hellebore (*H. fœtidus*), for the latter has a purple tinge at the edge of its green cup. The large leathery leaves easily distinguish it from other wayside plants

at this season. It haunts the woodland sides as well as the hedgerows.

Ere the end of April the shower of seed-leaves noticed earlier have sent forth their aërial leaves, and conspicuous amongst them is the star-like whorl of the common Cleaver (*Galium aparine*), which is mounting high in the hedges. We shall notice it in bloom further on. Overhead we see the Wayfaring Tree (*Viburnum lantana*), with its broad, toothed, downy leaves, shrubby growth, and its clustered blossoms of perfect flowers. As the summer advances, flattened red berries will succeed the bloom, and as winter approaches the berries will turn black. The leaves and berries of the wayfaring tree are powerfully astringent. The latter are used in the manufacture of ink, and the leaves yield with alum a yellow dye. The wood is white and hard, useful to the turner, and the rind of the root is not unknown to boys in the making of birdlime.

Closely allied to the foregoing is the Guelder Rose (*V. opulus*), the Snowballs of our gardens, and we shall find its "silver globes" thickening on the shrub in the hedgerows. In the wild state the flowers are not globular. The leaves are three to five lobed, and smooth. In the autumn we shall notice its orna-

mental red fruit, which in Sweden and Norway is eaten with honey and flour. The branches yield a yellow dye, and the wood is used for a variety of purposes, that of tobacco-pipe stems not being the least important.

If in our springtide walk we pass the solitary cottage by the wayside, we shall see the Elder tree (*Sambucus nigra*) in blossom. Its well-known pinnate leaves and stout arms are planted by the wayside to keep off the witches, or to gather the flowers, which are made into an ointment, or to permit the berries to ripen, with a view to the making of the cottagers' winter cordial—elderberry wine. The pithy wood is made by boys into popguns, by butchers into skewers, and the old yeomen thought highly of it for their arrows. The Dwarf Elder (*S. ebulus*) is known as Danewort.

The Box shrub (*Buxus sempervirens*), so useful to the wood engraver and the turner, is only indigenous in England at Boxhill in Surrey, and the prickly Holly (*Ilex aquifolium*), are now in bloom. The leaves of the latter are stated to be equal to Peruvian bark in the cure of intermittent fevers. The root and leaves have valuable medicinal properties, and birdlime is made

from the bark. The Paraguayan tea tree is a species of holly.

The Spindle tree (*Euonymus Europæus*) shows its small green blossoms in May. The Cornel or Dogwood (*Cornus sanguinea*) is also showing its white clusters on the edge of the chalk downs, where it loves to dwell.

The beautiful Hawthorn—the lovely May (*Cratægus oxycantha*) must not be forgotten amongst our spring flowers, though it sometimes blooms on into summer. We have before spoken of the legends which have clung around the hawthorn. The Crab (*Pyrus malus*), which is the wild apple, has a richly-tinted purplish peduncle of flowers. The Wild Cherry (*P. avinum*) and the Bird Cherry (*P. padus*) are in bloom on their long stems by the side of the coppice; and creeping through all is the common White Bryony (*Bryonia dioica*), with its vine-like leaves and long curling tendrils. The flowers are marked with green veins, and are well worth inspection. The male flowers grow in clusters, are bell-shaped, and greenish-yellow in colour. The tendrils have the uncommon property of twisting different ways. In autumn its brilliant-coloured fruit will glisten amongst the rich-coloured

leaves. It is acrid and poisonous, though its young shoots may be gathered and eaten as a vegetable with impunity. This is not to be mistaken for the Black Bryony (*Tamus communis*), which has glossy heart-shaped leaves, and blooms later.

The Geranium family—the Crane's-bills—of which we have seventeen varieties, and no less than thirteen with pink or purplish flowers—begin to blossom by the hedgerow and by the wayside, as well as in the woodlands. One of the earliest is the rose-coloured bell-shaped flower of the Dove's-foot Crane's-bill (*Geranium molle*) and the Herb Robert (*G. Robertianum*), which remains in bloom all the year and in almost every locality.

The Bladder Champion (*Silene inflata*) has burst into bloom ere this, and its starry white flowers seated on their bladder-like cup, form an object in the early May landscape. It precedes a little the Germander Speedwell (*Veronica chamædrys*),

“Bright as the brightening eye of smiling child,
And bathed in blue transparency of heaven,”

which studs the bank beneath it. The Corn-Law Rhymer knew this plant by its Midland name of “Eye-bright,” and he called it the

“Loveliest flower of all that grow
In flower-lov'd England.”

It bears the name also of “Paul’s Betony,” and “Fluellin;” and there is a touching anecdote of the lesson which the germander speedwell taught the heart of Rousseau. This flower is easily known by its coarsely toothed leaves and axillary clusters of large deep blue blossoms, slightly veined with a lighter blue. We have in our woods, fields, and hedges, no less than thirteen species of veronica: some, however, are very rare, others we shall notice in our walks.



IN THE WOODLANDS.

“And now the wood engirds me, and the tall stems
Of birch and beech tree hemming me around
Like pillars of some natural temple vast.”

AS we pass along the embosomed lane, and turn into the woodland, we shall hear the redbreast and the blackbird singing their welcome to spring, and find here and there an early flower in March. First on some sheltered spot the flower of the wind, *l'herbe au vent*, as the French still call the Wood Anemone (*Anemone nemorosa*), with its three-lobed elegant leaves stained with crimson on its slender stem. The

“Dew-cup of the frail anemone”

is white, and frequently has a tinge of purple beneath its golden stamens. Cattle will not eat its poisonous but seductive flowers, which, when bruised, will raise a blister on the skin. It has been used for similar purposes as the Spanish fly is now applied to. The Pasque Flower (*Anemone pulsatilla*) has large flowers of a dull blue colour, but is not so common. Its name shows its season of bloom.

Not far off, in a moist spot, we may hope to find the Daffy-down-dilly — the Daffodil (*Narcissus pseudo Narcissus*),

“That comes before the swallow dares, and takes
The winds of March with beauty.”

The old poets wove a fabled story round the Narcissus (*Narcissus poeticus*), and it and the daffodil were frequently mentioned by Drayton, Spenser, and other early writers, under the name of “lily.” The daffodil is a pale yellow flower, frequently nodding, surrounded by a circlet of lemon-coloured petals. The Narcissus has six snowy petals, expanded like a star round its yellow cup fringed with scarlet. Its showy, early, and attractive blossoms, and the peculiarity of its fragrance, which is strong and deleterious, has made it a permanent garden flower, though it is yet to be found wild in many parts of England.

“In the lone copse, or shadowy dell,
Wild clustered knots of blue-bells blow;”

and there is scarcely a “wilding of Nature” that delights us more than the Blue-bell of spring—the *Hyacinthus non scriptus*, or rather *Agraphis nutans*, of botanists; for the old poets tell us that its leaves were

streaked with black, nay, even were marked with AI, to express Apollo's grief for having accidentally killed the boy Hyacinthus, and was changed by him into a hyacinth.

"Apollo, with unwitting hand
Whilome did slay his dearly loved mate,
Young Hyacinth, the pride of Spartan land,
And then transformed him to a purple flower."

We look in vain for any marks on this beautiful denizen of our woodlands, and it is now thought that the flower meant is the Martagon Lily, the markings of which sometimes assume the shape indicated by the legend, and botanists have taken it out of the family of hyacinths altogether, and have named it *Agraphis nutans*. Even in the smoky Lancashire cloughs they grow abundantly,

"As if the rainbows of the fresh wild spring
Had blossomed where they fell ;"

and in many places they literally clothe the woodlands with an azure carpet. The blue-bell is universally prized wherever it grows. The slimy juice with which its deeply-seated root and its long green foliage abounds was once highly prized as a starch to stiffen the stiff ruffs of our forefathers.



1. Wild Hyacinth.
4. Stitchwort.

2. Purple Orchis.
5. Fritillary.
7. Blue Speedwell.

3. Wood Anemone.
6. Dog Rose.



One of the most common and at the same time one of the prettiest woodland flowers is the Wood-Sorrel (*Oxalis acetosella*). In a warm spring it rises to receive the kisses of the first April shower; but it is frequently later ere its delicately beautiful triple leaves and the pencilled beauty of its blossoms are to be seen. No English plant has any greater right to claim affinity to the sensitive plant than this woodland beauty. Its foliage droops at the approach of rain equally with the evening dews. It shrinks when roughly handled in gathering, and it folds up its leaves when the "storm sings in the wind." It is said to be the original shamrock which St. Patrick plucked to convert the Irish, and it is so common in the "Island of Woods," as to give every reasonable probability to the suggestion. The Savoyard calls it the *Pain de dieu*, for it, like the manna of the Israelites, is scattered by the wayside. It is plentiful in Lapland, where it forms one of the principal vegetables. In Norway it is the *primula*—the first flower of spring. It bore in old times the names of "Wood-sower," "Stubwort," and "Wood Trefoil." Dear old Gerarde tells us that "apothecaries and herbalists call it Alleluia and cuckowes' meat." It yet bears the name of Alleluia in Italy and Spain. Its delicate

acid flavour, so much admired by schoolboys, arises from the presence of binoxalate of potass (oxalic acid), and if taken in large quantities might be injurious. It formed part of the old "green sauce" which in former days always accompanied fish on the table. Villagers yet use the expressed juice to remove spots and ironmoulds from linen, and it forms without exception one of the most pleasant acids for turning milk into whey for a drink in fevers. A yellow species of the wood-sorrel (*Oxalis corniculata*), is also indigenous, but is extremely rare.

Later, in the moist recesses of the wood, we may find the Twayblade (*Listera ovata*), one of the Orchis tribe. The flowers are small, green, in a tender raceme, and grow about half-way down a stalk about a foot high. The two broadly ovate leaves are from two to four inches long. Glance for a moment at the veins in its leaves; they will be found to run from the top to the bottom, and do not form a network, which is so conspicuous in other plants: this is one of the distinguishing features of the Orchis tribe. The early Purple Orchis (*Orchis mascula*) shows its tall stem in the woodlands as well as in the meadows; but the brown Bird's-nest Orchis (*Listera nidus-avis*) is a

true woodland plant. It looks like a drooping oak-leaf, and might be passed by as such, were it not for its evident life and freshness. It is different from the generality of our British orchids in the fact that its root is not bulbous, but fibrous, which cross and entangle each other like the sticks of a crow's nest.

In the chalky woodlands especially of Kent, and along the banks of the Thames, the Lady Orchis—the brown-winged orchis of the botanist—(*Orchis fusca*)—may be found. The stem is sometimes two or even three feet high, and the thickly-set clusters of flowers are proportionately large. The upper part of the flower is of a brownish purple hue; the lower lip is white and beautifully spotted. The Green-man Orchis (*Aceras anthropophora*) has a lax spike of greenish flowers; but it requires the aid of some imagination to find out any resemblance to the human frame.

The trees of the woodland during April put forth their buds, and many of them flower early in May. The Oak, of which we have two principal species, *Quercus pedunculata* and *Q. sessiliflora*, which are distinguished from each other by the following characteristics: the latter, which is called Durmast, has long yellowish leaf-stalks, and sessile or shortly-stalked

acorns; the former has either stalkless leaves, or the leaf-stalks are short and of a greenish or reddish hue. The acorns are on long stalks. The oak-apples are the result of the puncture of gall-flies. The galls of commerce are imported from the Levant, and are produced from the *Q. infectoria*. It has been asked if the galls which are common in our hedgerows could not be turned to more account. The Birch (*Betula alba*) shows its catkins early in April, whilst the Beech (*Fagus sylvatica*) protects its buds in autumn against the severity of the winter. Under its branches the wood-sorrel loves to linger, and the white, rose-like flowers of the Wild Strawberry (*Fragaria vesca*) creep towards its shade, as well as to the sunny openings in the woodland glade. The small but delicious fruit is the most wholesome of all our English wild fruits. It is a botanical fact which should be remembered, that all fruits growing on plants bearing flowers similar to the wild rose may be safely eaten. The Bramble (*Rubus fruticosus*) and the Raspberry (*R. Idæus*), which are now in flower, are familiar examples of this fact.

At the roots of the trees we shall find the Sweet Woodruff (*Asperula odorata*), sometimes called wood-

rowell. It is conspicuous by its white enamelled flowers, and its whorl of fine green leaves rising at regular intervals along its stalk. There is but little odour from its fresh leaves, but when dried it has the odour of new-mown hay, and no native plant retains its fragrance so long when dried. In many country districts it is made into tea, and careful housewives keep it in their drawers to preserve their clothes from moths.

The sweet and pretty Lily of the Valley (*Convallaria majalis*) is not unknown to our woodlands in May.

“The Naiad-like lily of the vale,
Whom youth makes so fair and passion so pale,
That the light of its tremulous bells is seen
Through their pavilions of tender green.”

Its graceful snow-white bells, half hiding themselves between the rich green leaves, are not an unfit emblem of modest beauty, purity, and humility. Occasionally we may find the taller and somewhat similar plant of Solomon's Seal (*Polygonatum multiflorum*), which was at one time classified with the *Convallaria*. Though not a common plant, it is by no means rare, and where it has once taken root it is difficult to extirpate.

In the moister recesses of the wood we may find the

singular flower known as Herb Paris (*Paris quadrifolia*). It is about a foot in height, and consists of a simple stem, on the summit of which are four broad, ovate, acute leaves, which form a cross, and a single terminal large green flower. It has but little beauty and little virtue; for though it has been used medicinally, its use is to be avoided rather than sought.

The Lungwort (*Pulmonaria officinalis*) shows its purple bells with their young pink buds as early as May. The rough foliage is spotted like the animal lungs, and hence was thought useful in pulmonary complaints. Its old name was Jerusalem cowslip. It is a somewhat rare plant. Not so the Red Campion (*Lychnis diurna*), which is a plentiful summer flower both in woodlands and hedgerows.

In the woodlands and on some waste places we may find in dark spots the Enchanter's Nightshade (*Circœa lutetiana*). It has a creeping root, and its stem grows about a foot high. It has pointed ovate leaves, and its pink blossoms are set on red flower-cups.

Amongst the woodland plants of spring we must not forget the Buckthorn (*Rhamnus catharticus*), a large shrub, whose yellowish-green flowers produce the black fruits, about the size of peas, which when dry resemble

black pepper, which were for a long time a favourite purgative medicine. The colour known as sap green is prepared from the fresh berries. The Privet (*Ligustrum vulgare*), so common in hedgerows and shrubberies, shows its white clusters in May.

One of the most common of woodland flowers is the Stitchwort (*Stellaria holostea*). It is found also in the hedgerows, and is known by the names of satin-flower and adder's-meat. It has a long straggling quadrangular stem of a delicate and brittle structure, with grass-like leaves. The large, paniced, lustrous white flowers are not much smaller than a primrose. There are half a dozen kinds of *Stellaria*, but this is the largest: the common Chickweed (*S. media*) is amongst the number.

How different in foliage, if not in colour, is the broad-leaved Garlic (*Allium ursinum*), which at first sight is often mistaken for the lily of the valley! The amateur field botanist is apt to rejoice over the beautiful umbel of white flowers, in shape not much unlike the star of Bethlehem; but the beauty of the flowers is counteracted by the strong garlic-like odour of the plant. It is the Ransoms of our ancestors, who thought that it gave a relish to their meat and had a salutary

effect on their system. It grows on a stem about six inches high, and occasionally lurks amongst grass, but this is not common. It flowers from May to June, and is plentiful in Somersetshire.

But we must leave the spring woods, and as we pass into the open country

“Look at these flowers, just peeping from their nest
Of moss and leaves, so beautifully shy.
It may be that the sight as yet is new,
Or else methinks I love these lowly ones
More than the rose herself, and better far
Than boughs with fruitage crown'd—the dazzling wreaths
Which deck yon wilding cherry, white as snow,
Save where a faint soft blush, all but invisible,
Steals o'er the whiteness.”



FLOWERS OF THE FIELD.

AS we emerge from the woodlands, and gaze over hill and vale, and cross the fields where the spring wheat hardly veils the rough soil, we shall find many an early wild flower, half hiding its modest head. The boldest among them is the Common Colts-foot (*Tussilago farfara*). Its thistle-like but bright yellow head dots the side of the railway cutting, and delights in strong clayey soils. Its short thick stalk and solitary appearance distinguish it from the dandelion, for its big leaves do not appear until the flower has perished. The village housewife may be found gathering these yellow blossoms, for they have a wonderful reputation for curing colds and coughs when candied with sugar; and, indeed, they are used for making wine, and were a few years ago hawked by country people for that purpose. Its name of colt's foot, or foal's foot, is derived from the shape of its leaves, which are of dull green. The under part of the leaves is covered with a thick cotton-like down, which was formerly in some request for tinder, but

the leaves are gathered and dried by the villagers for the purpose of making herb tobacco, when it is mixed with yarrow, rose-leaves, and some sweet herbs, and is said to be useful in cases of asthma. In the corn-fields, in the early spring, we shall find the Ivy-leaved Speedwell (*Veronica hederifolia*). It is easily known by its trailing stem and thick ivy-shaped leaves. Its long shoots twine among the young corn, and when the March sun shines genially, its small blue flowers are easily distinguished, and its seed-vessel is formed of two lobes. It, like Grey Field Speedwell (*V. agrestis*), flowers throughout the summer. The latter has, however, a paler blossom, and is white in the centre of the blossom. Its notched heart-shaped leaves and procumbent stems lie along the furrows of the tilled field or creep over the sunny bank at the side. There is one distinguishing feature of the Veronica tribe—the lower of the four petals is in all cases narrower than the other three, and the colour in all the seventeen varieties is blue of greater or less intensity. A larger variety of speedwell has been noted on some lands, and is known as Buxbaum's Speedwell (*Veronica Buxbaumi*). It flowers much later, and is altogether a larger and more handsome plant than its earlier re-

latives. This variety, though becoming common, is not supposed to be indigenous to the country, but to have been imported with the seed-corn from foreign lands. Another early flowering plant is the Corn-salad, or Lamb's Lettuce (*Valerianella olitoria*). On light soils, its thick compact clusters of tiny lilac flowers, crowning a stem about six inches high, will surely be noticed. Its branches spread out, and its long pale green leaves become broader at the extremity. This was one of the edible plants of our forefathers, and is still called monk's salad by the French (*Salade de chanoine*). The old country name was the white potherb, and Gerard, the old Elizabethan botanist, says "that it was eaten with vinegar, salt, and oile, as other salades be, among which it is none of the worst." Alas for the degeneracy of modern days! it is now neglected.

Deep in the furrows on the south side we shall have no difficulty in finding a spray of Fumitory (*Fumaria officinalis*). Its somewhat graceful sea-green leaves are divided into slender segments, and a spike of purplish rose-coloured tubular flowers, each with a small black spot upon it, grows on the upper portion of the stem. When this pretty plant is frequent it is

looked upon as a sign of bad husbandry, and it soon takes possession of a neglected field.

“ Her fallow leas
The darnel, hemlock, and rank fumitory,
Doth root upon.”

And gentle Cordelia speaks of her father as

“ Crowned with rank *fumiter*, and furrow weeds,
With harlocks, hemlocks, nettles, cuckoo flowers,
Darnel, and all the idle weeds that grow
In our sustaining corn.”

The name of fumitory is supposed to be derived from *Fume-de-terre*—earth-smoke—from the thin vapour-like appearance which its pale green leaves gives to the naked soil. Indeed, in the Northern counties it is called earth-smoke; and a larger variety (*F. capreolata*), Ramping Fumitory, is common in highly cultivated ground. The plant has a very strong saline flavour, and, when boiled in whey or milk, is used by village belles as a cosmetic. Clare speaks of old dames sparing the plant when reaping, from the remembrance of the service it had rendered to their youthful charms. The “harlocks” mentioned by Shakespeare is doubtless the Common Charlock, the *Sinapis arvensis* of botanists. In Ireland, where it is known as the “*Pushoch dwee*,” or yellow weed, it

blooms early in the spring, and, as Hooker remarks, is "too frequent" in the corn-fields. Its provincial name varies in different localities—kerlock, kadlock, and chadlock. It is a species of mustard, and the young leaves are frequently gathered and used as greens by villagers. It is somewhat difficult to distinguish this plant from the turnip, or the Black Mustard (*Sinapis nigra*), which is largely cultivated in Durham for its seeds, which, when ground, form the mustard of commerce. The flowers of all these are of a pale sulphur colour, and are cross-shaped.

In the early spring, on dry sandy soils, we find the Long Scorpion Grass (*Myosotis collina*), though it properly belongs to the dry walls. It has very bright blue blossoms, which have entirely disappeared by midsummer, when its place is taken by the Field Mouse-ear or Scorpion Grass (*Myosotis arvensis*), the true inhabitant of our cultivated fields. This plant is nearly allied to the forget-me-not, and is frequently mistaken for it; but its little cluster of light blue flowers have not the golden centre of the flower of remembrance. When the days lengthen the fields become the poor man's garden, and furnish forth the most brilliant of our wild flowers.

Amongst the flowers of the spring corn-fields, the Heartsease or Wild Pansy (*Viola tricolor*) may be found, its yellow face "freaked with jet." Shakespeare calls it "love in idleness," and it still bears that name in Warwickshire. Another midland name is "pink-o'-my-John," and it also once bore the name of herb trinity. Frequent mention is made of it in connection with "lover's thoughts" by the old dramatists.

The Corn Buttercup (*Ranunculus arvensis*) flowers during May amongst the young corn. It is distinguished by its three cleft leaves and singular prickly seed-vessels, from which it derives its common name of hedgehog. Its acrid properties are remarkable even in the *Ranunculus* tribe.

The beautiful Santfoin (*Onobrychis sativa*) blooms in May on a chalky soil, where it is frequently cultivated, though undoubtedly naturalized on Salisbury and other Wiltshire downs. Its name signifies holy hay, and it is known by the name of cock's-head grass and French grass. Its crimson tint contrasts forcibly with the blue purple of the cultivated Lucerne (*Medicago sativa*), which is hardly a wild plant. Its relative, the Yellow-flowered Medic—the Black Non-such (*Medicago lupulina*)—is, however, a native. Its

yellow butterfly-shaped flowers, and single-seeded kidney-shaped seed-vessels, turn black when ripe, and hence its name.

As the season advances, the small Bugloss (*Anchusa arvensis*) shows its bright blue flowers in many a corn-field. It is a bee-loved flower; its foliage is rough and prickly. The roots contain a great quantity of mucilage. It can hardly be mistaken for any other flower of the field. The flowers are white in the centre. The Rest Harrow (*Ononis arvensis*) begins to show its pink butterfly-shaped blossom at the same time; but good husbandry has banished this pretty plant from the corn-fields to the waste ground, where we shall find it.



IN THE MEADOWS.

“Ah, joyous time ! through verdant meads to rove
With wild flowers strewn.”

MANY a flower has peeped out in the deep furrows, warm woodland nooks, and under the hedgerows ere the glorious kingcups and cuckoo-buds have gladdened the meadows, and

“The buttercups across the mead
Make sunshine rift of splendour.”

The gay meads and spring flowers are indelibly associated with childish “treasures of silver and gold.” Though we noticed the “wee, modest, and crimson-tipped” Daisy by the wayside, the verdant mead is its true home, side by side with the glorious spring Buttercups, the creeping and bulbous Crowfoot (*Ranunculus repens* and *R. bulbosus*), which are distinguished by the form of the root. Equally do children hold the bright and “gold-eyed Kingcups fine” beneath their chins to know if they “like butter ;” and schoolboys dig for the marble-like bulbs, to taste their acrid flavour and to deceive the green and ignorant home-bird. The

bulbous crowfoot has furrowed flower-stalks, and the sepals are turned back, and it is the first to flower. The creeping variety has runners like the strawberry plant. The Summer Buttercup is *Ranunculus acris*, and has round and smooth flower-stalks, and the sepals spread outwards. Sometimes the Lesser Celandine adds its golden charms to the meadow, though it prefers the wayside bank, where we have placed it.

Earlier even than the buttercups, we have what Ebenezer Elliot terms the "sunflower of the spring," the Yellow-rayed Dandelion (*Taraxacum dens leonīs*), which decks alike the meadows and the moors with unpaled sunlight, gathering up honey for the early bees, and furnishing pipes for childish fingers to make neck-chains of. Its serrated leaves are searched for by the French peasant to add to his salad, and when blanched they are not to be despised. The English villager, intent upon diet drinks, 'plucks up the root, and, indeed, it forms a not-to-be-despised tonic. When dried and roasted the young roots are used as coffee. Its downy balls of seeds are called clocks and blowballs by the village children, who ask questions as to time and weather of the ball, and then blow the seeds into the air for an answer. This custom is at least as old as

Shakespeare, and is mentioned by Ben Jonson. Useful as dandelions are to the herbalist, they are by no means loved by the agriculturists, though undoubtedly they have their economic uses in the feeding of cattle, lambs especially being, it is said, peculiarly fond of them.

When the meadows are damp, or a streamlet runs through them, the Marsh Marigold (*Caltha palustris*), the winking Mary-buds of Shakespeare, "ope their golden eyes" in the early spring months. The foliage is large, dark, and shining. The flowers are the calyx, and are supported on thick, strong stems which defy the March winds. Country folk call it "water-blob." In Scotland, Sweden, Norway, and Holland it is plentiful, and is there the first spring flower. Like all dark-foliaged plants, the leaves are poisonous, though the young buds, when pickled with vinegar, are said to be a good substitute for capers. One use the marsh marigold has: its flowers, when boiled with alum, afford a good dye, but now it is seldom used. Not far off the Mary-buds, and frequently blooming alongside of them, is "the Ladysmock all silver white" (*Cardamine pratensis*), whose pale, lilac, cross-shaped flowers stand erect in pretty clusters on

stems from eight to ten inches high. They form a conspicuous object in the meadows, and are great favourites with children, who like the pungent leaves, which have the taste of cress. Indeed, one of its old names was the wild watercress.

The spring sun gets warmer towards the end of April, and then we may look for the fragrant Cowslip (*Primula veris*) and its larger relative, the yellow Oxlip (*Primula elatior*). The latter is, however, comparatively scarce, and appears to partake equally of the character of the primrose and the cowslip. The latter is the loved of the villagers, for they make tea of the dried flower-pips, and wine from them when gathered fresh. The village damsels use it also as a cosmetic, and we know it adds to the beauty of the complexion of the town-immured lassie when she searches for and gathers it herself in the early spring morning. The old names of the cowslip were "petty mullein" and "palsy-wort;" the latter name is preserved by the French. Cowslips form no insignificant feature in the May garlands, and when intermingled with the flowers of the purple orchis, or the handsome flowers of the Bugle (*Ajuga reptans*), which grows not only in the meadows, but its creeping root finds its way to the spinney, and

starts up amongst the primroses. The spike of the bugle is blunt, and the upper lip is very short. Fortunate indeed will be the lover of wild flowers if he can find the large purple blossom of the Snake's-head or Fritillary (*Fritillaria meleagris*). It formerly grew in Foot-meadow, Northampton, but it has long since disappeared, and I have never found it elsewhere, though it is not very rare in the Eastern counties. Its drooping head is shaped something like a tulip; its colour is a rich purplish-brown, sometimes lighter and tinged with green. It is covered at regular intervals with small squares of reddish-purple, like a draught-board. Its old name was guinea-hen, or turkey-hen, but now country people frequently call it the wild tulip.

If the spring weather is fine and open, the charms of the flowers of the meadows will be enhanced by the sweet-smelling Purple Clover (*Trifolium pratense*). All country-bred children have sucked the honey from its florets, when they have raised their heads to meet the sun. They are the honey-stalks and suck-bottles of our fathers, and the bees love the honey of the flowerets, as well as the baby fingers of the young. The name "trefoil" has been given to it, from its treble leaflets, and in the Meadow Clover each leaflet

is marked by a crescent-shaped greyish spot. This spot is absent in the darker flowered Zigzag Clover (*Trifolium medium*), which, however, is easily distinguished by its zigzag stem. The white Dutch Clover (*T. repens*) is more common, and decks the shady lanes with its white blossoms. This was the "cloefer-wort" of our ancestors. In our rambles over the footprints of the old Roman settlers we seldom if ever found the Dutch clover absent, and it adds its beauty, we are told, to the valley of Sharon. The white clover, too, is the shamrock of the Irish. We shall notice other species of trefoil during our summer rambles. The sensitive nature of the leaves of all trefoils to moisture was known to the ancients; and when a storm comes on, the appearance of the field changes, the leaflets fold to prepare alike for the dews of evening and the coming storm.



RUINS, WALLS, AND WASTE PLACES.

THE loves of the flowers are as diverse as their forms and colours. Some love the moist bog, others the shady woodland. Some delight in the bracing air of the ocean, others in the quiet meadows. Many love the picturesque ruin, revel by the wayside wall, and rejoice in the small pieces of waste ground which are everywhere met with as we walk along,

“ Pleased

To muse, and be saluted by the air
Of meek repentance, wafting wallflower scents
From out the crumbling ruins of fallen pride.”

Very unkindly must be the site that will not afford a home for the earliest of our wild flowers, the little Shepherd's Purse (*Capsella bursa pastoris*). It peeps up beneath the wall, and shows its jagged leaves between the cracks of the pavement. Its little white flowers are succeeded by its numerous heart-shaped seed-cases, which, from their real or supposed resemblance to the old-fashioned leather purses, gave the plant its name. Formerly many virtues were

ascribed to it, and its names were various. It was "the poor man's parmacetie,"—the Saint James's Wort,—Caseweed of our ancestors. It will be found in bloom during the whole of the summer months in fields and gardens, as well as waste places.

It is on old walls or rocky protuberances that we must look for the little Whitlow Grass (*Draba verna*). Its stem is not above two or three inches high, and grows out of a circle of slender leaves. As early as February it shows its small cross-shaped white flowers above the lowly moss. Old writers called it nail herb, and the juice, when mixed with milk, was thought to cure that painful swelling known as a whitlow.

Out of the crevices of the wall the purplish or lilac-tinted flowers of the Ivy-leaved Toadflax (*Linaria cymbalaria*) creep in profusion. The thick round-shaped leaves are tinted with purple on the under side.

If the wall is of limestone, the pretty ferns *Ruta muraria*, Maidenhair Spleenwort, and the Polypodies will be found close at hand.

Early in the year we may look for the yellow Sweet-scented Wallflower (*Cheiranthus cheiri*). It

nestles in many a crevice of the ruined abbey, and makes fragrant the breath of early spring. It is said to have its medicinal uses, and when spring green crops were unknown it was frequently given to cattle.

The common Groundsel (*Senecio vulgaris*) blooms early from every piece of waste ground. Its yellow flowers, succeeded by tufts of feathery seeds, are well known. Its soft leaves have been used for poultices, and its root was once thought to cure the toothache and all manner of sores. We have now lost the trusting faith of our forefathers in "groundeswyle," except as a treat to our feathered songsters.

At the foot of the wall, and in many a waste nook of city and country, thick clusters of Knotgrass (*Polygonum aviculare*) may be found, with its reddish-white blossoms, growing out of chaffy bracts along its reddish stems and by the side of its small dark green leaves. Under the names of cumberfield, "hindering knotgrass," hogweed, swine's cress, it was known to our forefathers, who believed that it not only hindered the growth of plants, but of animals. Swine, however, are fond of the plant.

We may look for several varieties of the Mouse-ear Chickweed on the old walls, and sometimes on

the dry hedge-bank. Its hairy pale green foliage, and white flowers in dense two-parted branches, distinguish the Broad-leaved Mouse-ear Chickweed (*Cerastium vulgatum*). Its seed-capsules are curiously curved as they ripen. The Narrow-leaved variety (*C. viscosum*) is a coarser plant with narrower leaves. Some other varieties may be found, but they are local.

The Rock Cresses, too, are numerous, and several varieties grow on particular spots. They are all distinguished by their white cross-shaped blossoms, toothed leaves, and narrow spreading pods. The British Rock Cress (*Arabis stricta*) is common only on carboniferous limestone. The Tower Cress (*Arabis turrita*) seems to love old universities, for it is found on the walls of several colleges. The Hairy Rock Cress (*Arabis hirsuta*), with its somewhat rough woody stem, round which the root-leaves form like a star, and the hairy stem-leaves embrace it closely, is more common. The white flowers are succeeded by the upright pods.

Many cottagers in Great Britain have, like Andrew Fairservice in "Rob Roy," "forced the early Nettles for their spring kail." There are three kinds. The

Common Nettle (*Urtica dioica*) is the one used for early greens, "nettle beer," nettle porridge, and other rural dainties. Its greyish-green flowers, ovate serrated leaves, and sharp sting, are well known. The Little Nettle (*Urtica urens*) is a much brighter-looking plant: the leaves have five nearly parallel ribs. The great Roman Nettle (*Urtica pilulifera*) may be distinguished by its clusters of green globose fruits, as large as blackberries. It is not so common as the two other varieties, but its sting is very virulent. The roots of all the species boiled with alum make a yellow dye.

Ere the flowers of the nettle have departed, the grey leaves of the sullen-looking Borage (*Borago officinalis*) rear themselves in out-of-the-way places. The rough foliage hides its azure flowers, whose white eyes are in direct contrast to the prominent purple stamens. Rough as the borage is, but few plants have been more popular. Its young shoots have been eaten with salad and pickled. Its leaves form still an ingredient in "claret-cup" and "cool tankard." Formerly every gardener cultivated it; now its glory is departed, a few plants only being kept near the apiary for the bees.

In many an out-of-the-way corner, as midsummer draws nigh, the Deadly Nightshade—the common Dwale (*Atropa belladonna*)—shows its dark, lurid, purple, bell-shaped blossoms, which precede the purplish-black berries, which are fixed in a purple cup. This must not be confounded with the bitter-sweet of our hedges, for it is infinitely more poisonous. It loves to lurk in an out-of-the-way corner of a ruined wall or dilapidated cottage. The egg-shaped leaves are large and of a dull green colour. The stem is from one to two feet high. The plant furnishes a useful medicine, but even medical men use it with great care.

A frequent companion of the belladonna is the Large Celandine (*Chelidonium majus*), the tetterwort of our ancestors, its acrid juices being used as a caustic remedy for that old affliction. It grows some two feet high. The stem is hairy and brittle. The pinnated leaves are thin, lobed, and notched. The dull yellow flowers are somewhat small, and grow in long-stalked umbels; they are succeeded by long pods.

On shady rocks, damp walls, but somewhat partial in its likings, is the succulent Wall Pennywort (*Coty-*

ledon umbilicus). Its thick, round, fleshy leaf is depressed in the centre, where the foot-stalk joins it. In favourable spots its round flower-stem grows a foot high, but generally it is much shorter. The pale yellowish-green flowers cluster round the stem. It is common in all rocky mining districts, but is comparatively rare in the Midlands.

Amongst the earliest of spring flowers, but from its rarity placed last, is the Wild Tulip (*Tulipa sylvestris*). It is a small greenish-yellow flower, somewhat like a lily, and is found principally in old chalk-pits, where it propagates itself by means of a long fibre from the root, which produces a new bulb at some distance from the parent plant.



THE MOORLAND AND THE MOUNTAIN.

LEAVING the beaten paths, and striking for the wild moorland and breezy heaths, beyond which the blue mountain shows its silvery outline, we find but comparatively few flowers of the early spring, but the air is redolent of sweet perfume,

“As if Nature’s incense-pans had spilt,
And shed the dews i’ the air.”

The sturdy Gorse shows its golden blossoms and welcomes the early bee. The variety now in bloom is the *Ulex Europæus*. It has, with the Dwarf Furze, been showing a few buds during the winter. (See Winter Flowers.) The bonny, bonny Broom (*Sarothamnus scoparius*),

“Yellow and bright as bullion unalloyed,
Her blossoms,”

gleam from the graceful dark green twigs, which wave to and fro on the breezy moorland and make glad the landscape. This is the *Planta genista* whose story we have told, and which has a place in our “*Materia*

Medica” as a diuretic. Old Gerarde says the flower-buds, when pickled and used as capers, wonderfully improve the appetite, but the plant is bitter. Both the furze and the broom are subject to parasites, amongst the largest of which is the acrid and bitter Broom Rape (*Orobanche major*), whose long clammy succulent stems, without leaves, spring up at the roots of the broom at the latter end of May. Its flowers are nearly the colour of the reddish stem, but are sometimes tinged with purple. The flowers grow about half-way down the stem. The Lesser Broom Rape (*Orobanche minor*) grows on the roots of clover, and the wild thyme is sometimes afflicted by the same “man of the mountain.”

On the cleared woodlands, but more frequently by the side of some clough or dell in the moorland, grows the myrtle-leaved shrubby Whortleberry (*Vaccinium myrtillus*), or “whorts,” as they are sometimes called. This is not a solitary plant: it extends along the dell for miles. Its pretty red waxen flowers appear at the latter end of April, and the purple fruit are ripe in August. The Cowberry or Red Whortleberry (*Vaccinium vitis idæa*) is of lower growth, and its leaves are not much larger than those of the common



1. Broom Rape. 2. Broom. 3. Fumitory. 4. Golden Saxifrage.
 5. Pasque-flower. 6. Wood Sorrel. 7. Water Crowfoot.
 8. Arum.



box. The Great Bilberry has duller and lighter leaves, and smaller fruit. It grows sometimes on high elevations, and the Cranberry (*Oxycoccus palustris*) is frequently found creeping beside it, showing its pink bells beneath its bright green leaves, which are white underneath. The fruits of all these are gathered for tarts, and are frequently sold in northern markets. In mountainous districts we shall often find the Common Raspberry (*Rubus idæus*), and the Mountain Raspberry or Cloudberry (*Rubus chamæmorus*) may be known by its single white blossoms and delicious orange-coloured fruit, which is known in the Scottish Highlands under the name of Averans. The pink flowers of the Bearberry (*Arctostaphylos uva-ursi*) are common all over the United Kingdom, and the white flower of the Alpine Black Bearberry (*A. Alpina*) may be found in mountainous districts early in May. By its side the small red flowers of the Azalea (*Azalea procumbens*) peep from the trailing woody stems.

The Juniper (*Juniperus communis*) is common equally on the downs as on the moorland. Its prickly branches were formerly hung up in houses to keep off evil spirits, and its berries were used to flavour gin. Its French

name *Génivière*, gave the name Geneva to the spirit which we have contracted to the familiar monosyllable. It is a popular plant in Norway and Sweden, where a conserve is made of the berries, and the leaves are used for a variety of domestic purposes. From a gummy substance which exudes from old juniper bushes the gum sandarach is made, formerly so much used by conveyancers and lawyers as pounce for their manuscripts and deeds. The utility of the wood is so great that it is one of the favourite trees of those places where it grows to a large size.

The singular flower Butcher's Broom (*Ruscus aculeatus*) or Knee Holly shows its solitary greenish-white flowers on the disk of the leaves in May. It is a rigid prickly plant, wild in the south and west of England, where its branches were and indeed are used as a broom.

Leaving the open downs, we will proceed—

BY THE RIVER AND THE STREAMLET.

“ Let us walk where reeds are growing
 By the alders in the mead,
 Where the crystal streams are flowing,
 In whose waves the fishes feed.”

THE hedgerows are gay and the flowers are laughing in the meadows and woodlands ere the blossoms that dwell by the streamlet and the river show their beauties to the sun. Early in April, in shallow waters, some of the aquatic plants send their foliage to the surface of lake and river, but they wait for the summer sun ere they show their brightest flowers. Not so the large Butterbur (*Petasites vulgaris*), which sends its thick stems, loaded with a crowded cluster of flesh-coloured flowers, before the leaves emerge from their winter resting-place. Its big heart-shaped leaves will be conspicuous enough in the summer, for its foliage is the largest of any of our wild flowers, and always forms a feature in the landscape.

If the weather is mild the bright flowers of the May-blobs, the Marsh Marigolds (*Caltha palustris*),

have "oped their golden eyes" before the butterbur and the Ladysmock will have bloomed. The plate-like leaves of the Lilies have arisen ere the leaves of the butterbur appear.

Though aquatic plants, as a rule, are acrid and poisonous, the Water Crowsfoot (*Ranunculus aquatilis*) is a remarkable exception, considering the acrid nature of the family. Its green foliage and pretty white flowers, known by their similarity to the buttercup, are wholesome. Cattle eat it readily, and possibly it might be made of great use as a fodder plant. It is difficult to distinguish the form of its three-cleft foliage under water if the current is strong, for the flower alone rears its head in the air.

The spring will have advanced somewhat ere the pink flowers of the Ragged Robin (*Lychnis flos-cuculi*), the cuckoo flower of Shakespeare. Its jagged petals flaunt by the side of the streamlet, and overtop the meadow grass on its tall stems and long purple-veined seed-cup until midsummer. In the meantime, the many-shaped foliage of the reeds and rushes are growing, and in a sheltered spot, towards the end of May, the Rough-leaved Comfrey (*Symphytum officinale*) begins to show its yellowish-green bells from

amidst its coarse foliage. Its root is mucilaginous. It is used for coughs when candied. The young foliage is not bad eating when cooked, and it forms good fodder for cattle.

As we gain the river-banks we shall see the grey leaves of the Silverweed glistening as if it was on the dusty road-side, and the star-like foliage of the Vernal Starwort (*Callitriche verna*) floating in the stream. There is little to distinguish it except its stalked oval leaves. The green flowers are insignificant. The new aquatic weed, known as the Water-Thyme (*Anacharis alsinistrum*), or Canada Weed, is only too common. The history of this plant is well known, but how it reached this country is a mystery. It was first seen, in the Dunse Loch, in 1842; next in the Grand Junction Canal, near Market Harborough; then in the Trent, and in the Cam; and now it is found in nearly every river and stream. It has been largely propagated by the ignorance of boatmen of its habits, for each of its three-leaved whorls has the power of growing, even when floating down a stream, and the toothed foliage enables it to catch any stray filament of confervæ or weed, and anchor itself, to begin a new life.

What wonderful organism does the still pool reveal to us! the thick green scum is but a mass of Crowsilk, a green thready mass, very apt to appear in tanks. The Quiverworts and Quickmosses, and the wonderful Duckweeds and Pondweeds, all excite our attention as we wander in search of wild flowers. Even the Duckweeds (*Lemna*) are flowering plants, but it will require a pair of sharp eyes to discern the bright anthers on the edges of the green scale-like leaf which forms such a verdant coat for the pool or ditch. There are several varieties, distinguished principally by the shape of the fronds. The Pondweeds (*Potamogeton*) are almost equally as well known to the angler and the saunterer by the river-side, though but few can distinguish the many different species from each other. These transparent, somewhat leathery reddish-brown spikes of leaves, sometimes in early spring rise above the surface of the water, but usually the foliage is immersed, and floats about in the crystal stream like the glorious seaweeds in the clear waters of the ocean. They are occasionally several feet long. The most common species are the Curled, the Shiny, and the Perfoliate species. The thread-like whorls of the Hornworts (*Ceratophyllum*)

crowd round the stem. But these, though flowering plants, and curious and useful in their way, are not usually ranked as old English wildflowers.

Not so the White Rot (*Hydrocotyle vulgaris*), with its roundish lobed leaves, for it sends its pinkish flowers upwards in the month of May, while the leaves loll on the water in shallow places, or even where there is a slight pool on the marshy ground. As it marks the place where the sheep are afflicted with foot-rot, its name is obvious, though at one time the plant was supposed to cause the rot in sheep.

Under the old name of Passions, the common Bistort (*Polygonum bistorta*), or Snakeweed, is yet known in many country places. Its leaves were long looked upon as the source of safety from infectious fevers, for marvellous virtues were attributed to a decoction made from them. The base leaves are somewhat heart-shaped, but like most of the species they become more egg-shaped as they rise up the stem, which is about a foot high, and bears a long spike of small pink-coloured flowers. Modern science is silent as to the genuine virtue of the plant. Ere it has ceased flowering the spring days are merging into summer, and the river-sides are bursting into glory.

THE MARSHLANDS AND THE BOGS.

PASSING from the river-sides to the spongy marshlands, or treading lightly over the dark bog, where

“The golden-belted bees hummed in the air,
The tall silk-grasses bent and waved along”

the pathway, we shall find amongst the thick matted mosses the Sweet Gale, or Bog Myrtle (*Myrica gale*), with its yellowish catkins and refreshing fragrance, early in the year. It is easily known by its small and myrtle-like appearance. It is hung up in houses for its perfume, and where abundant it is frequently burnt for the sake of the sweet odour. When the sweet gale is boiled, a species of wax rises to the surface of the water. This, when gathered in quantities, is used for tapers, and when burnt give out an agreeable fragrance. The plant is strongly astringent, and the berries are frequently used for spices in flavouring ale in Wales.

Perhaps the earliest of the marsh flowers is the *Viola palustris*, whose pale lilac blossoms have, in a

slight measure, the perfume of the violet of our hedge-rows; and by the side of the Marsh Violet we shall find the Marsh Stitchwort (*Stellaria glauca*), with its star-like flower. The smaller flowers of the Bog Stitchwort (*Stellaria uliginosa*) are also frequently found. The Golden Saxifrage (*Chrysosplenium oppositifolium*) makes gay the boggy ground, and sometimes appears by the river-side. Its stem is not more than four or five inches high, and bears a close cluster of bright yellow flowers. This species of saxifrage is remarkable for its medicinal qualities.

By far the most striking, because they are more numerous, frequently covering acres of boggy ground, are the Cotton Grasses (*Eriophorum*), waving their hoary silver hair-like tufts to the wind. But though they look so soft and silky, they are useless, the fibre is brittle, and no means have yet been discovered of utilizing these pretty plants. Many a marsh boasts of the Flowering Fern (*Osmunda regalis*), and the hairy and hard grasses are abundant.



ON THE CLIFFS AND BY THE SEA-SIDE.

IN many a sheltered nook and cranny the spring wild flower will be found in bloom. Others will be found braving the bold sea wind, where

“the murmuring surge
On the unnumbered idle pebbles chafes,”

or flaunt their beauties on the dizzy cliffs. Many of the types of our garden vegetables are natives of the sea-shore, and amongst the earliest wild flowers in bloom are the yellow cross-shaped flowers of the Wild Cabbage (*Brassica oleracea*), which stud the cliffs with their thick large lobed leaves, which though of a pale glaucous green now, in autumn turn to a brimstone or purple hue. As late as September some of the flowers will be found lingering on the tall stem. The leaves, though undoubtedly the parent of our garden variety, are bitter. The cultivated cabbage was introduced by the Romans, and the plant is remarkable for the number of variations it assumes under cultivation; and in this it almost stands alone in the vegetable kingdom.

Sometimes we may find the Hoary Shrubby Stock of the sea-side (*Matthiola incana*), with its pale purplish flowers and white woolly leaves. It is not common even on the south coast, where it has made its home. It is the original of the Brompton stock. On the Welsh coast may be found the Great Sea-Stock (*Matthiola sinuata*), whose purple blossoms smell fragrantly in the evening. The Wallflower, "sweet flower of the solitary place," is far more common on the cliffs of England.

The Sea-Buckthorn, or Sallow Thorn (*Hippophaë rhamnoides*), grows on the sandy shore and occasionally on the cliffs. It is one of the few bushy shrubs of the shore. It has numerous branches, each terminating in a thorn. The narrow leaves have a peculiar leaden green above, and are silvery and scaly beneath. The greenish flowers appear in May, and in autumn are succeeded by numerous yellow acid berries, which are not only wholesome, but in some districts are made into an agreeable fish sauce.

The Common Scurvy Grass (*Cochlearia officinalis*) shows its white cross-shaped blossoms in the late spring. The succulent, thick, egg-shaped leaves are sometimes used in salads, and had for many years a high reputa-

tion as an antiscorbutic. The Horse Radish (*Cochlearia armoracia*) is another species of scurvy grass ; but the appearance of the plants is very different.

The once favourite pot-herb Alisander or Alexander (*Smyrniium olustratum*) flowers in May, but its dark green leaves, not much unlike celery, appear earlier in the year. It was formerly cultivated, and is frequently found near the neglected gardens of old castles and ruined abbeys ; but it loves the salt air. It is an umbelliferous plant, and the flowers are greenish-yellow. The leaves grow out of a swollen sheath.

Another May flower, the Sea-Gromwell (*Mertensia maritima*), is not so common, being chiefly confined to the Scotch and Welsh coasts, where it blooms among the pebbles on the beach. It may be known by the delicate green tint of both stems and leaves, which are covered with a mealy bloom. The flowers are of a rich purple hue, with yellow dots inside. As the foliage withers and the bloom is rubbed off, rough callous points are seen upon the surface, which become stony or ivory-like in drying, when the rest of the plant is black. The flavour of the plant is thought to resemble that of oysters. The floral beauty of the sea-shore belongs rather to summer than the spring.



Wild flowers of Summer.

“As shadowy April’s suns and showers would pass,
And summer’s wild profusion plenteous grew,
Hiding the spring flowers in long weeds and grass,
What meads and copses would I wander through!
When on the water ope’d the lily-buds,
And fine long purples shadowed in the lake!
When purple bugles peep’d in the woods
’Neath darkest shades that boughs and leaves could make.

“The ragged-robins by the spinney lake,
And flag-flower bunches deeper down the flood,
And snugly hiding ’neath a feather’d brake,
Full many a blue-bell flower and cuckoo-bud;
And old-man’s-beard, that wreathed along the hedge
Its oddly rude, misshapen, tawny flowers,
And prickly burs that crowd the leaves of sedge,
Have claimed my pleasing search for hours and hours.”

AS soon as the oak-leaves have burst their ruddy
sheaths and flutter their pale green pennants in

the balmy air, and the spring buds laugh through their split sides into joyous flowers, we know that summer is at hand. The seasons glide into each other noiselessly, and no one can tell where one commences and the other fades away; but we all acknowledge that summer has come when the woodlands are clothed with verdure, and the sun has penetrated the shady dingles and awakened the flowers in the bleak moorland. Spring has built up the tender foliage, and summer crowns it with flowers. The fragrant May stretches far away over hill and dale, its snowy petals sometimes blushing with beauty. The grass of the meadows waves to and fro in gentle billows, waiting for the scythe of the husbandman. The corn is bursting into ear,

“The green herbs

Stir in the summer's breath; a thousand flowers

By the road-side and the borders of the brook

Nod gaily to each other; glossy leaves

Are twinkling in the sun, as if the dew

Were on them yet.”

The fisherman has noted the embroidery which has made gay the banks of his favourite stream. Out of the depths of the river the broad flat leaves of the Water-Lily have arisen, and spread their glossy sur-

faces to the sun. The buds have started up between them. The arrow-head looks defiantly above them all, nay, even frowns at the stately Bulrush and stalwart Reed-mace, which kisses the bank as if afraid of the moving waters. By-and-bye the yellow stars will shine side by side with the long purples, and the snowy petals of the Aquatic Ranunculus will emulate the snow-flakes which fell into the streamlet when January frowned upon its gambols. The river seems to rejoice in its fringe of glory, and goes lazily onward to its stepmother the sea. The old highway seems sunburnt, and proud too of its road-side beauties. The fields entice, the woodlands allure us, the moorland invites us, the swelled torrent of the hill-side is less threatening. It is summer-time. Let us leave the close-built town, and wander among the flowers—

BY THE WAYSIDE AND HEDGEROWS.

“The dew yet lingers on the grass,
 As down the long green lane you pass,
 Where o'er the hawthorn's snowy wreath
 The woodbine's honied perfumes breathe,
 And the wild roses' arching spray
 Flaunts to the breeze above your way.

“What palace proud—what city hall
 Can match these verdant boughs that fall,
 Vaulting o'er banks of flowers that glow
 In lines of crimson, gold, and snow?”

WHAT roses bloomed when the rose was made the insignia of St. George and merrie England? Saint George's Day is the 23rd of April, and the faintest blush of a wild rose cannot be perceived until summer is at hand. But now we may begin to look on their arched sprays for the clustered buds, which will succeed the hawthorn and sweet-scented May. The common Dog Rose (*Rosa canina*), with its pale pink flowers, sweet-scented and delicate, is the most frequent of them all. I have noticed that the dog rose is called the “canker flower” of Shakespeare. The “canker” was the mossy excrescence—the “fairies’

pincushion"—which is frequently seen on the branches. In the 54th sonnet Shakespeare clears up the point:

“The rose looks fair, but fairer we it deem
 For that sweet odour which doth in it live :
 The *canker blooms* have full as deep a dye
 As the perfuméd tincture of the roses.”

In the Midland shires it is still termed a “canker ;” but the rose is the dog rose, as it was in the time of Cæsar’s invasion. The rose of the Roman general was probably the trailing White Dog Rose (*Rosa arvensis*), the White Rose of the Yorkists, the long sprays of which extend several feet from the comparatively small bushes on which it grows. This rose was common in our woods, and it was so frequent in one of the Lancashire forests as to give it its name—“Rose-in-dale.” The red “hips” of this rose are of a sweeter and richer flavour than those of the other wild roses, and are more frequently gathered for the making of that famous cough conserve which country house-keepers are so proud of. The petals of the dog rose and the Sweet-Briar Rose (*Rosa rubiginosa*) are more fancied for rose-water than the trailing dog rose. The sweet-briar is the eglantine of the poets, and it may be known by the fragrance of its foliage, the

smallness of the flowers, which are also of a deeper tint than the more frequent hedgerow and wayside roses. There are altogether eighteen species of roses, but their peculiarities, with the exception of the common Burnet Rose (common on sea-shores and where the soil is sandy or chalky), they can hardly be described in a popular manual.

The Bladder Campion (*Silene inflata*), whose sturdy buds we noticed in the spring, is now in full bloom on the hedge-banks. Deeper in the shade and by the side ditches the yellow flowers of the Common Avens (*Geum urbanum*) start up from its long straggling stems. At first sight the flower is often taken for a buttercup, but a glance at its big root-leaves and branching stem will show that it is the Herb Bennett—the blessed herb, goldyflower, or star of the earth. Throughout the Southern and Midland counties it is one of the most common of wild flowers. It blooms all through the summer; the flowers are succeeded by spiny burs of a dark reddish tint. Its leaves are thought to be valuable as a febrifuge, and was once used as such; but the root is the treasure it holds for the country folk on account of its sweet clove-like odour. It was infused into wine and ale, or distilled

into "sweet waters." When dried and laid in drawers and chests, it imparts its sweet odour to linen. When the plant grows in damp places, or in the shade of a wood, its characteristic scent is not developed.

In our walks down the country lane we shall find now and then a mass of downy leaves, and in the early summer the dark claret-tinted *raceme* of flowers of the Hound's Tongue (*Cynoglossum officinale*). The colour of the flower is so remarkable amongst old English wild flowers as to distinguish it amongst all others, and its lanceolate leaves are said to tie the tongues of hounds; hence its name. When it intrudes into old pastures, cattle avoid it. It is not a very common plant.

Skirting the wayside foot-path we shall find the sulphur-tinted flowers of the Silverweed (*Potentilla anserina*), whose home is perhaps by the water-side; but it seems to love the dusty road and the company of mankind. If we search on the hedge-bank we shall find its companion, the creeping Cinquefoil (*P. reptans*), though it belongs to the heath and common land. It is distinguished by its five-fingered foliage.

There is scarcely a child in the rural districts but who knows the lilac-tinted purple-veined flower of the

Common Mallow (*Malva sylvestris*). It grows by every road-side south of Lancaster. It haunts the sunny banks of the corn-fields and loves the sheltered nooks of the meadows. It establishes itself on waste places, and some of the finest specimens I ever saw grew on the now filled-up moat and on the mound of Northampton Castle. Children call the circular fruit "cheeses," and French children call them *les petits fromageons*. The colour of the flower is that of *mauve*, the French name of the plant. The uses of mallow are infinite: their emollient properties are well known; their leaves are used for embrocation, and the mucilaginous seeds form an excellent soothing poultice when boiled. The upright stems and larger leaves distinguish the common mallow from the Dwarf variety (*M. rotundifolia*), the stems of which droop, the flowers are more faded, the veins are more conspicuous, and the leaves rounder than its taller namesake. It blooms later, and hugs closer to the shelter of the wall, and it haunts the rubbish-heaps of the wayside.

In the hedgerows, when the mallows are in bloom on the banks beneath, we shall find the purple star-like flowers of the Bitter-sweet (*Solanum dulcamara*).

They are easily known by their orange-coloured stamens and their likeness to the flower of the common potato, to which plant it is nearly allied. The bitter-sweet has a straggling stem, and is sometimes found on the top of old walls. Its brilliant scarlet berries in the autumn are tempting to children, but they are poisonous. Its common name is derived from the peculiar flavour of the root. In some districts the bitter-sweet is known by the name of felon-wood.

Though the spring-time, ere the pale green of the hawthorn-bud had burst, we have noticed the pinkish buds of the Woodbine or Honeysuckle (*Lonicera periclymenum*). The woodbine is one of the earliest leafing plants in our hedgerows, and by midsummer its trailing branches are resplendent with their sweet-scented cream-tinted flowers, which are occasionally quite yellow, but generally white marked with red. The flowers grow in a whorl, familiar to those conversant with classical decoration; for it is one of the most common forms used in Greek and Roman ornamentation, as it is now the favourite of the cottage porch. The fruit is red, of a sweet flavour, and frequently remains till the harsh winter winds hustle it to the ground.

As the summer advances, one of the most beautiful of old English wild flowers begins to bloom. The large, hoary, green, woolly leaves of the Foxglove (*Digitalis purpurea*) have remained all winter in sheltered spots; and when midsummer is past the flower-stalks arise, generally solitary, but bearing the lovely bell-like purplish flowers one above the other, their heads all turned one way, to the height of three or four feet. The foxglove is one of the plants which mark the geological strata. It flourishes best when it can nod its handsome head over the earlier formations. In Devon, Cornwall, Wales, and the south of Ireland, it is especially handsome. In the Midland districts, away from the carboniferous system, it becomes dwarfed and scarce. Its common name is a corruption of Folk's (*i. e.*, Fairy) glove; and it has, besides, the common names of fairy thimbles and fairy bells in Munster, where it is more than common. When it is transplanted to a garden, its flowers become pale, often white, and lose their speckled appearance, by which you recognize it as

“the foxglove that Tom stays to pop,
Though his mother has sent him for bread to the shop.”

The popping is produced by closing the opening of

the bell and striking the upper part—a favourite pastime with schoolboys where the flower is plentiful. The powerful medicine *digitalis* is made from this plant, and occasionally villagers drink an infusion of the leaves, but it is dangerous to do so.

About midsummer, but frequently a little later, the tall sturdy spikes of Aaron's Rod—Mullein—put forth their pale yellow blossoms. The Great Mullein (*Verbascum thapsus*) is easily known. At the root the large, woolly, flannelly leaves are something like those of the foxglove, and the woolly material is frequently used for tinder. The angular rough stem rises stiffly to four or five feet high. Its flowers are yellow, and the buds cling closely to the stem. The great mullein frequently grows on recently cleared woodlands, and sometimes makes its appearance on artificial rockwork. The old name of high taper and hag taper was given to this flower. The Romans dipped the stems in tallow, and burnt them at funerals; hence its name. Probably it received this name also from its use to hold the taper to light the candles on the altar, for which its lightness and peculiarity of structure would well fit it. In the Midlands it is called Aaron's rod. Kentish folk call the mullein flannel-flower, from its leaves.

The country people extract a species of ointment from the flowers and use it for chest complaints. We have no less than seven native species of mullein, but many of them are scarce. The Moth Mullein (*Verbascum blattaria*) received its name from the real or supposed dislike some kinds of insects are said to have to its leaves. The yellow Hoary Mullein (*Verbascum pulverulentum*) has a quantity of mealy down on its leaves, and its flowers, which are exceedingly numerous, are so slightly attached to the stem as to fall off on the stem being shook; the calyx then closes round the germen immediately.

Sometimes the St. John's Wort (*Hypericum*) may be found by the road-side, though it belongs to the woodlands. The Galium family are more common. The common Cleavers (*Galium aparine*) are known to everybody under the name of goosegrass, catchweed, tongue-bleed, or harriff (*hairrough?*). They cling to the hedgerows, and force their way to the tops of the bushes by means of the minute hooks with which every portion of the plant is armed. The leaves are arranged in whorls, and the minute white flowers are succeeded by small bristly seeds, which cling to the dresses of the passers by. Its name goosegrass was

given it from the supposed fondness of geese for the plant. Schoolboys draw the whorls over the tongue until it bleeds. The pillow lace-workers collect the seeds to form heads for the pins used in their work. Hairrough tea is considered a purifier of the blood. The cleavers belong to the Bedstraw family, and the Ladies' Bedstraw (*Galium verum*) is often found in hedgerows, but more frequently on the moorland, where it trails through the furze bushes. Its tender stem, dark green fairy-like whorls, its minute yellow flowers, redolent of honey, which cluster round the head of the plant, render it a favourite. The old name bedstraw is supposed to be a misnomer, as I have elsewhere shown,* for beadstraw. The fact that Irish peasant girls often repeat their "aves" from them in the absence of a rosary, and the regular whorls suggest the name—"Our Lady's Beadstraw." It blooms, too, throughout the early autumn months, during which the Feast of the Assumption takes place (August 26). It is said to be one of the flowers which burst into bloom on the birth of our Saviour. Bead-like excrescences frequently appear on the stem.

* "Athenæum," February 21, 1868.

The root of this variety gives out a red dye, and the flowers will coagulate boiling milk.

The Wild Hop (*Humulus lupulus*) is common in some parts of England; it is frequently seen in hedgerows in the Midland and Southern counties. Its dark green rough lobed leaves render it conspicuous, and at the end of the summer months its strong-scented cones peep out from amongst the foliage. The young shoots of the hop plant are frequently gathered and eaten.

The Black Bryony (*Tamus communis*) blooms in June, and its glossy heart-shaped leaves may be seen in the hedgerows. The flowers are yellowish-green; but in autumn its brilliant red berries are very conspicuous. The root of this plant is large, and was frequently called Our Lady's Seal. Its acrid nature may be removed by washing, and leave a small residuum of starch-like substance.

The heart-shaped leaves of the Great Bindweed (*Calystegia sepium*), with its white trumpet corollas, is common—too common—everywhere. Sometimes it is trained as a climber round cottage porches, but it is a troublesome weed to introduce into a garden. The drugs jalap and scammony are prepared from foreign relatives of this species of convolvulus.

Where the hedgerow-bank is warm and sunny, the pretty scarlet Pimpernel (*Anagallis arvensis*) may be found, where it has sought and found shelter from the corn-fields. This is the "shepherd's weather-glass," for one of the "signs of rain" is the closing of the "pink-eyed pimpernel;" it has many powerful virtues, and was highly extolled by the old herbalists as a cure for many diseases of the brain. It may be easily recognized by its square stem, egg-shaped sea-green leaves, which are often marked by black specks on the underneath side. It is one of the most common plants in corn-fields in June and July.

Of all the plants that grace our hedgerows and creep amongst the bushy places, but few are more interesting than the trailing Vetches. Their small tendrils and elegant leaflets set opposite to each other in rows on either side of the stalk, distinguish the whole of the twelve varieties. The red pottage, for which Esau sold his birthright, was the Lentil, a species of Vetch or Tare (*Ervum lens*). One of the earliest flowering varieties is the pretty crimson Vetchling, or Grass Vetch, which has butterfly-shaped blossoms and grass-like leaves, and haunts the bushes of the green fields. The Tufted Vetch (*Vicia cracca*),

with its numerous crowded flower tassels of a bluish-purple hue, is common in all hedgerows, over which it flings its "breathing garland." In the Midland shires, and farther south, the narrow-leaved Everlasting Pea is common enough. Its large greenish flowers, veined with purple, are not much unlike those of the sweet pea. The white Climbing Corydalis (*Corydalis claviculata*), with long and slender stems, small pale yellow flowers, may sometimes be found on gravelly soils growing amongst the bushes. In the hedgerows and by the wayside the rough-leaved labiate plants have usurped the places of the summer flowers, and tell us that autumn is at hand.



IN THE WOODLANDS.

THE summer woods are matronly and sombre; the foliage is full and dark—

“Shade above shade the ærial pines ascend,
Nor stop but where creation seems to end,”

and invite us to avoid the glare of the midsummer sun. The birds sing but little, and there is nought but the humming of the bee to disturb the deep silence of the woods. There are but few wild flowers in its deep recesses. The Bramble and Raspberry are in bloom, and in the cleared heathy recesses we shall find the Bilberry and Cowberry. The tall umbels of the Cow Parsnip and other similar plants rear their heads by the green ridings alone and undisturbed.

Where the sunlight peeps through the boughs we shall find Aaron's-beard, the flower of midsummer, St. John's Wort (*Hypericum calycinum*), though it scarcely shows its brilliant yellow blossoms, with their golden stamens arranged in bundles of three or five, until the first week of July. You may know the whole of the dozen species of the family by the above descrip-

tion and their resinous odour. The most common species is the perforated St. John's Wort (*Hypericum perforatum*). Its two-edged stem is about two feet high. There are small black dots at the tips of the petals and on the calyx, and the leaves on being held to the light appear to be marked with translucent dots, which rural superstition avers to have been made by the "auld Mahoun" with a needle. This species of hypericum was formerly held in great esteem as a vulnerary, and an ointment is even now made from it. Its old name was "Balm for the warrior's wound." The St. John's wort is as frequent in the open spaces near the woods as in the woods themselves.

In July we may find, particularly in the Eastern counties, the yellow Cow Wheat (*Melampyrum pratense*) and its fellow (*M. cristatum*). The latter is a handsome flower, with a little purple within its yellow lip. It is not so common as the first-mentioned, which has large yellow flowers which grow on a straggling stem about a foot high. It belongs to the Figwort tribe, and turns black in drying.

Close by we shall probably find the Knotted Figwort (*Scrophularia nodosa*), where the land-spring is undrained and the soil is moist. We shall easily

distinguish it, as it grows some three feet high, with a square succulent stem, from which at distant intervals branches shoot out, bearing a scattered panicle of small purplish flowers intermixed with green. The plant has a disagreeable odour, similar to the elder bush. The leaves are somewhat heart-shaped, and are doubly serrated. Its root appears full of knots, and formerly had a good reputation for medicinal virtues.

These virtues paled, however, before another woodland plant, the far-famed Betony (*Betonica officinalis*). When a lad, I have gathered arms-full of betony in distant woods for the "yarb"-lovers, whose faith in its virtues, as duly set forth in Culpepper, never failed. The old herbalist only re-echoed what physicians had said before: Green says the Italians tell one another to "buy betony, even if you sell your jacket to get it;" and undoubtedly the plant has the virtue of curing headache, but I have never tried its properties in cases of short wind. Its flowers are labiate, of a purplish-red colour, and grow in whorls round the square stem. The root-leaves are oblong, and grow on long stalks, but the stem-leaves are few. These peculiarities distinguish it from a numerous tribe of plants very similar in general appearance, and amongst which it some-

times grows in the hedgerows. It must not be confounded with what is called Water-Betony, that is, the Water-Figwort or the Smooth Speedwell (*Veronica serpyllifolia*), which is sometimes called Paul's Betony.

The really beautiful blue Meadow Crane's-bill (*Geranium pratense*), like the cow wheat, loves the woodlands more than the meadows. It grows some two feet high, and its rough woolly stem, large deeply-lobed leaves, each lobe subdivided, mark the plant, as well as its large purplish-blue flowers. It blooms throughout the summer months.

In the northern woodlands we may find the drooping and humble Linnæa (*Linnæa borealis*). Its pink bell-like flowers grow in pairs on fine thread-like stems. Its lowly habit and humble beauty commended it to Linnæus, and Gronovius changed its name, at the great Swedish botanist's request, from *Nummularia* to *Linnæa*.

In woods, thickets, and shady places we may find the large, rough, green leaves of the Dog's Mercury (*Mercurialis perennis*). Its greenish flowers grow in a lax panicle. The ovate or egg-shaped leaves are serrated, and grow on stalks, mostly at the upper part

of the simple stem. The plant flowers as early as May in favourable spots, but remains until the autumn on the ground, where, as it withers away, it may be known by its turning of a blackish or bluish-green colour.

The tall, sturdy, umbelliferous plant so common in woods where the ground is marshy, is the Wild Angelica (*Angelica sylvestris*). It is difficult to distinguish sometimes from the Cow Parsnip (*Heracleum sphondylium*), which is, however, a coarser plant, and does not partake of the purplish tint of the flower and stem of the Angelica.

As we leave the summer woodlands, we shall probably see the pinkish-purple butterfly blossoms of the Bitter Vetch (*Lathyrus macrorhizus*). Each blossom is marked by purple veins, and are on long stalked axillary racemes. The plant grows about a foot high, and its two or three pairs of leaflets are of a sea-green hue. In Surrey this plant is frequent, and it is common in the north of Scotland, where the Highlanders eat the tuberous roots under the name of *Corneille*. They dry them, and chew them with their liquor with a view to keep off hunger. Under the name of heath pea the roots have been frequently used as food. The cream-coloured, blue-streaked flowers of the Wood

Vetch (*Vicia sylvatica*) may occasionally be met with, in July and August, in upland and hilly woodlands. The elegant Pea and Vetch tribe are, however, common by the road-side and in the hedgerows.



SUMMER FLOWERS IN THE CORN-FIELDS.

THE ears of the corn are pressing through their ribbed sheaths as summer advances. By the foot-path we shall find the humble Chickweed (*Stellaria media*) pushing its tiny white stars by the side of its bright green leaves. It is a troublesome weed, and of little use save as food for fowls. The Medic is yet in flower. The Trefoils cluster round the borders of the field, where the Vetches are in bloom; but in the field we shall find one showing its blue-streaked flowers among the corn. This is the Strangle Tare (*Vicia tetrasperma*). The Common Tare (*Vicia sativa*) is cultivated under the name of vetches or dills. The Yellow Vetchling (*Lathyrus aphaca*) is distinguished by its colour from the others we have mentioned. The tare of Scripture is supposed to be the Darnel (*Solium tremulentum*). Amongst the common trailing plants we shall see the heart-shaped leaves of the common Climbing Buckwheat (*Polygonum convolvulus*). This is a tiresome weed to the farmer, for its small and insignificant greenish-red flowers are succeeded by an abun-

dance of seeds, and the habit of the plant is to climb the corn-blades and drag them down. Sometimes the leaves of the climbing buckwheat are mistaken for the sweet-scented small Bindweed (*Convolvulus arvensis*), whose pink bells and twisted shoots and leaves are common on road-sides as well as in corn-fields.

Where the soil is sandy the Hare's-foot Trefoil (*Trifolium arvense*) is common. It may be known by its small whitish head being covered with silky-looking grey hairs. The Corn Spurrey (*Spergula arvensis*) will not be far off, though it sometimes does not bloom until later. This pretty flower grows on a stem about eight inches high. The leaves are scarcely thicker than threads, and grow in a whorl round the stem, which is thickened at the joints. The white flowers are not dissimilar to those of the chickweed, and grow in a loose panicle. Cattle are fond of the plant, though it is so little liked by the farmers that some of them call it pickpocket. In Scotland the plant is called yarr. It bears abundance of seeds, which it freely scatters, as its name implies. These are, however, but the smaller flowers of the field, and the Corn Gromwell (*Lithospermum arvense*) is but little more conspicuous, with its narrow-pointed hairy leaves and white flowers

growing on a stem about a foot high. The peculiarity of the plant consists in its seeds, which are as hard as flint, and shine like pearls when the stem is withering away. The roots are of a bright red colour, and are sometimes used for dyeing linen. The Field Madder (*Sherardia arvensis*) loves the deep furrows. Its little stem is barely four inches high. The narrow leaves grow in whorls, and are distinguished by their rough edges. The bluish-lilac flowers grow in a close sessile umbel. Amongst the earlier flowers, though fortunately not generally, the Crow Garlic (*Allium vineale*) must be noticed, for it grows as tall as the midsummer corn, and rears its pale pink flowers as boldly as the most handsome plant. The bulbs are strong smelling, and the plant has hollow leaves round the base of the stalk, all of which smell strongly of garlic.

When midsummer has passed the Poppies begin to bloom, and the Common Red Poppy (*Papaver rhœas*) grows freely in cultivated fields and waste places over England. It is the most showy of all our wild flowers, for its brilliant scarlet is exceedingly bright. It is also known by the names of headache and cheese-bowl. On the continent it is cultivated for the sake of the oil contained in its numerous seeds, which is used in

cooking, and also in oil painting. We have six wild species of poppy, four of which are red. The White Poppy (*Papaver somniferum*) is supposed to have been introduced from Asia. From its milky juice the opium of commerce is obtained.

The Corn Bluebottle (*Centaurea cyanus*) is one of the handsomest of our wild flowers. Like the knap-weeds, the bluebottle has a disk of purple florets set in a hard scaly seed-cup, but it is fringed with a bright blue outer ray of florets. The stem is tall, hard, and slender; the leaves pale green, narrow, and woolly. This plant is noticed for its beauty by many of our poets, and has the country names of hurt-sickle, blue bonnet, and blue cap.

The tall Corn Cockle (*Agrostemma githago*) is also a handsome flower. Its purple flower grows on a stem some two feet high, and the sepals are lengthened until their points stretch beyond the flower-cup. In appearance the flower is not much unlike the champions. Its seed-vessel is large, and its black glossy seeds are numerous.

The blue Wild Succory, Endive, or Chicory (*Cichorium intybus*), is frequently found in light chalky soils, with its large pale blue-rayed flowers growing on

a stem some three feet high. Well may the Germans term it the "keeper of the ways." It opens its flowers at eight o'clock in the morning and closes them at four in the evening.

" Thus in each flower and simple bell
That in our path untrodden lie
Are sweet remembrances which tell
How fast the wingéd moments fly."

The bright yellow blossoms of the Corn Marigold (*Chrysanthemum segetum*) stud the fields for several months in the year. Under the old names of gold, goules, yellowbottle, and St. John's bloom it has been celebrated by poets from Chaucer downwards. The marigold and Marybuds of Shakespeare are different plants. The first is the *Chrysanthemum coronarium*, the garden variety; and the second the marsh marigold. The golden flowers grow singly on a tall angular branched stem, but the foliage is smooth and of a light green tint.

Another handsome plant is the Field Knautia (*Knautia arvensis*), which, though much taller, is frequently taken for the scabious. Its lilac head is slightly convex, but the outer row of florets are much larger than those in the centre. The root-leaves are

hairy, undivided, and only slightly notched. The stem, however, is frequently three feet high. Occasionally the Flax (*Linium usitatissimum*), with its slender pea-green stem and foliage, and its dark blue erect bells, may be found on field borders. This is the flax of commerce, and its bright seed is the linseed. The fibrous quality of the stem is also present in the White Flax (*Linium catharticum*), sometimes found by the roadside where the ground is chalky.

The two trailing plants known by the name of Toad Flax, or Fluellin, have nothing in common with the above. The flowers are yellow with a purple lip, borne on a slender stem. The Round-leaved variety (*Linaria spuria*) has round leaves, as its name implies; in the Sharp-pointed species (*Linaria elatine*) the leaves are broad and halberd-shaped.

The reddish-tinted brown-looking stem and leaves, the latter slightly notched, is the Red Bartsia (*Bartsia odontites*). It is perhaps as frequently met with in pastures as in corn-fields, under the common name of brown weed. Its two-lipped pink flowers grow down the stem in one-sided clusters, and form small sprays some eight or nine inches high.

A more common plant is the Annual Knawel (*Scle-*

ranthus annuus) in sandy fields. Its straggling stems have narrow opposite leaves united at the base. The minute green flowers are in leafy clusters. As the corn begins to ripen, several labiate plants begin to bloom. The Corn Mint (*Mentha arvensis*), with its egg-shaped stalk, notched leaves, square stem with whorls of small lilac flowers, is common. Its disagreeable odour distinguishes it from others of the tribe. The Red Dead Nettle and the Red Hemp Nettle (*Galeopsis ladanum*) are very common. The latter has rose-coloured variegated flowers, while the Common Hemp Nettle (*Galeopsis tetrahit*) has a bristly stem, swelled below the joints, which the red variety has not, and the variegated corolla is principally yellow, or yellowish-white, with a broad purple spot on the lower lip.

There are many umbelliferous plants in our cultivated fields, or flourishing along the borders. These plants, so distinct as a family, are difficult to describe individually. The Wild Carrot (*Daucus carota*) has a compound umbel of white flowers, in the centre of which is a pink one. The leaves are finely divided, and the plant can be distinguished by the peculiar odour of the root, and by the singular appearance

which the umbel presents as the flowers fade. The stalks all turn inwards until they form a sort of cup or bird's nest. This and the upright Hedge Parsley are the "kecksies" of the Midland shires, though it appears that the stems of other umbelliferous plants have been called *kex*. The Shepherd's Needle, or Venus Comb (*Scandix pecten*), is a well-known and pretty plant. No one who has ever seen its singular cluster of long pointed seed-vessels could forget it. It does not grow more than six or eight inches high, and there is little in its finely-cut leaves and white umbels to distinguish it from other plants belonging to the same family. The Hedge Parsley and Fool's Parsley (*Æthusa cynapium*) are also common on the field borders, but are scarcely attractive to the most ardent lover of "Nature's wildings."

The stubble fields, however, show that summer is closing, and that autumn has begun to gather in her rich fruits of the year.



WALLS, RUINS, ROCKS, AND WASTE
PLACES.

AS we climb the ivy-mantled ruin, and repose in the shady bower it has made, we shall find some of the most brilliant of our summer wild flowers in bloom.

“For who would sing the flowers of June”

would find the task a long one even for a summer's day.

The golden star-like flowers of the common biting Stonecrop (*Sedum acre*) sit, as the name implies, on many a stone wall, and reflect the sunshine on many a cottage roof. The flowers, it should be noted, do not grow on the leafy stems, but on leafless stalks. The old names of gold-dust, gold chain, wall-pepper, Jack of the buttery, have died out, except wall-pepper, which it retains from its pungency. There are eleven wild kinds of stonecrop, many of which do not differ materially to the eye from the common *Sedum*. The Tasteless Stonecrop (*Sedum sexangulare*) and the crooked Yellow Stonecrop (*Sedum reflexum*) are common on walls and roofs of houses. The latter has large

yellow cymes, and the leaf-stem is covered with thick recurved leaves. Two other yellow stonecrops are frequent in Wales and on the Cheddar rocks. The White Stonecrop or Orphine (*Sedum album*) is sometimes pickled as samphire. The English Stonecrop (*Sedum Anglicum*), common in Wales, and on the sea-shore, is very lovely. The flowers are but few, but they shine like stars. In the centre their purple anthers are conspicuous. The foliage is tinged with purple. It flowers early, and its branched stems are seldom more than three or four inches high. One species of Stonecrop (*Sedum telephium*) is often found on field borders and amongst bushes. Its stem is spotted, the leaves broad and oval-shaped, and its clustered flowers are purple. Its common name is orphine or livelong.

The interesting House Leek (*Sempervivum tectorum*) is well known from its rosette-like foliage and pinkish flowers, which shed their alleged protecting influence from lightning and calamity over many a cottage roof. The flowers are very interesting to botanic students, and the leaves are used by the villager as a cosmetic, and as a dressing to burns and scalds.

The Wall Germander (*Teucrium chamædris*) is sometimes found in the early summer on old castle



1. Purple Loosestrife. 2. Forget-me-not. 3. Avena. 4. Corn Poppy.
 5. Succory. 6. Lesser Bindweed. 7. Primrose.
 8. White Water Lily. 9. Stonecrop. 10. Pimpernel.



walls. Its ovate, deeply-cut leaves gave it its common name of ground oak. The bright pink flowers are something like the white dead nettle in shape, and grow between the leaves and the stem.

We all know the common purple, pink, or white Snapdragon, or Dragon's Mouth (*Antirrhinum majus*) from its frequent cultivation in gardens. It bends its wild head to the wind on churchyard walls in July, though probably not truly indigenous. Its large capsules and plentiful seeds (from which an oil can be extracted) have probably aided its extension. The flowers are perfect insect traps: the mouth of the corolla closes when an insect enters in search of the nectar which lies at the foot of the cup, and the imprisoned creature has no means of escape, save gnawing an aperture through the walls of its prison.

All the summer long we shall find the Hemlock Stork's-bill (*Erodium cicutarium*) peering out of the crevices of the walls, while its small umbels of purplish flowers peep from its deeply-cut foliage and hairy stem. The tapering awn of the seed-vessel gave the name to the species.

We must look on waste ground and on mountain pastures for the Musky Stork's-bill (*Erodium moscha-*

tum). It has much larger foliage—the cut leaflets are placed on either side of a leaf-stalk. The flowers are purplish, sometimes white, and the whole plant has so strong an odour of musk that it is sometimes cultivated for the sake of its fragrance.

All around, not only on waste places, but on field borders and by the road-sides, is the Thistle tribe found. More than a dozen species claim our attention. On dry stony soils the Musk Thistle (*Carduus nutans*) will be found. Its solitary purple blossom is really beautiful as it nods on its tall cottony stem in July. The stem is somewhat winged by the oblong leaves running down it. The whole plant is prickly, and in the evening gives out a fragrant odour. The Milk Thistle (*Carduus marianus*) may be distinguished by the white milky veins running down its large leaves. A drop of the Virgin Mary's milk is said, by the old legends, to have caused these white veins. This is sometimes called the Scotch thistle, but the true Scotch thistle is the beautiful Cotton Thistle (*Onopordon acanthium*). Its spiny leaves, globulous seed-cup, purple plume, tall branched stem, all point to it as the original of that defiant motto which is associated with it.

The most common of the wayside thistles is the Creeping Plume Thistle (*Cnicus arvensis*), the horse thistle of the country-side, the plague of the fields. Its spiny leaves, dull purple flowers, and angular stems are too well known. The thorny flower-cups and yellow flowers of the Carline Thistle (*Carlina vulgaris*) must not be looked for by the wayside. On the rocky pastures and upland fields it may be found in June and later in the summer. The stems are often coloured or reddish-brown, and there are a few purple florets in the centre of the flower, which closes before rain.

Quite as common as the thistles is the Dock tribe. The Fiddle Dock (*Rumex pulcher*) is not very common, but it may be known by its peculiar fiddle-shaped leaf. The brownish flowers are, like all the dock and sorrel tribe, not very beautiful to the eye, but often give variety to the village posy. The Bloody-veined Dock (*Rumex sanguineus*) is often a vexatious weed in gardens and fields, where it *will* grow, as well as by the wayside. Its somewhat long egg-shaped leaves are marked by deep red veins occasionally. The more common variety has green veins. This is not easily distinguished from the common Broad-leaved Dock (*Rumex obtusifolius*), the leaves

of which are more obtuse, and somewhat wrinkled at the edges. The Alpine Dock, or Monks' Rhubarb (*Rumex Alpinus*), was frequently cultivated for the sake of its root in the abbey gardens, near which its large and very obtuse wrinkled leaves are sometimes found.

A frequent companion of the dock is the big burly Burdock (*Arctium lappa*), whose large heart-shaped foliage forms a remarkable cluster by the road-side. Their ball-like flowers, of a dull purplish hue, are armed with prickles set in a spiny seed-cup; these are the burrs of schoolboys. Shakespeare frequently alludes to their clinging qualities. Celia says to Rosalind in "As you Like it," "They are but *burrs*, cousin, thrown upon thee in holiday foolery: if we walk not in the common paths, our very petticoats will catch them." The leaves, when laid on the part affected, have some virtue in relieving rheumatic pains.

The spiny foliage and stiff stems of the Rest Harrow (*Ononis arvensis*) are frequently seen in the neighbourhood of the burdock. Its pink butterfly-shaped blossoms are but seldom found now in cultivated fields, but they make their home in waste places, and on the common, or the sides of the grassy lanes. It

is known as landwhin in the Eastern counties, while the Scotch call it cammock. The roots are sweet, and have the flavour of liquorice.

As the summer wears on, the well-known Viper's Bugloss (*Echium vulgare*) displays its blue bells, which have so variegated an appearance, in consequence of the buds and stamens being pink in colour. The rough leaves are so thickly set with prickles that even donkeys refuse to crop the bristly rigid plant. The name of viper's bugloss appears to be common to the plant on the continent. Its spotted stem was supposed to resemble the skin of the snake, and its seeds have a fanciful resemblance to a viper's head. Hence, even old Gerarde supposes the plant to possess sovereign virtues against snake bites, as well as a sort of supernatural power over scorpions and other venomous reptiles.

The minute Pearlwort (*Sagina procumbens*), which so frequently leaves the wall for the garden-walk, flowers and seeds all the summer long. The thread-like leaves are each tipped with a spine, and the flowers are very minute, of a greenish-white tint.

The two common species of Sandwort are now in bloom, and the small star-like white flowers of the

Thyme-leaved Sandwort (*Arenaria serpyllifolia*), with its acute ovate leaves and rigid stem, from the forkings of which the flowers grow, is common on walls. The Fine-leaved Sandwort (*Arenaria tenuifolia*) is a remarkably slender plant, fond of a sandy soil. The Purple Sandwort (*Arenaria eulora*) has reddish flowers, much-branched stem, and spreading habit of growth.

At the foot and sometimes on the top of the wall the common Pellitory (*Parietaria officinalis*) may be found. Its dark green oval leaves, red brittle stems, and small pinkish-green flowers, between the stem and leaf, distinguish it. Its warm astringent nature made it in request for toothache, and its salivating properties, from the nitre it contains, added to its value amongst sovereign herbs. It flowers during the summer.

The Ivy-leaved Lettuce (*Lactuca muralis*) may be found starting from the joints of the ruined wall, or towering its slender head and loose clusters of yellow rayed blossoms at the summit. It is a common plant at Kenilworth, and so is the Dyer's Weed (*Reseda luteola*), the Dyer's Rocket, yellow weed or weld. It sometimes rears its tall racemes on dry banks, where

they are conspicuous above the surrounding foliage from the number of yellowish flowers with prominent green stamens, not unlike the mignonette. The stem is branched. What is termed Wild Mignonette grows commonly on chalky hills. It is the Base Rocket (*Reseda lutea*). Its spike is broader, the flowers more yellow, and the leaves cleft instead of undivided like the dyer's weed.

Round the villages on many a waste spot, we shall find the pretty Soapwort (*Saponaria officinalis*), with its large clusters of pale pink flowers. It grows some twelve inches high, and the stem appears to run through its double, smooth, narrow leaves. Its bitter juice makes a sort of lather with warm water. The Holy Vervain (*Verbena officinalis*)—Holy Herb, Simpler's Joy—is also common near houses. It is a long slender-branched plant, with few leaves, and the small bluish-lilac blossoms form a spike at the termination of each branch. The virtues of this herb are but few, but it appears to have been held in reverence for many centuries. The Thorn Apple (*Datura stramonium*) is sometimes found, with its rough leaves, and white bell-shaped flowers, which the leaves shield tenderly at night. Its curious ovate prickly fruit, from which

the well-known narcotic is extracted, gives it its name. The plant was introduced by old Gerarde. The Poisonous Hemlock (*Conium maculatum*) is known by its foetid smell, spotted stem, and dark foliage among umbelliferous plants. Quite a different plant is the Henbane (*Hyoscyamus niger*). The much-branched, rounded stem and foliage are all covered with unctuous foetid hairs. The clustered dingy yellow flowers are streaked with purple, and it has often a purple eye. It is a valuable medicine, and its leaves were formerly smoked for asthmatic affections.

The Dwarf Elder, or Danewort (*Sambucus ebulus*), sometimes haunts the ruined castle and abbey. It also is a noxious plant, with a foetid odour. Its serrated leaflets, dwarf growth, white clusters, red externally, but with purple anthers, distinguish it from the common elder. The berries are reddish-black. Its common name, Danewort, is supposed to have been derived from a tradition that it grew up only where blood had been spilt in the Danish wars.

During the summer, in the south, on rocky places, the whorled leaves of the Madder (*Rubia peregrinia*) may be seen. About midsummer the greenish-white flowers begin to appear, as the creeping stem attains



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|----------------|-----------------------------|----------------------|
| 1. Rock Rose. | 2. Butterwort. | 3. Milkwort. |
| 4. Sundew. | 5. Nymphaea-like Villarsia. | 7. Marsh Cinquefoil. |
| 6. Thornapple. | | |

its full height of some two or three feet. In autumn the rigid foliage becomes bronzed, and the margins prickly. Another colouring plant, growing on a stem about two feet high with a one-sided cluster of purple flowers, is the Alkanet (*Anchusa officinalis*). It may sometimes be found, but it is scarcely considered a British wild flower. The plant is valuable from the colouring matter in the roots.

On the Severn rocks we may look out for the Cheddar Pink (*Dianthus cæsius*), and the pretty yellow flowered Rock Rose (*Helianthemum vulgare*), with its shrubby stems, which also grows on gravelly soils. On limestone rocks a white variety is sometimes found; but, with the exception of the common rock rose, the whole family are local and rare. The bright yellow Welsh Poppy (*Meconopsis Cambrica*) is in bloom on "Severn's banks and Snowdon's cliffs," and the Clove Gillyflower (*Dianthus caryophyllus*), the humble progenitor of our glorious carnations, grows on old stone walls. It is the "July flower" *par excellence* of our ancestors

"The curious choice clove July flower;"

though its small pink flowers would scarcely suggest its relationship.

Far more common, however, is the Red Valerian (*Centranthus ruber*), with its deep rose-tinted clusters of flowers, opposite leaves green and smooth, of a sea-green tint. It is frequently found on old churches, and possesses similar properties to the Water-side Valerian,—the setewall of our forefathers.

Long ere the valerian has ceased to bloom, the shadows begin to lengthen and the autumn flowers to blow.



GRASSY NOOKS.

WHO in the sweet summer-time has not thanked
 God for the green fields, and thought, with
 Johnson Barker,

“What a desert-like spot would this life of ours be,
 If, amid sands of sin, no glimpse could we see
 Of some green-knotted garland of grass—
 Some oasis bright, a glad hope to impart,
 That the sun of the sky, and the sun of the heart,
 Still abide in the road we must pass”?

And ere we proceed to the wild moorland—to the mountain and the heather-clad uplands—let us rest awhile in a grassy nook and contemplate the humble beauty of the simple grass. “The story of the grass,” says Shirley Hibberd, in his “Brambles and Bay-leaves,” “is the story of the world. Ere the creatures of the flood and field existed, the earth brought forth grass and herbs, so that when the earth should bring forth the living creature after his kind, cattle and creeping thing, they should find sustenance and enjoyment; and man, waking up from chaos at the will of the Omnipotent, should find himself in a home of greenness, with a soft carpet for his feet, a refreshing

verdure to gladden his eyes, and a living beauty to imbue his heart with holiness and peace." Travellers have told us that the most sublime scenes on the face of the earth are often wanting in the higher elements of beauty; for you may look in vain for a grassy knoll or quiet spot of delicious greenery, such as are common in our own land.

As we have wandered in search of the brighter coloured wildings of Nature, we have seen the tall Brome creeping through the brambles, and showing its graceful oat-like spray above the undergrowth of vegetation. We have seen it bending in luxuriant masses over the broad stream, and hidden away in the silent depths of the woodland, or sparkling in the glades of the forest. We have felt its elasticity and wire-like texture under our feet on the wild moorland. It is ever present in our landscape, and as it is one of the most common, it is one of the most interesting and useful of the tribes or families of the vegetable world, yet it has been strangely neglected. Ferns and seaweeds have been popularized, but the "grass of the field," in all its varied beauty of form and foliage, has been apparently overlooked; yet there are but few objects in Nature more beautiful or more graceful than a



1 Canary Grass. 2. Meadow Grass. 3. Millet Grass. 4 Meadow
 Fescue. 5. Cock's-foot. 6. Water Sweet Grass. 7. Darnel.
 8. Meadow Foxtail. 9. Rough Brome Grass. 10. Wall
 Barley Grass. 11. Quaki g Grass. 12. Common
 Sedge. 13. Cyperus Sedge.

group of grasses. A higher taste is now spreading. The lordly Pampas Grass waves its pennons on our lawns, and the variegated Ribbon Grass finds a place in many a garden, and the Hare's-tail, Panic, and Quaking Grasses, alternate with flowers in the gay parterre.

Let us cull a few specimens of this much-neglected tribe of plants, as we sit with the soft flowing river murmuring onward, and reflecting our grassy friends on its silvery surface. The common grass is the simplest form of a perfect plant. From its tufty fibrous root there shoots a slender stem, clothed with long and narrow alternate leaves. Along these leaves the veins run side by side from one end to the other. In the true grasses the stems are round and hollow, and the sheaths of the leaves open on one side. They range in height from two inches, as in the Sand Cat's-tail, to eighty feet in the lordly Bamboo. In the Sedge tribe, however, the cylindrical form is absent, and the stem is angular and solid, but the leaf-sheaths form perfect cylinders. The highest leaf on the stem of the grass acts as a cradle for the young buds, until they are sufficiently formed to emerge into the open day. In the sedges, the male and female parts of the flower,

that is, the stamens and pistils, are in separate florets, sometimes in separate spikes. Both the sedges and grasses have three stamens, and most of them two pistils. The sedges have no calyx or corolla; the male flowers are accompanied by a tiny leaf or bract, and the female by a few bristles. In the true grasses the flower consists of *glumes* and *paleæ*. That part of the plant which is called calyx, is called *glume* in grasses, and *paleæ* for corolla; they are both neither more nor less than inner and outer chaffy scales. The bristle which often accompanies the flower of the grass is called an *awn*. There are always three stamens, with one exception, and form an object of beauty during their brief continuance, as they fringe lightly and delicately the spike or panicle. There are generally two pistils, but there is one exception in the Mat Grass (*Nardus stricta*). Its narrow and plentiful leaves grow in a thick mat: its narrow spike contains but one row of florets, which throw out a fringe of purple anthers, generally on one side only. The foliage is dark green. It frequents moors and hill pastures, where its roots form a thick mat.

The Sweet Vernal Grass (*Anthoxanthum odoratum*) which forms the exception to the grasses having three

stamens, we shall find where we sit. This is a small annual grass. Its flowers are contained in short spike-heads, broader at the bottom than the top, and not very compact. This gives out when drying the sweet fragrance of the hay-field, and it flowers earlier in the spring than the majority of grasses.

For the distinguishing characteristics of the other grasses around us, we must look to the marks in the *glumes* and *paleæ*; for all other grasses have three stamens and two pistils.

Let us take the Foxtail family first, for they are easily distinguished, and are common enough, lording it over meadow and corn-fields, and frequenting the road-sides and sludgy marsh. In this family, known under the generic title of *Alopecurus*, the two or three glumes enclose a single floret only. They may be known by their cylindrical spikes covered with orange coloured anthers. The Meadow Foxtail (*A. pratensis*) is one of the early meadow grasses, and grows like its relative the Slender Foxtail (*A. agrestis*), which flowers later, by the road-side and in the corn-fields, to the height of three feet. By the margin of pools we may find the Floating Foxtail (*A. geniculatus*): its rough stem, bent at the joints, distinguishes it from its more

terrestrial namesakes. There are two other Foxtails, the Alpine and the Bulbous; the latter frequents salt marshes.

Similar in appearance, but lower in growth, are the purple anthered Cat's-tails (*Phleum*), tenants alike of the meadow, the pasture, and the sea-shore. They have two pointed glumes, concealing the blunt and insignificant paleæ. On permanent pastures the common Cat's-tail (*P. pratense*), with its thin and wiry stem and its close cylindrical spike, may be found growing to the height of twelve or eighteen inches. The Sea Cat's-tail (*P. arenarium*) is a minute grass with a tapering spike and hairy foliage. There are three other Cat's-tail grasses, known as the Rough, the Alpine, and the Purple-stalked. They are, however, rare.

The Canary Grasses (*Phalaris*) next claim our attention—the tall canary-grass, with its rounded head, and broad, overlapping, and beautifully shaped glumes, of which there are two, with three or four paleæ. The Reed Canary Grass (*P. arundinacea*) waves its panicles of soft florets by the river-side, amongst its relatives, the sedges. It binds the loose earth of the river-bank together, and is otherwise a useful grass. The Ribbon Grass of our gardens belongs to the same tribe.

The Green Beard Grasses (*Polypogon*) are maritime plants, haunting the sea-shore and the salt marsh. There is a perennial and an annual variety. They bloom in August, and have their florets arranged in close panicles. The annual species may be known by having awns thrice the length of the glumes.

Over the brushwood the Feathery Millet Grass (*Milium effusum*) spreads its green feathery panicles like a cloud, and the spreading Millet may be found in woods, rising to the height of four or five feet; the florets have two close glumes enclosing the two paleæ, and several stems arise from the same root.

The silky panicles of the elegant Bentgrass family (*Agrostis*) hang over the foot-path alike of the way-side, the fields, and the woodland. Two unequal glumes enclosing a single floret, with transparent paleæ, distinguish this family. The Fine Bentgrass (*A. vulgaris*) is common in meadows, and has a shining purple-tinted panicle. The Silky Bentgrass frequents sandy fields, and has its panicle waving on one side. The Brown-hued variety haunts the way-side path, and the Marsh Bentgrass (*A. alba*) frequents the Irish bogs, where it grows luxuriantly. It

is common enough in England, as farmers know, as it has an awkward habit of getting into corn land.

The Dog's-tooth Grass (*Cynodon*) has its florets arranged in loose spikes, and the Finger Grass (*Digitaria*), with its many spikes and purple glumes, frequent our southern shores, but are somewhat rare. The dog's-tooth grass is the "Doole-grass" of India, held sacred by the Brahmins, and is much used by the Europeans for lawns.

The next great family of grasses have two or three florets enclosed between each pair of glumes. Amongst these we have the elegant Hair Grasses (*Aria*): their fine and delicate panicles give a lightness and beauty to the river-bank, the field, and the woodland, where various members of the family dwell. The Tufted Hair Grass (*A. cæspitosa*) grows in masses by our woods and hedges, some three feet high. It has light panicles of glossy florets, which have one awn from the bottom of the outer glume. The Wavy Hair Grass (*A. flexuosa*), the Crested, the Silver, the Early, and the Grey Hair Grasses are also common: the latter frequents the sea-shore.

The Panic Grasses (*Panicum*) are found but rarely in our fields, though they are charming in our gardens

and in bouquets, where they make a perfect contrast with the more diffuse and pink-tinted Soft Grass family. They have ribbed glumes, and of the two or three florets enclosed one is neuter. The Rough Panic Grass has smooth jointed stems. The Green Panic grows erect, with a crowded spiked panicle. The Loose Panic Grass has its flowers on one side; the panicle is branched, and the leaves lanceolate. These grasses are related to the millets of India, and in Jamaica and Brazil are valuable as pasturage.

The Soft Grasses (*Holcus*) have a crowded panicle of pink-tinged downy florets and soft hairy leaves. The paleæ form the coat of the seed, and are awned. The Meadow Soft Grass (*H. lanatus*) has the lower floret perfect and without an awn. In the middle of June the Creeping Soft Grass (*H. mollis*) flowers: it has fewer flowers in its panicle, and the upper floret has a very prominent awn. There is a common broad-leaved, rough, tall-growing oat-like Soft Grass (*H. avenaceus*): the florets are large and with unequal glumes; the lowest floret has an awn. The stamens are long, and the anthers deep purple.

Amongst the early grasses are the *Melica*, or Melic Grasses, remarkable for their broad delicately tinted

foliage and purple fly-like florets. The Wood Melic Grass (*M. uniflora*) has a drooping slightly branched panicle; the barren florets are stalked, and the fertile seated. The Mountain Melic (*M. nutans*) has a drooping spike, and the paleæ have no awns. On damp moorlands we may find the Purple Melic (*M. cærulea*): its bluish-green foliage is rather narrower than the others, the florets smaller and more numerous.

We must not overlook the early-flowering Blue Moor Grass (*Sesleria cærulea*), the tenant of the chalky uplands. It may be known by the spikelets being arranged in the form of an oval cluster, by its blue-tinged glumes and narrow foliage.

The Holy Grass (*Hierochloa borealis*) is a pretty grass frequenting the Scottish glens. It has a scattered panicle of florets, three to each spikelet.

Who does not know the familiar Quaking Grass (*Briza*)?—the “Trembling Grass,” the “Quakers and Shakers” of old Gerarde, the “Ladies’ tresses” of our childhood. In the Midlands there is a lingering superstition that this elegant grass brings ill luck to its possessor. There are two British varieties (*B. media*), and the small Quaking Grass (*B. minor*), which is somewhat rare.

Under the broad Greek generic term for grass (*Poa*) we have the true Meadow Grass, common as a weed in our gardens, and which infests our footpaths and green lanes. This family of grasses has a pair of glumes to each spikelet of many florets, and the paleæ are membraneous at the joint. The Rough Meadow Grass (*P. trivialis*) and the Smooth-stalked Meadow Grass are the cherished inhabitants of our meadows, where they add much to the hay crop. They may be easily distinguished by the smoothness or otherwise of the stem. They grow some eighteen inches high, with full-branched panicles of small spikelets, occasionally tinged with purple. The Wood Meadow Grass (*P. nemoralis*) has only about three flowers on each pale green spikelet, which grows from a slender graceful panicle. The other meadow grasses are the Alpine, the Glaucous, and the Flat-stalked. The Bulbous Meadow Grass haunts the sea-shore.

The Sweet Grasses (*Glyceria*) have a simple paleæ; and their many florets, headed by the two glumes, form little spikelets on the panicle. There are four varieties of sweet grasses which inhabit watery places. The Reedy Sweet Grass (*G. aquatica*) grows to the height of four feet by the margin of rivers, and has

stiff sword-like leaves. The Floating Sweet Grass (*G. fluitans*) is common by the margin of ponds. On salty marshes we may find the Reflexed Sweet Grass (*G. distans*); but the Hardy variety (*G. rigida*) is a small plant frequenting the tops of walls and sandy places.

The Cock's-foot Grass is perhaps as well known as any. We have only one British species (*Dactylus glomerata*), but its coarse herbage and distantly branched panicle, the stem resembling the claws of a cock's foot, mark its peculiarity. Its characteristics are two sharp pointed glumes, which are keeled, and enclose from three to six florets.

The Heath Grass (*Triodia decumbens*) is a rigid grass, growing in tufts, with round paleæ and concave glumes. The panicle, which grows on a stem which often leans at an acute angle towards the ground, has four florets on each spike. It is common on swampy ground and on moors.

On muddy salt marshes the Cord Grass (*Spartina stricta*) may be found. Its leaves are rolled in, ribbed, and pointed.

Of Dog's-tail Grasses (*Cynosurus*) we have two species: they have both glumes and paleæ awned, and

the florets are put upon the spike in pairs. The Crested variety (*C. cristatus*) has the spike straight, and the back of the stem is naked. The Rough Dog's-tail (*C. echinatus*) has a compound spike.

On meadow, pasture, walls, waste, and wood, we shall find the Fescue Grass (*Festuca*), with its many flowered spikelets and graceful panicles. It is distinguished from the brome grasses by the lower paleæ not being awned, and from the *Poas* by terminating in a hard point. The glumes are acute and very unequal. On hilly pastures the Sheep's Fescue (*F. ovina*) and the Hard Fescue (*F. duriuscula*). The first is easily distinguished by its fine narrow foliage, square stem, and close panicle leaning on one side; this is also the characteristic of the second, but the panicle is larger, and spreads wider. The Creeping Fescue (*F. rubra*) somewhat resembles it, but it has a glaucous hue, and is hairy on the upper surface. The Small Barren Fescue (*F. bromoides*) frequents walls and sandy places. Its panicle is narrow and erect. The Wall Fescue (*F. myurus*) has a more leafy stem. The Meadow Fescue (*F. pratensis*) is a taller variety, with a nearly upright panicle. It is, however, surpassed in height by the Tall Fescue, which has a compound

drooping panicle, with from three to six flowers in each spikelet. The Spiked Fescue (*F. loliacea*) has its flowers in alternate spikelets seated on the stem, and somewhat resembles rye grass. The drooping spike of the Wood Fescue (*F. sylvatica*) is easily recognized in woods and hedgerows. The leaves are pale and hairy, and the spikelets are placed alternately on the stem, and has long awns. The Spiked Heath Fescue (*F. pinnata*) has smooth foliage and shorter awns, but in other respects somewhat resembles the wood fescue.

By the hedge-side, creeping through the undergrowth, we find the graceful Brome Grasses (*Bromus*), often attaining a great height, and vying in grace with the elegant cyperus sedge. There are some nine or ten varieties of brome grass. The glumes are awnless, and the solid spikelets contain several florets on erect or most gracefully drooping panicles.

The Oat Grasses (*Avena*) are represented by the true oat, and has members of various sizes, tenants of the meadow, the corn-field, and the woodland. They are distinguished by their lax panicles, two loose membranous glumes, and a small number of florets, each of which has one paleæ armed with a strong twisted awn. It has been proved that the common

oats have been derived from the Wild Oat (*A. fatua*), the flowers of which have been used instead of artificial flies in angling.

The Darnel family (*Lolium*), of which the Rye or Ray Grasses are a branch, has many flowered little spikelets seated on either side of the stem. There are but one glume and two herbaceous paleæ. The two styles are very short, and the stigmas are feathery. The Bearded Darnel (*Lolium temulentum*) has a somewhat evil reputation. It is supposed to be the original of the plant translated "tares," which Satan sowed amongst the wheat, for the seed produces poisonous effects on the system, such as headache, vertigo, and drowsiness. It has long glumes, with the awn longer than the paleæ. Its leaves are rough, and it frequently grows to the height of two feet. The Perennial Darnel or Rye Grass (*L. perenne*) is well known.

There is also the Hard Grass (*Rottbolia incurvata*) with a tapering spike, and a stem twisted into angular elbows, which inhabits salt marshes; and the Lyme Grass (*Elymus*), whose spikes adorn the sandbanks, whilst its roots mat the shores into sea barriers. Ere we leave this portion of the subject, we should mention the Barley Grass (*Hordeum*), whose respectable

bearded appearance is well known even in the Common Wall Barley (*H. Murinum*). The Wheat Grasses (*Triticum*), include the Common Couch Grass (*T. repens*), which is too well and unfavourably known. The creeping stems, if boiled, however, form a nutritious mass for pigs. The Fibrous-rooted Wheat Grass (*T. Caninum*) is similar in appearance, but has no creeping root. It is the canine medicine apparently, for dogs eat it with avidity, and it has an emetic action on them.

The Reed family (*Arundo*) claim a notice among the grasses, though their ancient uses and importance have departed. The pandean pipes—the first musical instrument—is scarcely heard any longer; but the reeds of the clarionet and hautboy are not yet superseded. Pens are yet sometimes made from them, but their use in hurdling, for thatching or plastering, is now very limited. They have three to five flowers on each spike, the two glumes are sharp pointed and channel keeled, nearly equal. Their large panicles of glossy florets, with the paleæ, are surrounded by long soft hairs, which give a woolly appearance to the clusters when in seed, which almost vie with the cotton grass, which belongs to the Sedge family. There

is the Common Reed (*Phragmites communis*), the inhabitant of marshes; the Small Reed (*Arundo calamagrostis*); and the Wood Reed (*A. epigejos*); both the species inhabiting woods. The Highland species (*A. stricta*) has only one flower on a spikelet. The Cypress Reed (*A. donax*) is perhaps the most useful member of the family; but it is not indigenous to this country: it gave the name of cane to all the varieties of that article. The Sea Reed (*Ammophila arundinacea*) is a most useful grass in binding up the sand-banks on the sea-shore. It is a rigid plant, with bluish rolled-up leaves.

Here we take leave of our grassy nook, and look out for

“The freckled cowslip, burnet, and green clover.”



IN THE MEADOWS AND ALONG THE
PASTURES.

THE intermingling of spring and summer is so general in the bright grassy meadows, now so lovely in their greenness and beauty, that it is difficult to distinguish between the "beauteous children of the spring," and the more glorious summer flowers, which form the "motley meadow's glory and delight."

Where the meadows are damp we shall find here and there the Meadow Orchis (*Orchis morio*). Its flowers grow on a succulent stem, varying from eight inches to a foot high, and form a lax spike. Each flower is distinguished by the greenish-purple tint of the calyx, which forms a sort of helmet or hood over the purple lip, which is marked with dark spots. Here, too, we may find the early Purple Orchis (*Orchis mascula*), which we noticed in the spring woodlands. Its leaves are frequently spotted with black, and its flowers are altogether paler; sometimes, indeed, I have found them nearly white. When of a deeper tinted purplish or lilac hue, it is sometimes fragrant. Its lip is spotted.

The dwarf Dark-winged Orchis (*Orchis ustulata*) haunts the chalky pastures, where its low and close growth, dingy rusty purple flowers, with rough-looking spots, distinguish it. The Pyramidical Orchis (*Orchis pyramidalis*) haunts the chalky meadows in summer-time. It is much handsomer than the foregoing. Its spike of rose purple flowers is somewhat egg-shaped, and shines like a mass of amethysts amongst the emerald green grass. The pinkish-coloured Marsh Orchis (*O. latifolia*) loves the half-drained meadow. The spotted Palmate Orchis (*O. maculata*) is more fond of the heathy pastures, and its white or pale purple flowers are more or less streaked with a darker tint. The Fly Orchis (*Ophrys muscifera*) presents the appearance of a number of flies creeping up the stem, and the Bee Orchis (*O. apifera*) has the same general resemblance to a cluster of bees. They are not uncommon in the South-eastern districts of England. The uses of the Orchis tribe are not many. The roots of the early purple variety were the staple of the once popular London morning beverage "saloop," and they are supposed to be the "long purples" of which Shakespeare speaks, though the "long purples" of to-day is the brilliant Purple Loosestrife (*Lysimachia*).

The Plantain tribe is common in meadows and pasture lands, as well as by the waysides. Indeed, the Large Plantain (*Plantago major*) bears the name of "way-bread," and is found everywhere near the haunts of man. Its egg-shaped leaves, through which the veins run from stem to point, are raised above the ground, and from the centre there springs the long thick spike of small green flowers, succeeded by the brown seeds so loved by singing birds. In Shakespeare's time the plantain-leaf was used as a plaster for broken shins, and its cooling application seems to be instinctively known to schoolboys. There is scarcely an old herbal but is eloquent on the cures which can be performed by the aid of the decoctions, washes, and applications of this common herb. So frequently does it spring up in the track of the colonist that the Indians call it the "Englishman's foot." Quite as common is the Ribbed Plantain (*Plantago lanceolata*), or Rib Grass. It has narrower and longer leaves, strongly ribbed from end to end, and is sometimes too common in meadows. Its tall dark oval-shaped heads nod amongst the meadow grass, and in June they are covered with white anthers. It is very common—too common—on the field of Bosworth, but it does not seem to affect the

quality of the hay. On the battle-field of Naseby I first found the Hoary Plantain (*Plantago media*), whose spike is lighter and brighter coloured than either of its kindred. It is really pretty when the purple anthers hang from its silvery surface, and its scent is not unpleasant. The leaves are without foot-stalks, and hence it lies closer to the ground than even the larger plantains. On old pastures it may easily be found, and its presence on grassplots is not to be desired, as it destroys the grass in the neighbourhood of the root.

In July, on dry chalky pastures, the dull purplish-red flowers of the Salad Burnet (*Poterium sanguisorba*) may be found. The flowers grow on a stem some two feet high. The egg-shaped serrated leaflets are numerous, and have the taste and scent of cucumber, and are frequently eaten in salads, though the flavour is somewhat hot. When the anthers appear the flower becomes conspicuous, as they are very numerous, and hairy around the head.

The Great Burnet (*Sanguisorba officinalis*) is more frequent in the Northern counties in moist meadows. The stem is from one to three feet in height. The dark purple flowers are much crowded on its oval head

Its serrated ovate leaflets are situated on each side of a leaf-stalk. Its old name of bloodwort pointed to its real or supposed use as a styptic.

Midsummer will scarcely have passed ere the great Ox-eye Daisy (*Chrysanthemum leucanthemum*) will stare boldly from the sides of the dry pastures. Sometimes it overtops the grass, and often shows its broad yellow disk and white rays on the sides of railway embankments.

The Black Knapweed (*Centaurea nigra*), with its hard, knobby, thistle-like head, covered with black scales and crowned with purple florets, stands sturdily above the pastures. Its dull-looking head has not the handsome ray-like fringe of florets of the Greater Knapweed (*Centaurea scabiosa*), the flowers of which are a deep lilac tint, but the scales of the involucre, or head, are more cottony. This plant is the matfefelon of our ancestors, and is noticed in one of the earliest books extant as "bolwede" and "cowede," and as having "leaves ylike to scabyose." This is also a flower of the pasture, field, and meadow. The Premorse or "Devil's-bit" Scabious (*Scabiosa succisa*), which received its common name from the fact of its root having the appearance of being bitten or cut off abruptly, has somewhat stiff

and oblong hairy leaves. Its flowers are in button-like heads of a purplish-blue colour on a nearly simple stem. Its singular name was given it under the belief that "the divell, for the envie that he beareth to mankind, bit it off, because it would be otherwise good for many uses." Now, at all events, the flower is more beautiful than useful. The Smaller Scabious (*Scabiosa columbaria*) is not so common in the middle and northern districts as the preceding. Its leaves are cut into segments like the knapweeds, and grow on the stem. Its five cleft flowers are of a purplish-lilac hue. It is frequently mistaken for the field knautia, which is a much larger plant, and whose outer florets form a ray round the flower. In the small scabious the long narrow leaves of the involucre extend beyond the flower.

Where the pasture is dry, or on the banks by the meadow-side, the old English Clary or Sage (*Salvia verbenaca*) grows. Its wrinkled ovate leaves have a fragrant odour. Its purple flowers scarcely emerge from the calyx, which grows in whorls round the square stem. It has always occupied a prominent place in English cookery. It is fried in pancakes, mixed with curd and made into cheese, or eaten on bread and

butter. Its virtues, real and alleged, were numerous enough, and it received its name "clary" from the seeds being used to clear the eye. A much rarer species is the Meadow Sage (*Salvia pratensis*). It is easily distinguished from all adjoining plants by the bright purple flowers, wrinkled leaves, and sage-like odour. It is frequently cultivated, but it is not common in a wild state in this country.

Now, whilst the mowers are whetting their scythes, and the fragrant smell of the hay fills the summer air, let us sit on the haycock, and glance at the flowers around us. The Germander Speedwell is yet in bloom, and its bright blue blossoms contrast gaily with the yellow Lady's Slipper or Bird's-foot Lotus (*Lotus corniculatus*), which is common on all grass lands. This is a species of trefoil, which has umbellate butterfly-shaped blossoms of a rich golden hue. The half-open buds, and sometimes the flowers, are tinged with crimson. It has a little leaf at the top of the flower-stalk. In general appearance it is not much unlike its neighbour the Kidney Vetch (*Anthyllis vulneraria*), which, however, has its yellow flowers set in a woolly cup. Children call the plant lambs' toes and ladies' fingers. The pale blue-green leaflets, which are hairy and

pinnate, distinguish it from the foregoing. The plant was formerly used as a vulnerary, and was sold as such in the herb markets.

All around us we may see the tall stems of the Sorrel, with its ruddy whorls of flowers. The flower-stems are not attractive, and we all know the grateful acidity of the foliage. The larger variety (*Rumex acetosa*) is the green sauce of boyhood, and is common in meadows; the smaller (*Rumex acetosella*) frequents dry pastures, but its acidity is not so strong. It is the sour grass of Irish children, and either forms a grateful addition to the salad bowl.

If the land is poor, the Yellow Rattle (*Rhinanthus crista-galli*) is almost sure to be present, with its yellow flowers, and narrow, oblong, serrated leaves growing down the rigid stem, which is often speckled with black. The plant is parasitic, and derived its name of rattle grass from its seed-vessels, in which the seeds rattle when shaken by the wind.

Rarely, however, shall we find the meadow Pinks. The Deptford Pink (*Dianthus armeria*) is perhaps the most common. Its rose-coloured blossoms, spotted with white, grow in clusters. It has no scent, but is easily recognized as a pink by its grass-like foliage.

The Proliferous Pink (*Dianthus prolifer*) may be readily distinguished by its small deep-coloured purple flowers, only one head of which expands at a time. The Maiden Pink (*Dianthus deltoides*) has a rose-coloured blossom spotted with white, and a white eye enclosed in a deep purple ring. It has a much-branched stem. By the hedge-side the Musk Mallow (*Malva moschata*) will be found. Its flowers are pale pink; its leaves, kidney-shaped and lobed. It forms a good foreground cluster for the artist, and it is known by the strong musky odour of both flowers and foliage. It is not uncommon in the meadows washed by the Warwickshire Avon.

Near the mallow the Yellow Vetchling (*Lathyrus pratensis*) will probably be found, as well as on the borders of the meadows where the tall grass grows rank and wild, through which the long stem climbs by means of the numerous tendrils. Its thin leaflets grow in pairs, and its beautiful racemes of yellow flowers grow seven or eight in a cluster.

The grasses are now in full bloom, and we long to be in some quiet nook

“On the verdant grass,
Beneath the covering trees,
To cheat the hours with short repose.”

THE HEATH, MOORLAND, AND MOUNTAIN.

THE gorgeous living beauty of the heath and moorland in midsummer tells rather of untold wealth than of a poor soil. The "jewels of earth's diadem" are scattered in profusion, and speak of Him

"Whose hand hath shed wild flowers
In clefts o' the rock, and clothed green knolls with grass,
And clover, and sweet herbs, and honey dews
Shed in the starlight bells, where the brown bees
Draw sweets."

On the heath we shall find many a curious trefoil and honey-bottle. Here the Zigzag Clover (*Trifolium medium*), with its purple flower and zigzag stem. Here, too, is the Hare's-foot Trefoil (*T. arvense*), with its small white round cap of flowers and silky hairs. Here, too, are the small Yellow Trefoils and the peculiar Hop and Bird's-foot Trefoil, creeping over the molehills and making glad the green places.

Here, too, we shall find our five native species of Heath (*Erica*), with their purple or rose-coloured bells, which cannot be mistaken for any other plant's. The Fine-leaved Heath is the commonest of all the

species, and is put to a variety of uses. The young shoots were used in brewing, and it formed the Highlander's bed. It roofs his shanty, tans his leather, dyes his tartan, and catches his fish. The bees hum over the bells, and the moor-cock feeds on its seeds. Perhaps the Ling (*Calluna vulgaris*) is more common than the other. It is the Heather of Scotland, where it grows some two or three feet high. Its small leaves are pressed close to the branches, and it has lighter colour and smaller flowers than the heaths.

Who does not know

“The thyme strong scented 'neath one's feet,
And marjoram so doubly sweet”?

The Wild Thyme (*Thymus serpyllum*) sheds its fragrance o'er many a mossy bank, and gives ease to many an aching head when made into tea. As for the odoriferous Marjoram (*Origanum vulgare*), its taller stem is surmounted by a spike of purple flowers like the thyme too, only there are larger floral leaves amongst it. The sweet bags in our grandmothers' drawers were redolent of marjoram and lavender.

The Creeping Cinquefoil (*Potentilla reptans*) creeps amongst the grass, and shows its yellow flowers and five-fingered leaves on the low-lying bushes; and not

far off will be the common Tormentil (*Potentilla tormentilla*), with its slender stems and its three leaflets, which number five as they approach the flower-stalks. Here, too, is a plant which furnishes not only a dye from its large woody roots, but also a valuable tanning for leather. Our Lady's Bed or Beadstraw (*Galium verum*) is common on heathy soils, with its multitudinous little yellow flowers.

The greyish-blue heads of the Sheepsbit (*Jasione montana*) is sometimes mistaken for the scabious, but it grows on slender stems by hundreds and thousands amongst the grass on the downs and hill-sides, where it is eaten by the sheep and decorates the landscape. Its smell when crushed is very disagreeable.

The Trailing St. John's Wort (*Hypericum humifusum*) grows on slender stems some six inches long on the heathlands, and both flower and cup are dotted with black. It has all the characteristics of its tribe.

The Cotton or Cudweeds are very singular-looking woolly-looking plants. The common Heath variety (*Filago Germanica*) has a sturdy stem of about a foot high, and from its head, which is scarcely larger than a hazel nut, grow two or three flower-stalks bearing a head of blossom. It is allied to the everlasting plants

of our gardens. The Dwarf Cudweed (*Gnaphalium supinum*) has a small close head of yellow flowers on a leafless but woolly stem, which rises just above the grass; the thick leaves lie about the root. The Mountain Everlasting or Catsfoot (*G. dioica*) loves the mountain heath. Its chaffy flowers grow a few inches, and the oblong leaves are woolly beneath. The barren stems lie on the ground.

The fragrant Orchis (*Gymnadenia conopsea*) loves a dry, chalky, hilly spot to show its red spikes. Its sweet scent will enable it to be easily recognized. On the heathland in July we may look for the delicate stems of the Eyebright (*Euphrasia officinalis*), where the soil is dry and open. This is not the blue-eyed speedwell, but the true euphrasy of the poets. Its small white flowers are streaked with purple, which sometimes tinges the whole flower. It is still used for eye-water, but we know not if it is yet steeped in wine, as of old, to improve the memory. The plant is small, with notched leaves, but it is not uncommon.

Near it will possibly be found the pretty Birdsfoot (*Ornithopus perpusillus*), with its butterfly blossoms and its spray of tender leaflets composed of from six to nine pairs. The cream-coloured blossoms are marked

with red lines, and the seed-pods have an awkward resemblance to a bird's foot: hence its name.

As we ascend the steeps we shall find the size of the flowers becoming smaller, and they bloom later than in the lowlands. The Moss Campion (*Silene acaulis*) is scarcely above four inches high when it opens its somewhat large purple, sometimes white, bells to the light, on the mountain summits even of Snowdon, and hence it is known as the Snowdon pink. Here we shall find the Thrift (*Armeria vulgaris*), as well as on the sea-shore, with the yellow-tinted Poppy and its companions, the Saxifrages. The London Pride (*Saxifraga umbrosa*), so common in cottage gardens, is common only on Irish mountains, where it is known as Saint Patrick's cabbage: its wax-like finely marked pink flowers, in a loose panicle, are well known. The Mossy Saxifrage (*S. hypnoides*) shows its white stars on mountain rocks. The Starry Saxifrage (*S. stellaris*) loves the bubbling mountain spring, like the white stonecrop: its white flowers are exceedingly beautiful. The Yellow Mountain Saxifrage (*S. aizoides*) has glumous and downy stalks, and is found by the rill-side: its golden flowers are very beautifully marked with orange spots. The Purple Saxifrage (*S. oppositifolia*),

with its hair-fringed leaves, and lovely purple blossom, which grows on a leafy stalk, loves the wet mossy crags of Snowdon and the Scottish highlands, where the Alpine Clustered Saxifrage (*S. nivalis*) may be also found: the pure white flowers bloom like a button on a leafless stem.

The Bird's-eye Primrose (*Primula farinosa*) blooms in June and July, and is somewhat like an auricula; but the flower is small, seldom larger than the oxlip, of a pale purple tint, with a yellow centre; and the whole plant seems as if covered with a white mealy powder.

The Winter Green (*Trientalis Europæa*) blooms in June on the mountain-side. The stem rises some three or four inches high above the oval-shaped rosette of delicately tinted green leaves, with its three or four little white flowers.

The Globe Flower (*Trollius Europæus*), so well known in our gardens, loves the moist sward of the mountain-side: its tall stem and five cleft and subdivided leaves support its golden balls, which the Scotch call "the luckie gowan." The pale yellow Mountain Violet (*Viola lutea*) is common on the Welsh mountains; and so is the Rose-root (*Sedum rhodiola*), which

takes its name from the odour of its woody root: its unbranched stem, some eight or ten inches high, bears a cluster of yellow flowers and flat and oblong leaves. On the mountain summits the small yellow flowers of the Procumbent Sibbaldia (*Sibbaldia procumbens*) are often mistaken for those of the tormentil. Here also are found the rare Pipewort and the rarer Mountain Spiderwort, but we cannot linger over these. The Alpine Bistort (*Polygonum viviparum*) is, however, abundant amongst the midsummer flowers: its narrow, green, grass-like leaves clasp the slender stem at its upper part, but the lower leaves are stalked. On the upper part of the stem a few flesh-coloured flowers appear. Amongst the lower flowers are a few red bulbs, by which the plant is propagated, a process not uncommon amongst Alpine plants whose seeds cannot ripen.

The lesser-flowered Cow-wheat (*Melampyrum sylvaticum*) is of a much deeper yellow tinge than its woodland namesake, which it much resembles. It is frequently found in North Wales and in some parts of Scotland.

The white Mountain Avens (*Dryas octopetala*) loves to dwell in the fissures of the lower mountain lime-

stone. Its snow-white flowers have eight petals, a thick woody stem, much cut evergreen leaves, woolly on the under side. It is not an uncommon plant on the limestone crags of the United Kingdom, but it is particularly abundant on the limestone plateau on the south-west of the Bay of Galway. Later in the summer the botanist searches for the purple Sow-thistle (*Mulgedium Alpinum*), but it is very rare even amongst the crags of Lochnagar. The Alpine Saussurea (*Saussurea Alpina*) is far more common: its large purple flowers look like thistle-plumes set in a long flower-cup; the slender leaves are woolly beneath and free from spines.

Near highland springs the little Alpine Willow-herb (*Epilobium Alpinum*) may be found, and so may the Mountain Sorrel (*Oxyria reniformis*). The fleshy kidney-shaped acid leaves rise from the root. The pale yellow-tinted white flowers of the Scottish Asphodel (*Tofieldia palustris*) is common on Irish and Scotch mountains. The small Alpine Gentian (*Gentiana nivalis*) shows its bluebell, cut into five segments, sometimes on the Highland summits.

As we cross the mountain pastures to the lower moorland, we may look for the Baldmoney of the

Highlanders, the Spignel or Mew (*Meum athamanticum*), whose fine hairy leaflets cluster round the somewhat tall and ragged flower-stalk, which bears somewhat numerous umbels of yellow-tinted flowers. The plant is aromatic, and the root, which is shaped like a small carrot, is frequently chewed as a carminative. The Alpine Meadow Rue (*Thalictrum Alpinum*) has leaves shaped like the garden rue, but much brighter in colour. Its slight stem droops gracefully when it bears its white blossoms with their somewhat conspicuous stamens. The Alpine Lady's Mantle (*Alchemilla Alpina*) is an elegant plant, with clusters of yellowish-green flowers. The root-leaves are beautifully divided into five-fingered leaflets, covered with lustrous white satin-like down. The Common Lady's Mantle (*A. Vulgaris*) is far more common, and may be found in numbers of our hilly pastures. Its flower is somewhat similar to the Alpine variety, but its leaves not only lack their beauty, but are in shape not unlike the common mallow.

The change in the calendar has turned the pretty Milkwort (*Polygala vulgaris*), the Rogation or procession flower of our ancestors, like many old spring flowers, into a summer flower, for it is seldom now in



1. Bladderwort. 2. Arrowhead. 3. Water Aven.
4. Flowering Rush. 5. Iris. 6. Water Soldier.
7. Frogbit.

bloom until June. It grows but a few inches high, but its racemes of reddish flowers, varying sometimes into purple and blue, are well known to the wanderers in heathy pastures. In Gerarde's time this plant was known as hedge hyssop, and sold as such. This little plant was used in garlands to decorate the windows during procession week.

The star-shaped pink flower with thin golden anthers of the Red Centaury (*Erythræa centaurium*) are well known to the moorland wanderer. The flowers close in damp weather, and about three o'clock in the afternoon. Its bright green leaves and stem grow to above a foot high. It is a very bitter plant, and appears to have been used as a cure for indigestion.

The Petty Whin (*Genista Anglica*) blooms on its spiny stem about midsummer. The Hairy Greenwood (*Genista pilosa*) shows its yellow butterfly blossoms even earlier. Its folded ovate leaves are covered beneath with a silky down, and the whole shrub has a trailing habit, with a much-branched stem. The flower-spikes are only a few inches long. The Dyer's Broom (*Genista tinctoria*) loves a dry gravelly soil, and has an upright bearing, with lance-shaped leaves, and, though common on heaths, it has no objection to

the woodlands. For ages the whole plant has been used for a yellow dye, and in connection with woad (*Isatis*) for the dyeing of wool green. An alkaline salt is obtained from its ashes.



BY THE RIVER AND THE STREAMLET.

IN the summer-time the banks of the streamlet are covered with glory, as we wander by

“The sad waters, sad and chilly
With the snows of the lolling lily,”

or recline beneath the fat alder or the hoary willow.
What is more beautiful than

“A river in a greene mede,
There as sweetnesse evirmore inough,
With floureis white and blewe, yellow and rede”?

And amongst the white flowers what is more fragrant than the Meadow-Sweet (*Spiræa ulmaria*), which adorns the river-bank? We all know its multitudinous cream-

like flowers, its ovate leaflets, with a large terminal and alternate small leaves. This is the Dropwort of our ancestors, though the true dropwort is the *Spiræa filipendula*, whose flowers are cream-tinted, tipped with rose-colour. This is found in dry pastures; and by the woody margins of rivers the Willow-leaved Dropwort (*S. salicifolia*) shows its branching shrubby stem and dull rose-coloured flowers.

By its side, though it does not attain its full beauty until rather later, are the gloriously tinted spikes of the Purple Loosestrife—the “long purple” of the Midland poets (*Lythrum salicaria*). In all respects save that of time, this lovely plant answers to the “long purple” of Shakespeare, which is said to be the meadow purple orchis. The purple loosestrife is abundant on the banks of the Avon, near Stratford, on stems fully a yard long.

Before the loosestrife attains its full beauty, the drooping purple flowers of the Water-Avens (*Geum rivale*) have shown themselves where they grow, and the sword-shaped leaves of the Corn-flag (*Iris pseud-acorus*) have raised their yellow banner aloft over the stream or wet marsh. Its acrid root is said to have some virtues in case of toothache, and is sufficiently

astrigent to be a valuable ingredient in the manufacture of ink. Its juice has some reputation as a cosmetic, and its seeds have been roasted for coffee. The French call it *La flambe aquatique*. The common Purple Iris (*Iris fœtidissima*) is more common on meadow lands. The roast beef odour of the flowers is a subject of common observation.

Here too we shall find the enamelled torquoise flower of the "Forget-me-not" (*Myosotis palustris*), the Water Scorpion Grass. Its bright blue flowers have a yellow eye, surrounded with white. Sometimes the Field Scorpion Grass (*Myosotis arvensis*) is called the forget-me-not, but the legend, of which we have given an outline in our story of the wild flowers, points to the *palustris* as the true flower. The Brooklime (*Veronica beccabunga*) also bears a blue flower, and is frequently mistaken for the forget-me-not. Its stem is much thicker, the foliage is bluntly ovate, notched at the margins, and is lighter, thicker, more glossy, and is very pungent. It is sometimes gathered, when young, for the Watercress (*Nasturtium officinale*) which has white cross-shaped flowers in small clusters. The Water Speedwell (*Veronica anagallis*) also has blue flowers, but they are not so brilliant. The lance-shaped

insipid leaves also distinguish the plant, which seems to be fond of deeper water than either the brooklime or the watercress.

Frequently by the side of ponds and rivers we may meet with the Celery-leaved Crowfoot (*Ranunculus sceleratus*). This acrid plant has a branched succulent stem, much-cut leaves, and small yellow flowers.

The pale flesh-coloured flowers of the Great Valerian (*Valeriana officinalis*) which grow in a cluster, raise their heads some two to four feet high. Its lanceolate leaves are uniformly cut into segments. It is one of the few plants that the herbalist and the doctor use alike. It has some reputation as a potherb under the name of setewall. The love of cats and even rats for the plant is remarkable: its influence over them seems uncontrollable. A similar-looking plant is the Hemp Agrimony (*Eupatorium cannabinum*). Its dull pinkish flowers, greyish foliage, irregularly cut leaves, will enable any one to distinguish the two. The valerian is a solitary plant, while the hemp agrimony loves to grow in a cluster.

Early summer sees the somewhat rare Water Violet (*Hottonia palustris*) in bloom. It is known under the name of featherfoil, from its foliage, which floats

under water; while its hollow stem rears its head, surrounded by whorls of five-petalled lilac flowers. In some streams, about the same time, the Great Bladderwort (*Utricularia vulgaris*) puts out its somewhat bloated yellow flowers, with an upper and an under lip, the upper one being veined with purple. Some three or four flowers occupy the purple stalk. The thread-like leaves are remarkable for the little bladders attached, which gives the plant its name. These fill with air when it is necessary for the flowers to receive the sun's rays, but when the flowers are gone they again fill with water, carrying down the seed to maturity and vegetate in a suitable soil.

Early in April the big platter-like leaves of the Water Lilies shoot up from their watery bed, and spread themselves out on the surface of the pool or river. The Yellow Lily (*Nuphar lutea*) is the first to raise its greenish head above the surface of the water, and open its big eyes, which village children call brandy bottles, from their smell. As evening comes on, the flower closes its petals, and sinks beneath the water to sleep, as it were. The more rare, or rather less frequent White Water Lily (*Nymphæa alba*) is far more handsome. Its numerous petals are sometimes tinged

with cream-colour, at other times with the most delicate pink, and at others they are like the snow. Poets have sung the praise of its "chalice of silver bright," and it is a favourite flower with both gentle and simple.

The fragile-looking, white, three-petalled flowers of the Frogbit (*Hydrocharis morsus ranæ*) peep up from amidst their kidney-shaped and somewhat bronzed leaves, which elbow the bigger leaves of the water lily so unceremoniously, and sometimes cover a pond almost entirely. This plant is common in the Midlands, but is by no means evenly distributed. Another three-petalled flower, which rises out of a two-leaved sheath on a thick stalk, is the aloe-looking Water Soldier (*Stratiotes aloides*). This handsome plant is, however, rare, and is almost confined to the fens. Neither ought we to overlook the more common but handsome Flowering Rush (*Butomus umbellatus*). Its clusters of pink three-petalled flowers stand out like a lady's bouquet, each flower on a separate stem far above the surface of the water. Its sharp, irregular foliage is the source of many a cut finger and lacerated wound.

Surrounding the flowering rush is the singular-

looking arrow-headed foliage of the Water Arrow-head (*Sagittaria sagittifolia*). Its three-petalled white flowers are marked generally with a pinkish spot in the centre. The tuberous root is said to be rich in feculent matter, useful for food after the acidity has been washed out.

In July we see the tall spike and whorled flowers of the Water Dock (*Rumex aquaticus*) above the other plants; and not far off, the tall ragged foliage of the Water Ragwort (*Senecio aquaticus*), surmounted by its loose clusters or corymb of golden flowers. The marsh St. John's Wort, and the small delicately white Bedstraw (*Galium palustre*) is frequently found by the river-side; so is the bushy meadow Cranesbill, and many other damp meadow flowers.

Where there is a nook in the streamlet, or the water is shallow, there we may find a number of singular-looking plants, somewhat alike. These are the Mare's-tail (*Hippuris vulgaris*), whose cane-like green stems, surrounded by whorls of eight or ten dry horny leaves, rising one above another, are different from all the surrounding plants. Its flowers may be found, consisting of one stamen and one pistil, at the base of the upper leaves. The Horsetails (*Equisetæ*) are

somewhat similar, but the whorled leaves are pointed, and the stem may be taken to pieces in sections. The fructification is in a cone at the top of the stem. The horsetail is frequently found in railway cuttings, and on a poor dry sandy soil, as well as by the ditch-side. The common name is pewterwort, and indicates the old use of them for scouring pewter. The Water Milfoil, too (*Myriophyllum spicatum*), which occasionally shows its green leafless spike of flowers above the surface of the water, has its foliage arranged in a whorl of four leaves, which are always submerged.

The somewhat common Water Plantain (*Alisma plantago*) blooms in July near the bank in the river. Its strongly-ribbed leaves closely resemble the Common Plantain, but its flowers are pink and three-petalled, growing in clusters on a much-branched, bluntly triangular stem. The roots are wholesome.

There are two or three umbelliferous aquatic plants which ought to be avoided, which bloom in the summer months. The Hemlock Water Dropwort (*Ænanthe crocata*), which rears its tall head two or three feet high, and bears umbels of whitish flowers, is a most deadly poison. Its root is tuberous, and its foliage is something like celery. It is not so easily distinguished

as the Tubular Dropwort (*Enanthe fistulosa*), which has also white umbels, but whose stem and branches are hollow. Sometimes mistakes are made by watercress gatherers in taking the leaves of the Water Parsnip (*Sium latifolium*)—another dangerous umbelliferous plant—for the watercress. It is well to bear in mind that in the watercress the terminal leaf is rounder and larger than the rest; in the water parsnip it is not only smaller than the rest, but it is deeply serrated. This is fortunately rare.

Some of the Willow Herbs (*Epilobium*) make a great show by the river-sides, by the streamlets, and occasionally they are found in great quantities in damp ditches. The geranium-tinted flowers, willow-like leaves, and thick stems of the hairy Willow Herb (*Epilobium hirsutum*) cannot be mistaken. Children called it cod-lins-and-cream; but its sweet scent is rather sickly. The flowers are seated on long pods, which contain a number of seeds, tufted with cottony down. There is a small-leaved variety (*E. parviflorum*) which is also common. The Rosebay Willow Herb (*E. angustifolium*) is not common in England, but is frequent by the side of Highland streams. There is also a square-stalked variety common near streams. The Smooth-

leaved Willow Herb is a smaller plant, and prefers banks and roofs of cottages. The down of the seeds has been recommended for manufacturing purposes.



MARSHLANDS AND BOGS.

THE earliest summer flower of the marsh is the Red Rattle or Lousewort (*Pedicularis palustris*), which shows its red stems and flowers so plentifully as to tint the landscape, which is brightened by its deeply-cut green leaves.

The Butterworts are, however, the summer flowers of the bog. They are sometimes called bog violets, from their blue tint and drooping heads. The Common Butterwort (*Pinguicula vulgaris*) has its yellowish unctuous leaves arranged round the root. These leaves are used in many counties to coagulate milk, hence its name. The leaves have a singular habit of

curling back over the root when disturbed. It bears also the name of Yorkshire sanicle, and it has been boiled into syrup for a confection. The larger flowered species (*Pinguicula grandiflora*) blossoms in the spring months in mild seasons, and is frequently found cultivated as a garden flower.

The small flowers, succulent stem, and straggling leaves of the marsh St. John's Wort (*Hypericum eloides*) may be found during the summer months. Its small yellow flowers are very insignificant, but it shows the gold stamens arranged in bundles. It is not like its namesake,

"The herb of war,
Pierced through with wounds,
Marked with many a scar,"

for it is only a few inches high.

On the borders of the boggy land we may find the Marsh Mallow (*Althæa officinalis*), with its handsome rose-coloured blossom, tall stem, and thick velvety leaves, which are often gathered yet, and boiled as a remedy for coughs and colds. The Marsh Valerian (*Valeriana dioica*) is a smaller variety of the great valerian we noticed by the river-side. The Bog Pimpernel (*Anagallis tenella*) shows its tiny leaves, and

comparatively large rose-coloured blossoms to the observer; for it is frequently trodden underfoot by those who fail to look for modest beauty.

The pretty yellow spike of flowers, dotted with scarlet anthers on a stem about a foot high, is the Bog or Lancashire Asphodel (*Narthecium ossifragum*). It was once in repute as a hair dye when yellow hair was the fashion of the day; but its fame has disappeared, and its name remains to show the fallacy of many early notions. Its bone-breaking repute is gone. Sheep seldom eat it certainly, because a prudent shepherd would do his utmost to prevent his flock wandering on the boggy soil, for other reasons than because he was afraid of their bones becoming brittle through eating the asphodel.

The Marsh Cinquefoil (*Comarum palustre*) blooms in July. Its dingy purple flowers grow on a reddish stem. Its leaf-stalks have seven dark green leaflets, deeply cut at the edges. Though somewhat local, it is not an uncommon flower. It is closely allied to the tormentil. The fruit is spongy, but somewhat like a strawberry.

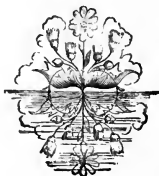
Of all the interesting plants which grow on marshlands, the most singular is the Sundew (*Drosera*

rotundifolia). Those who have never seen its white blossoms growing, can form but little idea of its singular appearance. Round the root it has a circle of leaves, and each leaf has a number of red hairs, tipped with pellucid glands, which exude a clear liquid, giving the leaves a dew-bespangled appearance, as it glistens in the sunshine. These have proved a fatal trap to numbers of insects. The foliage and stem are much tinted with crimson, and the whole plant is small. Mixed with milk, the juice is used as a cosmetic; alone, the milky juice is used as a caustic for warts.

Amongst the July flowers is the beautiful Bog or Buck Bean (*Menyanthes trifoliata*), the queen of marsh flowers. It sometimes, too, rears its tall head by the side of the river, and is frequently planted in that position in ornamental waters, for the sake of its handsome white flowers, which appear almost hidden by a border or delicate pink fringe. Its flower-stem grows out of a sheath on the top of its stout stalk, and the flowers are scattered down the stem. The leaves are triple, like those of the field bean, and the stalk has a general resemblance to that plant. It has many valuable bitter qualities, and in this country it is used as a remedy for rheumatism, but in Sweden and

Norway it is frequently used in brewing instead of hops.

The Great Spearwort (*Ranunculus lingua*) is quite as common by the river as in the marsh. Its blossoms are much like the common crowfoot; but its foliage is slender, and somewhat spear-shaped. The smaller species (*Ranunculus flammula*) flowers later, and is distinguished by its silky foliage. Ere it has done blooming, autumn days are at hand.



THE CLIFFS AND SEA-SHORE.

THE summer sun brings out the sea-side flowers in profusion. The visitor will find the strange vegetation full of beauty. Many have a curious resemblance to the inland flowers, but the majority will be strangers to him. One could hardly fail to recognize the Sea-Kale (*Crambe maritima*) when it sends its white cross-shaped blossom to salute the sun of June, its large, curled, rich-coloured foliage varying from light purple to deep plum-colour, relieved occasionally by the most delicate sea-green hue. It is common in the west of England, and sometimes it is blanched in the sand and eaten.

The sea-side Bladder Campion (*Silene maritima*) will also be familiar, though its stalk is short, and the grey green leaves much smaller than its inland relative. The flower is of the old form, and springs from the swelled seed-cup, marked with purple streaks, which has given it its name. The flowers grow singly on the stem, and are frequent amongst the pebbles of many of our beaches. On the east coast, where the shore is

somewhat muddy, the Teazle-headed Trefoil (*Trifolium maritimum*) will be found. Its small pale red flowers form a round teazle-like head. The Starry-headed Trefoil (*Trifolium stellatum*) is distinguished by the star-like flower of the calyx, when the small yellowish-grey flowers are departed. It is not unfrequent on the south coast. In the salt marsh the Tassel Grass (*Ruppia maritima*) may sometimes be found where the water forms a stagnant pool. It is hardly a flowering plant, but its greenish flowers appear above the surface, to ripen its pollen, about midsummer, after which its branched stem and thread-like leaves are again submerged.

The Sea Milkwort (*Glaux maritima*), or, as it is sometimes called, Black Saltwort, grows in muddy places, some four inches high. Its pale pink flowers are dotted with black, and its leaves smooth and fleshy. The Sea-Sandwort (*Arenaria maritima*) is also common.

“ Among the loose and arid sands
The humble arenaria creeps;
Slowly the purple star expands,
But soon within the calyx sleeps.”

The sea-sandwort, however, has pale lilac flowers, which grow plentifully on its slender creeping stems,

The leaves are cylindrical, and not much thicker than threads.

As the summer advances we shall find the large golden blossoms of the yellow-horned Sea-side Poppy (*Glaucium luteum*). The rough-waved sea-green leaves clasp the stem, which is much branched, and bears several flowers. The horn, as the seed-pod is called, is sometimes a foot long, and distinguishes the plant when its bright yellow crumpled petals and golden stamens have departed. The plant is acrid, and the stalk is full of yellow juice, which leaves a stain on the fingers.

The rose-coloured trumpet-shaped flowers of the Sea-Convolvulus (*Calystegia soldanella*) also claim our attention. Its kidney-shaped glossy leaves are often hidden by the pebbles of the beach. The seed-vessels, like those of the horned poppy, are large and conspicuous when the flowers have departed.

The edge of the cliff is frequently fringed by the sweet-scented Burnet Rose (*Rosa spinosissima*). Its cream-coloured flowers have the odour of raspberries. Its dark brown thickly-set prickles distinguish it from the other roses. It is not uncommon in wild heaths and moorlands, where it assumes a more branched and

open habit of growth. I have found it in the very centre of England, and on the wildest portion of the south coast of Ireland.

Another cliff flower is the strongly-scented Nottingham Catchfly (*Silene nutans*). Its white flowers, jagged petals, and brown-streaked flower-cups, mark the plant. The flowers, however, do not open until evening. They grow in clusters on a stem about a foot high, not only on many parts of the coast, but about Nottingham: hence its name.

A little later and we may find the handsome Sea-Lavender (*Statice limonium*.) Its bluish-lilac flowers grow in branched tufts, or corymbs, and are nearly level at the head. Its long glossy leaves turn back at the point. The angular stem is frequently two feet high. Notwithstanding its similarity of appearance to the garden lavender, it is but

“The sea-lavender ‘which lacks perfume.’”

The island of Steep Holmes, in the Bristol Channel, is the only known place where the Peony (*Pæonia corallina*) grows wild. Here, too, and in one or two other places, may be found the purplish-coloured blossoms of the Sea-Mallow (*Lavatera arborea*).

The red stems, pinkish flowers, and feathery pale green boughs of the Tamarisk (*Tamarix Anglica*)—the accursed tamarisk of the Romans—are also common on the cliffs in July. The pretty spikes of flowers are well known to sea-side strollers. It is an astringent plant, but is not supposed to be a native. The “huswives” of the coast frequently make besoms of its branching stems.

In describing the flowers of the mountain and moorland, I pointed out the thrift and saxifrage. On many sea-coasts they grow nearly down to the high-water mark. Near Bonmahon, County Waterford, London Pride, Thrift, and the Burnet Rose are very common on the cliffs.

Two plants frequently growing and blooming together are much alike. The Sea-Arrowgrass (*Triglochin maritimum*) begins to bloom in May, and continues to bloom until August. Its thick fleshy leaves all grow from the root, and are rounded on one side. The spike of greenish flowers is from ten to twelve inches high. The Sea-Plantain (*Plantago maritima*) has a spike more like the common plantain: it is thicker and more cylindrical than that of the sea-arrowgrass. The leaves are long, slender, and channelled.

The Sea-Heath (*Frankenia lævis*) lies amongst the grass on the cliff-tops. Its fine and thin but rigid leaves and stem are very small; its rich-coloured flowers are bluish and sometimes of a pink hue. The petals have a long stalk, and the foliage is much darker than the grass amongst which it lies.

The Fennel (*Fœniculum vulgare*)—the common fennel, so common in our fishmongers' shops—grows wild at the sea-shore. Its thread-like foliage grows out of large sheaths, and its savoury odour is familiar to all those who have eaten fennel sauce with their mackerel. Its umbels of white flowers appear in July. A somewhat similar flowering plant is the Lovage (*Ligusticum Scoticum*), but its stem is no more than twelve inches high, and striated. The leaves are composed of numerous leaflets. It is commonly eaten in the north, and it is said to have some carminative virtues.

The Sea-Pea (*Lathyrus maritimus*) blooms in July. It is sufficiently like the sweet garden pea to remind us of that flower. Its purple tassels and green leaflets are not uncommon on some shores, trailing amongst the stones. There is a legend about this pea being sent in a time of famine to relieve the hunger of the

people; but those who know its acrid qualities doubt if even hunger would render so bitter a dish palatable.

Seldom do we now meet with the pretty purple flower of the Stork's-bill (*Erodium maritimum*), or recognize its lobed ovate leaves on the sands; but the purple Sea-Rocket (*Cakile maritima*) is more common. Gerarde said it was a "good sallet herb," but its virtues and utility are not much thought of now. Its succulent, grey-green, deeply-cut leaves and spreading zigzag branches, support the tall cluster of purple flowers throughout the whole of the summer months.





Autumn Wild Flowers.

“The scarlet pimpernel creeps here and there,
Amid the corn the crimson poppies blush,
Still on the brooks gleam water-lilies rare,
And purple loosestrife, and the flowering rush
Still honeysuckle blooms perfume the gale
Where bryony-leaves adorn the hedgerows green,
Where peep the scabious and the campion pale,
With trumpet-like convolvulus between ;
The blue campanula, and chickory wild,
And yellow toadflax variegate the plain,
And with a thankful heart and sense beguiled
We look upon the fields of ripening grain.”

NO longer can we point to field and hedgerow
crowned with

“One boundless blush, one white empurpled shower
Of mingled blossoms.”

The reign of summer is at an end, and there follows, as Shirley Hibberd puts it, "the sweet, melancholy, soothing, plaintive autumn, 'like the quiet cadences of a hushed heart.'" You may hear the chirp of the robin, but the sweet-songed birds of spring are silent. The bright-eyed flowers are drooping, and in their stead the ruddy haws, golden crabs, and scarlet hips peep forth as they lose the shelter of the dropping leaves. Seeds are ripening. The woods are starred with golden red, and are full of the tall foliage and pods of bygone flowers. The hedgerows are choked with nettles, mints, and other labiate flowers. The larger flowers are all of a golden or purple hue. The hawkweeds stud the wayside, the harebell swings to and fro, and the autumnal crocus blooms in the meadow. By the river-side the willow herbs still linger. The large ox-eye daisy nods to us from the parched ground. The rich pheasant's-eye glances brilliantly from the ripening corn, and we may find the thread-like spurrey and the wild mignonette. As we approach the ruined wall, we shall find that

"Here the dull nightshade hangs her deadly fruit ;
On hills of dust the henbane's faded green
And pencilled flower of sickly hue is seen."

The mountain and moorland are somewhat gayer, and the visitor to the sea-shore will find a world of flowers yet in bloom. The ferns are in all their graceful luxuriance, and though some of the grasses are withered, others yet bend their laden panicles to the wind.

“A blade of silverhair grass nodding slowly
In the soft wind, the thistle’s purple crown,
The ferns, the rushes tall, and mosses lowly,”

alone adorn the landscape of a late autumn day.



WOODLAND GLADES.

"There is a Power, a Presence in the wood,
 A viewless Being, that with life and love
 Informs the reverential solitude ;
 The rich air knows it, and the mossy sod.
 Thou, Thou art there, my God !
 The silence and the sound
 In the lone places breathe alike of Thee."

WHEN the autumn breath stirs the woodlands,
 the clustering acorns begin to fall, and the
 angular beechmast studs the ground. The juicy rasp-
 berry has departed, but the big blackberries pout
 from the trailing branches. The elder bushes are laden
 with their dark fruit, relieved by the red stalks and
 fading leaves. Berries are abundant on the bushes.
 Nuts are ripening, and the hips and haws show that
 God's orchard is plentifully supplied. The leaves are
 beginning to change, and the flowers of the woodland
 are nearly over.

The Wood Sage (*Teucrium scorodonia*) is yet in
 bloom, if we do not overlook its spike of greenish
 flowers, through which the purplish-brown anthers are

seen. The leaves are wrinkled like the garden sage, and are very bitter; when bruised, they have the smell of garlic, hence one of its old names was *garlicke-sage*. It is frequently used as a bitter drink, and is sometimes used instead of hops for brewing purposes. Sometimes we may find the tall Teazle (*Dipsacus fullonum*) spreading its tall stem and thistle-like heads on the woodland borders. Here, too, in Southern counties may be found the Caper Spurge (*Euphorbia lathyris*) in those thickets which fringe the chalk downs. It is a tall, bushy plant, much like in appearance the common Sun Spurge, so common in our gardens. The flowers are greenish, and in autumn the lobed seeds appear, which are supposed to be a substitute for the ordinary caper. They are, however, exceedingly noxious. The Wood Spurge (*Euphorbia amygdaloides*) is a much more pretty inhabitant of our woodlands. It is readily distinguished by its numerous ovate-lanceolate leaves of a sunny hue; but how or why its old name of "welcome-to-our-house" was obtained it is difficult to say.

The rare purple Helleborine (*Epipactis latifolia*) may be sought for in woods in hilly districts, and it is sometimes found in the Midland shires. Its broad egg-

shaped leaves, long lax raceme of purple flowers sometimes tinged with green, distinguish it. The White Helleborine (*E. grandiflora*) also grows in woods on a chalky soil, but flowers as early as June.

Amongst the autumn plants in our woodlands is the Nettle-leaved Bellflower (*Campanula trachelium*). Its leaves are much like those of the nettle, and its blue bells grow in a small cluster on a stem some two feet high. The Ivy-leaved Bellflower (*Campanula hederacea*) is a graceful plant with pale purplish-blue flowers, and the fruit is a globose capsule. The Giant Bellflower (*C. latifolia*) is common in the north, but in England it is local in its likings. It is easily known, as it grows two or three feet high, and is one of the most stately of our wild flowers. Its flowers in Scotland are often white.

Far more common is the tall and handsome Golden Rod (*Solidago virgaurea*), with its crowded clusters of bright flowers. The ray and disk both are bright yellow. In the days of the Virgin Queen the golden rod was imported from foreign countries, and its virtues as a medicinal herb highly extolled; but on its being discovered to be a native plant, its use and popularity declined. It begins to flower at midsummer, and does

not cease to blow until the harsh October winds rustle its leaves and chill its bright flowers.

The red clustering berries of the Guelder Rose, the rose-tinted fruits of the Spindle tree, the hips and haws, the opaque red fruits of the Bryony, are plentiful now, as the yellow leaves of the maple and elm mingle with the coppery beech and russet brown of the oak and chestnut. The ash sometimes assumes the most lovely green tints during the autumn months. The red leaves of the bramble stretch through the yellow-green bracken, amongst which the conies peep in and out.

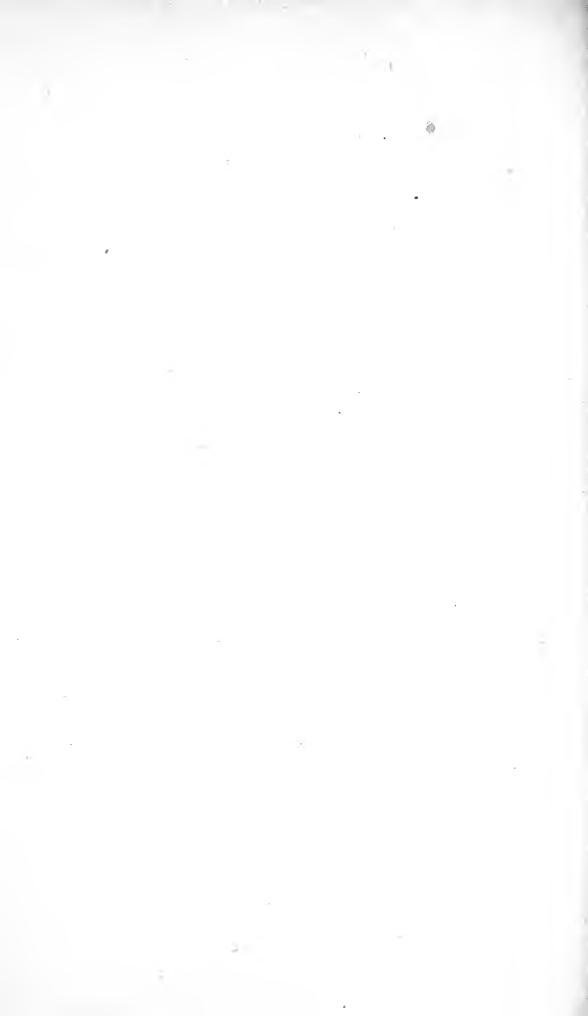


BY THE HEDGEROWS AND WAYSIDE.

THE tender green leaves and bright flowers of the spring and summer have given place to the dull and dusty-looking labiate tribe of Mints, Calamints, and Dead Nettles. We all know the White Dead Nettle (*Lamium album*), with its square stem, of which schoolboys make squeaking pipes: it blossoms in the early summer, but still continues in bloom. A very common plant is the Hedge Woundwort (*Stachys sylvatica*): it has whorls of six purple flowers round its stem, and its leaves are like the common stinging-nettle in shape, but downy. It was, and sometimes is even now, used as a styptic. Near towns the common Black Horehound (*Ballota nigra*), with its dusty foliage and thick stem, is common enough, with its reddish flowers of a foetid odour. The White or Medicinal Horehound (*Marrubium vulgare*) has, on the contrary, an aromatic smell and a bitter flavour: its flowers are small and white, and are set in crowded whorls. It is much used when candied for coughs and asthma. The Catmint (*Nepeta*



1. Yellow Toadflax. 2. Sea Holly. 3. Harebell.
4. Colchicum. 5. Goat's-beard.
6. Purple Saxifrage.



cataria) is another common plant: its flowers are white, tinged and spotted with rose-colour. Boys seldom forget to tease cats with it, and the cats seem to be amazingly fond of the plant; but its strong smell does not render it a favourite with posy gatherers.

One of the gayest of the autumn hedgerow plants is the "butter-and-eggs" of the country folk—the Yellow Toadflax (*Linaria vulgaris*): its tall stem, crowded with narrow slender leaves of a greyish-green hue, is surmounted by a loose terminal spike of handsome yellow flowers, each flower of which has a large orange spot. The juice of the toadflax is expressed, and when mixed with milk is sometimes used as a cosmetic, and at others to attract flies: it frequently occurs in the neighbourhood of old monasteries, and appears to have been cultivated by the old monks as a garden flower.

The Common Tansy (*Tanacetum vulgare*) is a frequent companion of the toadflax if the ground is sufficiently moist. It is a common plant, often cultivated in cottage gardens for the sake of its aromatic feathery leaf, which is frequently used in cooking. Its flowers are small yellow buttons, of no great beauty. In Ireland the flavour of the tansy is much

liked, and is used specially in the flavouring of the Cork luxury, *drisheens*, immortalized by Lady Morgan.

Another hedgerow flower, which has a rural reputation for medicinal virtues, is the Yellow Agrimony (*Agrimonia eupatoria*). It is a somewhat slender plant, about two feet high. Its pale yellow flowers grow round the stem. Each leaf is composed of several cut leaflets growing round the leaf-stalk. The plant is seldom found isolated, but grows in a clustered clump.

On banks by the wayside, where the sloe bushes grow, we may find the Spreading Bellflower (*Campanula reptans*). It is common in some parts of Warwickshire, and may be found in the South-eastern counties. Its rough stem, spreading habit, and larger and more open-mouthed bell, distinguish it from the common harebell, which frequently grows in the same neighbourhood.

Overhead, spreading amongst the bushes, we notice in places the long feathery seed-vessels of the Wild Clematis (*Clematis vitalba*), the "traveller's joy" of old Gerarde, who speaks in raptures of its "decking up the waies." Throughout the spring it has been creeping through the hedgerows and up the trees, showing

its greenish-white clusters of flowers and dark green leaves. On the approach of July its peculiar hoary appearance manifests itself, and in country places is known as "old man's beard." Its rapid growth and its obvious advantage in covering arbours gave it the name of "virgin's bower." It may be distinguished until late in winter. It is very common near Olney, in Bedfordshire, and on chalky and limestone soils.

By the wayside we may find the Plantain, the Hop Trefoil, the Creeping Cinquefoil, the Lamb's-toe Trefoil, and other meadow plants. In the neighbourhood of villages the Common Mugwort and even Wormwood may be found growing on waste ground by the wayside, in company with the Milfoil and Yarrow. These, however, properly belong to other homes. The Nipplewort (*Lapsana communis*) may be said to have its home in the hedgerows, though it is frequently found in corn-fields: its small yellow-rayed flowers grow on branched stems of a peculiar soft texture. The leaves are large, of various shapes; the root-leaves are lyre-shaped. Its country names are swine's-cress and succory dock-cress, and its uses are those of salad herbs, but its bitter flavour is anything but pleasant.

RUINS, WALLS, AND WASTE PLACES.

WHEN the autumn sun lights up the glorious ruin, and the berries begin to shine like jewels, we miss the flowers that gladdened the old walls and cast a ray of beauty into the waste places, and we have to look

“Down to the grey moss on the mouldering wall.”

The foliage is grey, too, of the common Hedge Mustard (*Sisymbrium officinale*), with its ragged, dusty foliage and small yellow flowers, on every waste place and almost every wayside. It blooms, however, rather earlier than the fine-leaved variety (*S. Sophia*), which is much smaller, and is known under the name of flix or flaxweed. Its foliage is finely cut, and its pale yellow cruciferous flowers distinguish it. It was the reputed possessor of great virtues once, but its fame is now departed. The Broad-leaved Hedge Mustard (*S. irio*), the London Rocket, is remarkable for having sprung up in immense quantities immediately after the great Fire of London, but it is rarely found in the neighbourhood of the metropolis.

The Goosefoots (*Chenopodium*) are now plentiful everywhere. The green spikes of the Good King Henry, or Mercury Goosefoot (*Chenopodium bonus Henricus*), begin to rise out of the dull triangular leaves of this spinach-looking plant: indeed, it is frequently cooked and eaten as spinach in Lincolnshire. It is one of those plants that lurk round the site of old monasteries, where, probably, in the dearth of other vegetables, it was cultivated, and its insipidity not so much despised. There are some dozen varieties in addition, all bearing the same family likeness, the green leaves more or less lobed and toothed; the under side grey, the spikes of greyish-green:

Somewhat similar in colour, only much taller and more woody, and the leaves more cut, is the Mugwort (*Artemisia vulgaris*). The upper surface of the leaf is dark green, the under side white and cottony, which turns black as winter advances. The furrowed stem bears a raceme of dull-looking flowers, often purplish when young, but when old yellowish, with closely clipped rays. The plant furnishes a useful tonic, and was formerly worn as a charm against ague. It had the reputation of being a preventive of fatigue. The common Wormwood (*Artemisia absinthium*) has a

similar appearance, but is seldom more than a foot high, and the flowers are larger and of a more decided yellow. The bitters furnished by wormwood are still highly esteemed. The use of wormwood in weaning infants is alluded to by Shakespeare in "Romeo and Juliet."

The green cups of the Sun Spurge (*Euphorbia helioscopia*) are still common by the wayside, and its acrid milky juice is still, as of old, in high repute as a caustic application to remove warts.

The Autumnal Squill (*Scilla autumnalis*) shows its pinkish stars on the rocks late in autumn, and even later its leaves appear, contrasting their freshness with the mature colours around. The mosses begin to look bright as the seasons roll onward, and the fan-like fronds of the ferns stand out in their feathery beauty.



IN THE STUBBLES AND CULTIVATED
FIELDS.

THE golden tint of autumn is spread over the fields. The corn is garnered, and with it have gone many of our brightest flowers. A few remain, as if to remind us

“How many plants—we call them weeds—
Against our wishes grow,
And scatter wide their various seeds
To all the winds that blow.”

The various Thistles are scattering to the autumn winds their “plumed seeds,” for the greater part of their glory has departed with the summer. Their home is, however, in waste places, and they ought not to be found in cultivated fields. The Sow Thistle loves the fields and garden. All who have kept rabbits, or possessed a garden, know the tall, upright, succulent Corn Sow Thistle (*Sonchus arvensis*), with its bright yellow flowers, which start from a long hairy seed-cup. The leaves clasp the stem, and are rougher than the annual variety (*Sonchus oleraceus*), which has smaller flowers, and the succulent stem is full of

milky juice. The leaves are said to be eaten for salad on the continent, but in England they are only used to feed domestic animals and pets.

Sometimes, in the course of the summer, the thin thread-like stems of the Strangle Weed, or Dodder, make their appearance in the clover-field, or disport by the hedge-side amongst the nettles. The latter is the Great Dodder (*Cuscuta Europæa*), and the Lesser Dodder (*C. epithymum*) frequently kills whole fields of clover. Both plants are parasitic, and spread with great rapidity from plant to plant, leaving their red threads round the stem, and at intervals show small clusters of minute pink flowers, which at first look like beads, but soon open and ripen their seeds.

The dark green moss-like tufts of the Camomile (*Anthemis nobilis*) spread along the ground, and in August send up their star-like flower from the commons, where it flourishes; and, as it is trodden on, gives out its aromatic odour and grows the faster. The camomile of the corn-field is the Stinking Camomile (*Anthemis cotula*). It carries its head high. Its leaves are smooth, and not downy like the camomile. Its daisy-like flower might be mistaken for the ox-eye.

The White Campion (*Lychnis vespertina*) some-

times grows in the corn-fields, and more rarely the Corn-bell Flower (*Campanula hybrida*) is seen therein. The useful Fuller's Teazle (*Dipsacus fullonum*), shows, too, its prickly foliage and tall stem, and bears its thistle-like oval head between the segments of the calyx. The blue flowers appear between the hook-like spines of the head, which are used for the raising of the nap on cloth. The leaves clasp the stem so as to form a water-cup. The Wild Teazle (*Dipsacus sylvestris*) is common in the early autumn. Its leaves are much smaller, and the head is nearly destitute of the hooks which give such value to the fuller's teazle. Occasionally the sharp spiky foliage and blue umbels of the Field Eryngo (*Eryngium campestre*) may be found. In Northamptonshire it is called the Daneweed, and was formerly common near Daventry and along the Watling Street road, but is now nearly extinct.



THE MEADOWS AND PASTURE-FIELDS.

AS the autumn days close in the grassy meads begin to grow brown, many of our spring and summer flowers have fulfilled their mission, and have cast abroad their seed. Many a

“Virgin daughter of the mead,
 Wooed by the sun, the wind, the shower,
 In loveliness beyond compare,
 It toils not, spins not, knows no care ;
 Framed by the secret hand that brings
 All beauty out of waste and rude,
 It blooms a season, dies, and flings
 Its germs abroad in solitude.”

The autumn meadow flowers are strangely like those of the early spring, where, if not for its tall stem, we might almost take the large and bright yellow star of the Goat's-beard (*Tragopogon pratense*), or, as it is called, “Jack-go-to-bed-at-noon,” for the dandelion. If, however, we look closely at the flower, we shall find the florets with cut edges (in this instance slightly serrated), and set in a long flower-cup, quite smooth. Then, too, the plant stands some two or three feet high, and has long, large, and smooth leaves.

The seed-ball is larger than the dandelion, each seed is on a longer stalk, and altogether the ball is of a browner hue. The habit of the plant, which gave it its singular country name, is not peculiar to this plant, which formed a portion of the floral clock of Linnæus, from its closing its eyes at noonday, when, in the language of Cowley, it "shuts its flowers at noon and goes to sleep." It does not open its petals during rainy weather.

Besides this giant species, there are thousands of yellow-rayed flowers in the meadows and by the way-side, from August to September, belonging to the Hawkbit or Hawkweed tribes. The former are distinguished from the latter by the long flower-cups being covered with long hairy scales. The Hawkweeds (*Hieracium*) are very numerous, varying in size and colour, but all of a yellow tint, and having a general resemblance to the dandelion. The Mouse-ear Hawkweed (*H. pilosella*) is of a pale primrose hue, and, from its creeping habit, frequently appears in old pastures in great profusion. The old tradition runs, that the hawk fed on the hawkweed, and fed its young with it, in order that it might gain clearness of vision. Another small star-like plant is the Hairy Thrinicia

(*Thrinicia hirta*). The differences between these yellow flowers are so minute that it is impossible to describe them all in a popular manual.

In all old greensward, particularly in old churchyards, we find the Milfoil or Yarrow (*Achillea millefolium*), one of the commonest of common plants. Its long leaves, cut into a thousand segments, may be found all the year round, and shortly after midsummer it sends up a thick stem, some eight or nine inches high, which bears a close cluster of white flowers, sometimes tinged with lilac, and at other times with pink. It forms an ingredient in herb tobacco, and is sold at all the herb-shops, for its ancient reputation as a vulnerary yet survives. Yarrow ointment is still made, but its old names of soldier's woundwort and knighten milfoil have ceased to be used. There is another and larger variety, in which each flower is as large as a daisy, and perfectly white. This is the Sneezewort Yarrow (*Achillea ptarmica*). I have only met with this species once or twice in Lancashire, where it is used as tea for headaches. The Yellow-flowered Yarrow (*A. serrata*) is still more rarely met with. The old name of the yarrow was nose-bleed.

Another famous vulnerary, common in meadows and

on hedgerow-banks is the Selfheal (*Prunella vulgaris*). It grows plentifully in the neighbourhood of old hermitages and monasteries. Its dark maroon flower-cups, studded with rich violet-tinted flowers, distinguish it from other labiate plants. The square stem is not more than six inches high. Its country name of sickle herb points to its use and time of flowering.

Though it flowers much earlier, Caliban's treat and the schoolboy's luxury, the Earth or Pig Nut (*Bunium flexuosum*) must be considered as belonging to the autumn months. Its small white flowers, arranged on umbels on a nearly simple stem some eight inches in height, distinguish it when in flower; but boys find it easily by the finely-cut leaves. On limestone and chalky soils it is very plentiful, and I have never failed to find it. The nut is some two or three inches below the surface of the soil, and is frequently as large as a chestnut. It has a slightly bitter taste, but otherwise pleasant, at all events to childrens' palates.

On meadow lands, stretching across the whole of the middle of England, the purplish crocus-like flowers of the Meadow Saffron (*Colchicum autumnale*) may be found here and there. They have been noted as habiting certain spots for more than three centuries,

and are so abundant as to tint the fields with their naked blossoms. The leaves appear in the spring, when the seed-stalks may be found, but in September the flower is in its glory. It is very poisonous, though it has many medicinal properties.

None of the crocuses can be said to be old English wild flowers, though the purple Spring Crocus frequently appears in meadows as if naturalized. The Saffron Crocus may be found also in some localities, and the Snowdrop has been found apparently wild. The ragged leaves and yellow blossoms of the Ragwort (*Senecio Jacobæa*) may be found until nearly the end of September.



THE HEATH AND MOORLAND.

THE glory of the moorland has departed before the autumn winds. No longer do we find

“The balm, the beauty, and the bloom ”

of summer days. The “blue-bell of Scotland,” the Harebell (*Campanula rotundifolia*) is common over the United Kingdom. The fragile flower-stems dance in the wind, and the fairy bells nod in the breeze. Its leaves have withered before the flower comes, but its young leaves may be found clustering round its root. The White Harebell, cultivated in gardens, is common in the meadows of France, where it is called the “nun of the fields.”

Though so late, we shall find on chalky downs one of the smaller species of Orchis (*Neottia spiralis*), known as the lady tresses. Its spikes of whitish flowers are fragrant, and all point one way, on a grey-green flower-cup and stem. The leaves are of a bright green. It is only a few inches high.

In August and September, by the solitary mountain lake, when the ground is moist and boggy, we may

see the Blue Lobelia (*Lobelia Dortmanna*). It sometimes grows in the water, which reflects its pretty blue bells. It is common in the Cumberland lakes, which sometimes appear filled with its foliage.

Another autumnal plant is the Field Gentian (*Gentiana campestris*). Its branched and somewhat erect stem bears a cluster of four cleft bell-shaped flowers and flower-cups. The dull bluish-purplish hue of the corolla is relieved by a little fringe in the centre of the bell. Its strongly-veined leaves are very bitter, of a bright green colour. This was the Baldmoyne of Chaucer's time, and the plant was early used for medicinal purposes, and for bittering ale instead of hops.

The Yellowwort (*Chlora perfoliata*) has long, pointed egg-shaped leaves, which are covered with a sea-green bloom. The stem, which runs through the leaves, is about a foot high. The large beautiful yellow flowers only open during the time the sun is shining. In the morning the centre flower opens, and when it closes at noon, the side flowers open, and remain so until the evening. This is also a bitter plant, with some tonic properties, and it has also been used for dyeing. Many a wanderer on the heath sees it as he searches for the wild berries, or for the herbs, blooming

late into September, when the equinoctial gales tell of the advent of winter, as they moan along the uplands like the wail of the wild flowers.



BY THE RIVERS AND THE STREAMLETS.

“O river-side !
Where soft green rushes bear dark flowers,
And reedy grasses weave dark bowers
Through which fleet minnows glide ;
O river banks ! let me from you convey
Something to scatter in that minster gray.”

WITH August days come the jovial “rush-bearing” times, yet kept up in the north and east. Where the imperfect drainage permits the rushes still to flourish, we shall find the tall Bulrush (*Scirpus lacustris*), with its fringed brown head nodding in the breeze, ere the basket-bottomer gathers it, or the villager comes for it to form the wick of the humble rushlight. The Sweet Flag (*Acorus calamus*) was

much sought after once for strewing in churches, in consequence of its fragrance. Here we cannot enter upon the distinctive features of the numerous tribe of Rushes, or do more than point out the graceful Cyperus Sedge, which nods its head by the river-side, or the more upright and sturdy Common Sedge. (See *ante*, 147.) The leading characteristics of the Sedge family we pointed out when treating of grassy nooks. Above them all the handsome Reedmace (*Typha latifolia*) rears its tall catkin, so long, fleshy, and round. It is sometimes confounded with the bulrush, but is altogether a different plant. Its leaves are often an inch wide and a yard long, and the catkin is mounted on a stalk occasionally five or six feet long. The Common Reed (*Phragmites communis*) which bears a feathery spray of light brown down, is also a neighbour of the sedge and reedmace in the marshy pool. The Bur Reed (*Sparganium ramosum*), with its singular-looking balls of flowers on the tall stem, also forms a feature in the river-side landscape.

Three or four yellow flowers continue to bloom until far into the autumn. The somewhat rare, but once common Elecampane (*Inula helenium*), with its single terminal yellow-rayed flower, may sometimes be found.

Its toothed downy leaves clasp the stem, which is frequently upwards of a yard high. Its root was the basis of the confection known by the name of the flower, and is still used with candied horehound as a pectoral medicine. The Fleabane (*Pulicaria dysenterica*) is another of these yellow flowers, with golden rays surrounding a disk, but is much smaller. Its wrinkled downy leaves are greyish in hue, and clasp the stem. The plant is bitter, but what special antipathy fleas have to its smoke would probably be difficult to discover. The Bur Marigold (*Bidens tripartita*) received its name from its bristly bur-like seeds. The yellow rays are dull-looking, and are frequently absent altogether from the dirty, greenish-looking disk. There are two varieties of this flower, not uncommon; but the difference between them is very slight: the foliage marks the distinction.

Of a very different appearance is the tall and graceful yellow Loosestrife (*Lysimachia vulgaris*), or Willow Herb, whose star-like yellow flowers grow amongst the leaves, on a stem two feet high. The smaller variety (*Lysimachia nummularia*) is of a creeping habit, and is fond of the sparkling rivulet and dashing cascade. It is frequently known under the name of moneywort, from its round foliage.

The Mint tribe (*Mentha*) is common by the river-side: the Capitate Mint (*Mentha aquatica*) is especially powerful amongst the Peppermints and Spearmint. Occasionally, too, the Pennyroyal (*Mentha pulegium*), with its strong smell familiar to the herb garden, may be found. These have all a common appearance, and there are nearly a dozen other varieties.

There are several species of Polygonums in bloom during the autumn months: one of the most common is the Spotted Persicaria (*Polygonum maculatum*). It is frequent in gardens and in damp places. Its long leaves, in the centre of which is a black spot, distinguish it. This spot is popularly said to have been caused by the plant receiving the drops of our Saviour's blood as He toiled up the *Via Dolorosa*. Its close flesh-coloured spikes of small flowers are more or less common in all the varieties. The Water-Pepper or Biting Persicaria (*Polygonum hydropiper*) has narrow leaves and waved margins. Its name is borne out by its pungent properties. The Amphibious Persicaria (*P. amphibium*) is of the same straggling habit as some of the other varieties. Its thick spike of rose-tinted flowers are well known at the water-side, and, indeed, better known than liked by many agriculturists.

MARSHLANDS AND BOGS.

HERE we shall find the cross-leaved Heath (*Erica tetralix*), with its whorls of four slender leaves and its pale bells. Many a mass of ling and heather bloom beside it, though their home is on the moorland and the mountain.

The lovely Grass of Parnassus (*Parnassia palustris*) blooms in autumn. Though called a grass, it has nothing in common with the green covering of our fields. It is found frequently in the north of England, and is occasionally found in suitable situations in the Midland shires. Its angular stem, which bears its handsome cream-coloured flowers, is only a few inches high; and round its root the heart-shaped leaves spring from long foot-stalks, like a violet. The plant received its name from its being considered as a fit flower for the Muses' care.

The Bog Orchis (*Malaxis paludosa*), a small plant with yellowish-green flowers, may be looked for when the autumn sets in. It may be known by the margin of the leaves being rough, with incipient buds. The

Marsh Cudweed (*Gnaphalium uliginosum*) lifts, too, its woolly-branched stalk and its yellowish-brown chaffy head to the sun.

The Marsh Gentian or Felwort (*Swertia perennis*) is a somewhat rare plant now. Its trumpet-like blue bells are open to the sun like a chalice, to catch the dew, and are streaked with yellowish-green. They grow above the narrow leaves on a stem nearly a foot high. The tonic properties of this herb are much used even now.

Another elegant marsh plant is the minute Ivy-leaved Bellflower (*Campanula hederacea*), but unfortunately it is rarely to be met with save in alpine districts in England, where it makes its home by the side of the waterfall. I have met with it frequently in Ireland, but its hair-like stems, ivy-shaped leaves, and purplish bells, are not obtrusive to the eye.

The fruit bushes that stud the marsh are equally common to the moorland and mountain, and there we have observed them.



THE CLIFFS AND SEA-SHORE.

AS the autumn comes on we still find the pink flowers of the Sea-Thrift in bloom, and several kinds of Sea-Southernwood are in bloom. On both the southern and north-western coasts the Samphire (*Crithmum maritimum*), renowned by Shakespeare, is yet gathered for pickling purposes, and a very good pickle it makes. Its thick leaves and small greenish-white flowers may be found throughout the summer on the cliffs, above high-water mark. The name is a contraction of Sampeter, and it was known as St. Peter's or the Fisherman herb. Sometimes the Common Saltwort (*Salicornia herbacea*) is sold as samphire, and it is frequently pickled. It is composed entirely of jointed fleshy tubes, and at the base of each tube grows the flower-stalks and three green flowers. The plant is semi-transparent, and was much used formerly in the making of kelp, as well as the Prickly Saltwort (*Salsola kali*), whose sharp angular stem has cut many a hasty finger. The small green flowers grow singly, and have three small green leaves at their base.

On the waste places and mud-banks near the sea-

shore the several species of Orache (*Atriplex*) flourish. Under the name of arrage or medlus they were known to our ancestors, who boiled the leaves for spinach. The foliage is covered with a granular mealiness, and their tiny blossoms are arranged in spikes, and vary in colour from green to red. The seeds are enclosed in two bracts, which enlarge after flowering, and are frequently covered by large warts.

On salt marshes, and occasionally on the cliffs, we may find the Sea Blite or shrubby sea-side Goosefoot (*Suaeda fruticosa*). It is somewhat rare. It has a stem some eighteen inches or more long, and small semi-cylindrical fleshy leaves. The greenish flowers grow between the leaf and stem. Sometimes the whole plant, which is soft and juicy, is tinged with red. It sometimes flowers as early as July, but in cold seasons it lingers on until autumn. Wherever, too, the mud is impregnated with brine, the Sea-Beet (*Beta vulgaris*) may be found. Its fleshy deep green-coloured leaves are ovate in shape; and as autumn proceeds they become tinged with red. The leaves are wholesome, and partake of the flavour of spinach. The flowers are small and green, and grow between leaves on the flower-stem. The red root is sweet, and forms a

popular confection when candied with sugar, and it also forms a good pickle.

In August, too, on sandy shores, we shall find the succulent Sea-Purslane (*Honkenya peploides*), with its white flowers, and thick glossy egg-shaped leaves, which start from the creeping rhizome. The leaves grow on the stems in four cross-shaped distinct rows. This distinguishes it from all other sea-side plants. It grows in clumps, and is not uncommon.

The Sea-Holly or Eryngo (*Eryngium maritimum*) cannot be mistaken. Its rigid stem, prickly foliage, variegated with white veins, its umbels of chaffy heads of blue flowers, all mark the plant. Its roots have been candied for their tonic properties, and the young shoots of the plant are boiled as vegetables. The flower-heads, and those of the Sea-Lavender, form a pleasant remembrance of the sea-side sojourn, as they keep their form and no little of their colour for months.

The Asparagus (*Asparagus officinalis*) grows wild on several parts of the shore of the United Kingdom. Its virtues as a diuretic are well known.

As the season passes onwards, and the glorious golden sunrises mark the shortening days, we shall find the Michaelmas Daisy, or Blue Camomile, as it is

called (*Aster tripolium*); it is also known as sea-starwort and blue daisy. Its shrubby stems continue to bear their azure flowers until the frost nips the young buds. It received its scientific name because it was alleged that it changed its colour three times each day, and that it was white in the morning, purple at noon, and crimson in the evening. Its narrow leaves are of a pale green tint. Cattle are fond of the foliage, and the liking of swine for its bean-like roots gave it its common name of hog's-bean.

The salt marshes are tinged late in autumn by the bluish-green hue of the Sea-Southernwood (*Artemisia maritima*), which grows somewhere about a foot high on slender stems. The leaves, stalks, and flower-spikes are all of a dullish grey tint. It has the odour of lad's love—the common garden southernwood or “old man.”

“These few pale autumn flowers,
How beautiful they are!
Than all that went before,
Than all the summer store,
How lovelier far!

“And why? They are the last!
The last! the last! last! last!
Oh! by that little word
How many thoughts are stirred,
The sister of the past!”



Wild flowers of Winter.



“See, winter comes to rule the varied year,
Sullen and sad, with all his rising train,
Vapour, and clouds, and storms ;”

AND as he comes the wild flowers go to their wintry home, where the secret processes of Nature—which are never still—are at work to renew, with vigour, life, and beauty, the opening year, and gladden the face of spring. For

“Look nature through, 't is revelation all,
All change—no death.”

The hedgerows are yet full of beauty. The tall sprays of the Wild Rose toss their arms aloft, as if

proud of their coralline hips, as well as of the "fairy pincushions," or "rose sponge." We have noticed, as Shakespeare noticed before us, that

The canker-blooms have full as deep a dye
As the perfuméd tincture of the roses."

These mossy excrescences are the product of a species of gall-fly (*Cynips*). Another variety produces the round bead-like protuberances at the back of oak-leaves, which are now developing into gall-stones. The "unsightly monstrous fungi," arrayed in their bright shades of orange and red, display their fleshy protuberances like sensual ghouls on the moist graves of the withered summer blossoms. The crimson-leaved Bramble trails over the hedgerows, and hides itself in the luxuriant undergrowth, which has not yet succumbed to the wintry storms.

The flowers are not all dead. A second blow of many flowers appear "faintly tinged, and breathing no perfume." A lingering autumn Knapweed, or a starry Corn Marigold, or an early Dandelion, opes its big yellow eyes to receive the cold kiss of the winter's sun. On chalky or clayey pastures we may see clusters of the radiate or star-shaped flowers of the Ploughman's Spikenard (*Conyza squarrosa*), which

blooms late. Its leaves are hairy, and it grows to the height of three feet. In former days the spikenard was hung up in rooms to drive away gnats and other insects. In many cottages, both here and in France, it is hung up for this purpose. The "wee Daisy" raises its glad face to heaven from many a sheltered nook.

The hedges are decked with many-coloured berries—with hips and haws, the rose-tinted fruit of the Spindle tree (*Eunonymus Europæus*), the transparent red berries of the Honeysuckle, which contrasts with the black berries of the Sloe, Privet, or Elder, and the clear white pearls of the Mistletoe, which may be seen on many a crab and apple tree. The red and white berries of the Cowberries, the grateful acid berries of the Barberry, and the scarlet ones of the White Bryony hang in profusion like clustered gems.

The Mistletoe—the "silvery modest mistletoe"—(*Viscum album*), with its thick, succulent, yellow-hued foliage, and white viscous berries situate in the axils of the upper pair of leaves, is common in the south of England. We have seen it growing in profusion in the neighbourhood of Guildford. It puts forth its flowers in May.

The Holly (*Ilex aquifolium*) sturdily maintains its place in many a hedgerow. I have seen its magnificent red-berried clusters in Westmoreland, and its thick leathery leaves on Dartmoor. It is common through all the Midland districts, and one of the finest holly hedges I have seen skirts the Watling Street, not far from the heart of England. Its name is supposed to be a corruption of holy tree, on account of its frequent use in decking churches at Christmas-tide. The white flowers appear in April, though the plant has far more associations with winter.

The Ivy (*Hedera helix*), which puts forth its green blossoms in October, now becomes a prominent object among the woodlands, by the walls, and in the hedgerows, though its chocolate berries are not ripe until April. The late bee, tempted from home by the warm glow of a November sun, hovers round the ivy flowers. The various-veined and differently-formed leaves, which distinguish the ivy, are supposed to be caused partly by a variation in the age of the plant, as well as the different soil on which it grows. There is a rapid-growing variety, known as the Irish Ivy (*Helix vegetata*), with large foliage, instead of the ordinary five-angled leaf, so well known, that poets

have taken ivy as the emblem of friendship. Some doubts exist as to the injury which ivy does to growing timber. In Shakespeare's time it was looked upon simply as a parasite, and it was asserted that

“No flower can bear the ivy's shade,
No tree support its cold embrace.”

Its tendrils, however, are not rootlets which “suck the verdure” out of the “princely trunks” of the forest trees, and Calder Campbell makes the ivy say—

“Oh! falsely they accuse me
Who say I seek to check
The growing sapling's flourishing;
I better love to deck
The dead or dying branches
With all my living leaves.
'Tis for the old and withered tree
The ivy garland weaves.”

By many a road-side,

“Fringing the fence on sandy wold
With blaze of vegetable gold,
The furze—but, ah! beware the thorn
Too oft 'mid brightest blossoms born!—
The furze still yields its fragrant bloom.”

The Winter Furze or Gorse (*Ulex tianus*), studs the heathland through the winter, and brightens up the

landscape, and peers even through the wintry snow. This is a species of lower growth than "the Never-bloomless Furze" (*Ulex Europæus*), which blooms in April and May. In many a foreign greenhouse is our Common Furze cherished as a precious plant: its golden butterfly blossoms so excited the great Swedish botanist when he first saw it, that he fell on his knees and praised God for its beauty. Nor is it unprofitable. Horses and cattle will browse on its prickly foliage when bruised. It forms a useful fence, and when twisted in hurdles, on many a bleak hill-side, it forms the most sheltered nook of the sheepfold.

In the intervals of mild weather the minute flowers of the Chickweed will peep forth. We may also find the bright yellow blossoms of *Eranthis hyemalis*—

"The aconite that decks with gold
Its little merry face."

The Dandelion will peep forth in the meadows, and the sweet-scented Coltsfoot occasionally wakens up during the winter. In the gardens the Spurge Laurel (*Daphne laureola*) expands its blossoms, and the Mezereon (*Daphne mezereum*) shows its fragrant pink blossoms down its bushy stems, and the Snowdrop—the "snow piercer" of the French—appears. The

Christmas Rose (*Helleborus niger*) stands like a flake of snow, amid its dark green leaves; and though, like the aconite, scarcely an English wild flower, we are glad to welcome them "as a token to the wintry earth that beauty liveth still."

At this season the Ferns, Lichens, and Mosses are in full fructification, and form beautiful objects of investigation. On old walls, or springing from the decaying roots of trees, the Common Polypody (*Polypodium vulgare*) may be found, and on the back of its fronds the small orange velvet buttons. On the Hart's-tongue (*Scolopendrium vulgare*) the seeds have a longer form. On the Maidenhair Spleenwort (*Asplenium trichomanes*), common on old walls, they are minute black dots. On the *Blechnum boreale*, the Hard Fern, with its wiry roots, they are more diffused. Each species has a distinctive mark of its own on the fronds waving in the breeze, or hiding in the shady nook.

But what shall we say of the Mosses, eight hundred species of which have been discovered? Each minute plot of vegetation is a little world of its own; but it requires a microscope to see their full beauty. They spring forth on newly formed soils; they appear in

Wild Flowers : How to Gather, Preserve, and Classify them.

THE LINNÆAN AND NATURAL SYSTEMS.



“Where'er I cast my wandering eyes around,
The God I seek in every object 's found :
Pursuing Thee, the verdant fields I pass,
And read Thy name on every blade of grass ;
Beauty complete, and majesty divine,
In all Thy works, adored Creator, shine !”

THE seasons pass away, and we see the wild flowers no longer. We have watched their growth, their beauty, and their decay. We have pointed out the lessons they teach and the story they have to tell. If the lesson is to have a permanent value, it should be taken to heart, and each flower preserved and studied at your leisure. What glorious memories of sunny days and rural excursions does the herbarium, as the collection of dried plants is called, bring to mind ! The hills, the moorland, and the flower-spangled meadow come with renewed freshness on the mind. As we turn over the heather, the fern, and even

the dandelion and the cowslip, what pleasant reminiscences start up to cheer the heart!

It is not a difficult matter to preserve the wild flowers, and to classify them for future reference and study, if they are gathered in dry weather, just as the flower is mature, and the plant is at the height of its vigour and beauty.

The materials and implements necessary are a strong pruning knife, a species of wallet, some eighteen inches long, four inches deep and eight broad—one that can be suspended by straps from the shoulder is the best. A very good one can be made by any ingenious youth out of a piece of bookbinder's millboard, and covered with leather or black American cloth. It may be fitted with a strap or two to fasten it. Tin boxes, japanned, are sold at the herbalists for the purpose, but they are not so handy as a home-made one. A smaller wallet for the pocket may be made in a similar manner, to hold choice specimens and the smaller varieties of plants. Each of these cases should be fitted with strips of dry blotting-paper, and a number of pieces of pasteboard or millboard, covered with blotting-paper. The wallet and box should be half filled with these. They may be held

together firmly by two or three ordinary India-rubber elastic bands. You are now fitted for a botanical excursion, either by yourself, or with a friend, or in company with the nearest Field Naturalists' Club. In selecting your plants, choose the most perfect specimen, and dig up the root as entire as possible, so that you may have root, stem, leaves, flower, and, if possible, the fruit of every plant complete. Gently shake the superabundant earth away, and lay your specimen between two or three sheets of your blotting-paper. Do this carefully and at once, as many plants wither and curl in a few minutes after being gathered, though others will remain without injury for hours. The plant should be laid flat, so as to preserve all its natural characteristics, and in order to do this it will be needful to break off some of the superabundant foliage and stems. On returning home, it will be necessary to complete the drying of the plants, to ensure their complete preservation. All that is requisite, is a little care and a few strips of wood, a supply of porous paper, and if blotting-paper is not available, old newspapers will answer the purpose. Two or three straps with buckles will be required, to press the boards tight. The outside board should first be

warmed at the fire, and two or three thicknesses of paper, also warmed, laid over it. The plant should be arranged carefully on this in the manner it is wished to preserve it. The leaves should be smoothed, and the flower and stem bent, if necessary, within the required space. Then place more warm paper, and repeat the process until some eight or ten specimens are included. A piece of board is then laid over all, and tightly strapped up. The boards are then laid on some dry convenient spot, and a few books or other weighty articles may be placed at the top to press them. Some of the aquatic and other plants of a moist nature will require to have the paper changed once or twice ere the drying process can be completed. It will be found that dandelions, thistles, and hawkweeds will ripen their seed during the drying process; whilst others, such as the pines, are likely to crumble to pieces: to obviate the latter, the specimen should be plunged into boiling water for a few minutes prior to being placed within the blotting-paper. Fungi will require particular treatment, as they cannot be pressed. The firmer varieties should be placed in separate sheets of blotting-paper, and the jelly-like varieties in tin boxes nearly filled with silver

sand. The sand will act as an equal pad to the plant, and as an absorbent during the drying process, during which the sand must be changed two or three times, and the boxes placed near a good fire.

When the plants are dry, many of the firmer varieties may be simply labelled and placed in a drawer or cabinet. The more delicate and perfect specimens should be mounted on stout cartridge-paper, though any ordinary brown paper will answer the purpose if sufficiently stout. The paper may be cut to any convenient size, and if the flower is too tall the stem may be bent backwards and forwards, so that the whole plant may be placed on the paper. The plants may be secured in their places by a little strong solution of gum arabic, paste, or glue. The smaller plants may be gummed at once to the paper, whilst others, possessing a woody fibre, must be fastened down firmly by straps of paper. The best plan to do this successfully is to mark with a pencil the spots where the straps are required, and make a slit in the mounting-paper on each side of the stem, so that the straps may be passed through and be firmly secured by cement on the other side of the paper. This gives a neat appearance to the mounted specimen ; at the same

time it renders them more secure. It requires but little practice to do this neatly and well. The paper should be kept of an even size, and as far as possible only one kind of plant should be placed on a page.

The naming and labelling of the plants, with their common and scientific names, should never be neglected. Indeed, if the collection is to be of use, either in an educational sense or for future reference, the plants must be classified either according to the Natural or Linnæan system of botany. There is but little difficulty in classifying plants according to the Linnæan system; but if the collector happens to be acquainted with both systems, he may label his plants thus:—

No. 18. <i>Bellis Perennis</i> . COMMON DAISY. <i>Kenilworth, May 20, 1867.</i>	
NATURAL SYSTEM.	LINNÆAN SYSTEM.
CLASS <i>Exogens.</i>	CLASS. . . <i>Syngenesia.</i>
DIVISION . . . <i>Calyciflora.</i>	ORDER . . <i>Superflua.</i>
FAMILY <i>Compositæ.</i>	
GENUS <i>Bellis.</i>	

The latter part of the label looks better if printed in blank and gummed on to the left-hand corner of the page.

The specimens, as they increase, should be arranged into families; but this requires some little atten-

tion to be paid to botanical science. This, though shrouded in what seem hard names, will be found in practice a not difficult matter, while at the same time it opens up a new world to the observer, even as the contemplation of his dried treasures brings back vividly the bright scenes and pleasant hours in which they were gathered.

The old herbalists thought they recognized the dominion of the planets over the "stars of earth," and proclaimed their virtues accordingly. The more skilful man of science has done more than this: he has classified their outward symbols and formed them into a language, the rudiments of which any one may acquire.

The most simple of modern systems of reading these signs, which tell us of the "wondrous truths" of the plant world is that which bears the name of Linnæus, the great Swedish naturalist. The truer but more abstruse and difficult system is one formed on the natural order or arrangement of the plants themselves, and is known as the Natural system, in contradistinction to that of Linnæus. Every plant will be found to belong to some family of various extent; and though it may be in itself uninteresting,

it may be nearly connected with some beautiful plant, and form a link in that grand chain of design and foreknowledge which pervade the universe. The chickweed and the carnation are an instance of this, and with a little practice most British wild plants may be recognized and referred to their appropriate families. A few brief hints will furnish the key to this comparatively unknown world, and the index will supply much useful information connected with each flower.

THE LINNÆAN SYSTEM will be found simple and ingenious, though somewhat artificial. He divides all plants into twenty-four classes, which are subdivided into orders. Both orders and classes depend on the number and position of the stamens and pistils. Of these orders, one is composed of plants without flowers, such as ferns and mosses; and the remainder are all plants bearing stamens and pistils, if not flowers. The first eleven classes depend solely upon the number of the stamens. The twelfth and thirteenth, partly upon the number of the stamens and partly on their relative position to other parts of the flower. The fourteenth and fifteenth classes are regulated by the relative lengths or number and proportion of the stamens. The sixteenth, seventeenth, and

eighteenth, by the connection of their filaments, or the lower part of the stamen; and the nineteenth, by that of their anthers, or the crown of the stamen. The twentieth class is distinguished by the relative position of stamen and pistil. The succeeding three classes depend upon the separation of the stamens and pistils in separate blossoms or on different plants. The twenty-fourth, on the absence of these organs altogether. The subdivision into classes depends entirely on the number of pistils in each flower.

This arrangement will be clearly understood by a glance at the detailed arrangement. Thus they stand:

Class.

1. *Monandria*, or one stamen in each flower.
2. *Diandria*, two stamens.
3. *Triandria*, three stamens.
4. *Tetrandria*, four stamens.
5. *Pentandria*, five stamens.
6. *Hexandria*, six stamens.
7. *Heptandria*, seven stamens.
8. *Octandria*, eight stamens.
9. *Enneandria*, nine stamens.
10. *Decandria*, ten stamens with the filaments united.
11. *Dodecandria*, twelve to nineteen stamens inserted in the receptacle or base on which the parts of the flower are placed.

12. *Icosandria*, twenty or more stamens placed on the calyx. This includes the wholesome and popular rose tribe.
13. *Polyandria*, twenty or more stamens inserted on the receptacle. Most of the plants in this order are poisonous.

Nothing can be more easy than to decide if a plant belongs to any of the foregoing classes. You have only to count the stamens and notice the position in which they are placed.

14. *Didynamia*, four stamens, two of which are longer, and, as the name implies, more powerful than the other two.
15. *Tetradynamia*, six stamens, four of which are long, and two short.
16. *Monadelphia*, the filaments of the stamen united in one stem, or, as the name expresses, one brotherhood.
17. *Diadelphia*, stamens united by their filaments into two bundles.
18. *Polyadelphia*, stamens united by their filaments into three or more sets.
19. *Syngenesia*, stamens united by their anthers. Flowers mostly compound, as the daisy and dandelion.
20. *Gynandria*, the stamens are united on the pistil.
21. *Monœcia*, the stamens and pistils on separate flowers in the same plant.

22. *Diœcia*, the flowers with stamens only on one plant, and the pistils on another.
23. *Polygamia*. Some of the flowers have stamens only, and some have pistils only, others with both stamens and pistils, either on the same plant or on two or three distinct ones.

These four classes are omitted by modern botanists, and the plants belonging to them are included in the other classes according to the number of their stamens.

24. *Cryptogamia*, plants destitute of the flowering organs, as ferns, mosses, &c.

The foregoing are the classes, and each class was divided into separate orders.

THE ORDERS.—In the first thirteen classes the orders were founded entirely on the number of pistils in each flower. Thus, *Monogynia*, having one pistil; *Digynia*, 2; *Trigynia*, 3; *Tetragynia*, 4; *Pentagynia*, 5; *Hexagynia*, 6; *Heptagynia*, 7; *Octogynia*, 8; *Decagynia*, 10; *Polygynia*, many pistils.

The orders in the fourteenth class were founded on the seed-vessel. They are—1, *Gymnospermia*, having seeds (four) apparently naked; and 2, *Angiospermia*, having the seeds enclosed in a distinct seed-vessel or capsule.

The orders of the fifteenth class are likewise two

founded on the seed-vessel. 1, *Siliculosa*, having seeds in a short pod or pouch broader than it is long; and 2, *Siliquosa*, where the pod is longer than it is broad.

The orders of the sixteenth, seventeenth, and eighteenth class, are founded on the number of the stamens, and they consequently receive the same names as the first thirteen classes—*Triandria*, *Pentandria*, and so on.

In the nineteenth class the orders are three, founded on the structure of the flower.—1, *Æqualis*, all the florets perfect; 2, *Superflua*, florets of the disk perfect, those of the ray with pistil only, and hence superfluous; 3, *Frustranea*, florets of the disk perfect, of the ray with neither stamens or pistil; 4, *Necessaria*, florets on the disk with stamens, those of the ray with pistils; 5, *Segregata*, florets included within the common involucre provided with proper calyces.

In the twentieth class, the orders are founded on the number of the stamens—*Monandria*, *Diandria*, &c.

The twenty-first and twenty-second classes have orders founded on the number, and other peculiarities of the stamens—*Monandria*, *Diandria*, &c.

In the twenty-third class, the orders are founded on

the separation of the stamens and pistils, and are named *Monœcia*, *Dicœcia*, *Tricœcia*.

The twenty-fourth class is divided into the natural orders of *Filices*, or ferns ; *Musci*, or mosses ; *Hepaticæ*, or liverworts ; *Algæ*, or flags ; and *Fungi*, or mushrooms.

These brief notes will suffice to show the principles of the system which Linnæus propounded, and a reference to Chapter III. will explain all the details necessary to enable the student to dissect any flower, and to arrange it according to the Linnæan system, and probably this will answer the reader's purpose who simply aims at classification. But Linnæus was sensible that his system and all systems must be imperfect, which were simply based on certain regulations of the organs of reproduction, and wished for a more natural arrangement of species. This has now been done, and

THE NATURAL SYSTEM or arrangement of the vegetable world is the one on which all scientific works are now based. In it the plants are classified according to their essential organs, the growth of the stem, and the number of their cotyledons or seed-leaves.

First, the vegetable world is divided into the *great*

primary divisions of FLOWERING and FLOWERLESS plants, called in scientific language *Phænogamous* and *Cryptogamous*. These are subdivided into three great classes.

Class I. Flowering plants with two seed lobes or *cotyledons*, and are therefore called *Dicotyledonous*; and as the stem has a distinct pith, round which the fibre is arranged in layers, the class is known also as *Exogenous*, or outward growing plants.

Class II. Flowering plants with only one seed-lobe are called *Monocotyledons*. These have stems composed of little bundles of fibres enclosed in a sheath and increase inwards; hence are called *Endogenous*, or inward growing. There are but few British plants, none of which are of large growth, which belong to this class.

Class III. Flowerless plants, or *Acotyledons*, plants destitute of seed leaves. To this class belong the ferns, mosses, liverworts, lichens, seaweeds, and fungi, with which we have nothing to do in this manual.

The first class is exemplified in nearly every British shrub. The wood is formed in rings, and is increased by internal layers. The leaves have branched and netted veins; while the leaves of the second class are

not netted, but lie in parallel layers, and are easily torn into strips, as the leaves of the flags, lily, tulip, &c.

These classes are again subdivided according to their floral coverings. Class I. is divided into four divisions:—

1. *Thalamifloræ*, in which the flowers have separate petals, which, with the stamens, are not attached to the receptacle or *thalamus*. There are twenty-two British orders or families in this division.

The name of the family is derived either from some well-known species, or from some peculiar feature by which it is characterized. In the former case, the termination *aceæ* is added in the Latin, and *aceous* in English, signifying like: thus, *Rosaceæ*, rosaceous, from *Rosa*, rose, rose-like family. In the latter case, a term is used to indicate the family characteristic—*Cruciferæ*, cruciferous, or cross-bearing family, from the shape of the petals; *Umbelliferæ*, umbelliferous, umbel-bearing family.

1. The Ranunculus family *Ranunculaceæ*.
2. The Berberry family. *Berberidaceæ*.
3. The Water-lily family *Nymphæaceæ*.
4. The Poppy family *Papaveraceæ*.

5. The Fumitory family *Fumariaceæ.*
6. The Cruciferous family *Cruciferæ.*
7. The Mignonette family *Resedaceæ.*
8. The Rock-rose family *Cistaceæ.*
9. The Violet family *Violaceæ.*
10. The Sundew family *Droseraceæ.*
11. The Milkwort family *Polygalaceæ.*
12. The Sea-heath family *Frankeniaceæ.*
13. The Clove-pink family *Caryophyllaceæ.*
14. The Flax family *Linaceæ.*
15. The Mallow family *Malvaceæ.*
16. The Lime or Linden family . . *Tiliaceæ.*
17. The St. John's Wort family . . *Hypericaceæ.*
18. The Maple family *Aceraceæ.*
19. The Crane's-bill family *Geraniaceæ.*
20. The Balsam family *Balsaminaceæ.*
21. The Wood-sorrel family *Oxalidaceæ.*
22. The Bladder-nut family *Staphyleaceæ.*

The mere repetition of the names of these families would not instruct the student much if some key was not given to them. Of the twenty-two families, four include a considerable number of genera. These are—

a. The *Ranunculus* family, which is distinguished by the flowers having *many* stamens free from the calyx, and several carpels separated into distinct pistils. The family is nearly the same as the Linnæan class 13, *Polyandria*, orders *Polygynia* and *Pentagynia*.

b. The Poppy family is distinguished also by having *many* stamens, but the carpels are united into a single-celled, many-seeded pistil. Two sepals soon fall off, and there are generally four petals.

c. The Cruciferous family have flowers with six stamens, two of which are shorter than the other four. Sepals and petals, each four, arranged in crosses. The fruit is either a pod or a pouch. This family is identical with the Linnæan class 15, *Tetradynamia*.

d. The Chickweed or Carnation family has jointed stems, with opposite and entire leaves at the joints. The flowers have long and narrow petals at the lower part, expanding at the upper, as the pink and carnation; these are termed *unguiculate* petals.

Families numbered 2, 17, 19, and 23 contain trees only. Families numbered 12 and 14 have four or five stamens. Families 9, 10, and 20 have five stamens. No. 5, six stamens. No. 11, eight stamens. Nos. 19 and 21, ten stamens. Nos. 15 and 17 have many stamens united in one or more sets; and Nos. 3, 7, and 8 have many stamens free.

2. *Calycifloræ*. The distinguishing features of this sub-class are flowers with calyx and corolla. The parts of the flower are usually in fours or fives, or

their multiples. The leaves are netted. The petals distinct or combined in one, and the stamens *united* with the calyx. In this sub-class there are twenty-six families. These are—

1. The Spindle-tree family† . . . *Celastraceæ.*
2. The Buckthorn family† . . . *Rhamnaceæ.*
3. The Leguminous family . . . *Leguminosæ.*
4. The Rose family . . . *Rosaceæ.*
5. The Evening Primrose family . *Onagraceæ.*
6. The Mare's-tail family* . . . *Haloragaceæ.*
7. The Purple Loosestrife family . *Lythraceæ.*
8. The Tamarix family* . . . *Tamaricaceæ.*
9. The Cucumber family . . . *Cucurbitaceæ.*
10. The Waterblinks family* . . . *Portulacææ.*
11. The Spurrey family* . . . *Paronychiaææ.*
12. The Houseleek or Stonecrop fam. *Crassulaceæ.*
13. The Currant family† . . . *Grossulaceæ.*
14. The Saxifrage family . . . *Saxifrageæ.*
15. The Umbelliferous family . . . *Umbelliferæ.*
16. The Ivy family . . . *Araliaceæ.*
17. The Dogwood family† . . . *Cornaceæ.*
18. The Woodbine family† . . . *Caprifoliaceæ.*
19. The Mistletoe family . . . *Loranthaceæ.*
20. The Madder family . . . *Rubiaceæ.*
21. The Cranberry family . . . *Vacciniaceæ.*
22. The Bell-flower family . . . *Campanulaceæ.*
23. The Lobelia family* . . . *Lobeliaceæ.*
24. The Valerian family . . . *Valerianaceæ.*
25. The Teazle and Scabious family . *Dipsaceæ.*
26. The Composite family . . . *Compositæ.*

Of these, those marked † contain trees principally. Those marked * have but few British species. Those families numbered 5, 6, 7, 8, 10, 11, 12, 14, and 16 are polypetalous. Those numbered 9 and 19 to 25 inclusive, are monopetalous—one petal only.

The families that require study, from the number of genera they contain, are four:—

a. The Leguminous family, the flowers of which are butterfly-shaped (papilionaceous), as the gorse and pea. Fruit in a pod. This family is the same as the Linnæan class 17, *Diadelphia*, order *Decandria*.

b. The Rose family has flowers of many stamens attached to the orifice of a calyx. This class is the same as the Linnæan class 12, *Icosandria*.

c. The Umbelliferous family has flowers with five stamens, and two carpels arranged in umbels.

d. The Composite family have the anthers united, and form a tube round the style. This peculiarity distinguishes it from the Scabious family, Linnæan class 19, *Syngenesia*. If the flower belongs to neither of these families, it will not be difficult to refer it to its proper family.

3. *Corollifloræ*. In this sub-class are sometimes included the monopetalous members of *Calycifloræ*.

The flowers have both calyx and corolla. The petals are combined in one, and bear the stamens, which are *not* united with the calyx. There are nineteen families subdivided according to the structure of the flowers.

1. The Heath family *Ericaceæ*.
2. The Winter-green family *Pyrolaceæ*.
3. The Bird's-nest family *Monotropaceæ*.

The above have from eight to ten stamens.

4. The Holly family *Aquifoliaceæ*.
5. The Privet and Ash family *Oleaceæ*.

The foregoing contain trees or shrubs only.

6. The Periwinkle family* *Apocynaceæ*.
7. The Gentian family *Gentianaceæ*.
8. The Greek Valerian family* *Polemoniaceæ*.
9. The Bindweed family* *Convolvulaceæ*.
10. The Borage family *Boraginaceæ*.
11. The Nightshade family *Solanaceæ*.
12. The Primrose family *Primulaceæ*.
13. The Sea Lavender family* *Plumbaginaceæ*.
14. The Plantain family *Plantaginaceæ*.

This family contains four stamens.

Those marked with * have five stamens.

The above have the flowers regular, or nearly so. The families that require particular attention, from the number of genera that they contain, are four:—

a. The Gentian family, which are smooth, upright plants, with bell or funnel-shaped delicate flowers.

b. The Borage family have round stems and harsh foliage, generally rough or prickly. The flowers are delicate. The bugloss and the forget-me-not furnish familiar examples.

c. The Nightshade family have generally clammy leaves, dingy flowers, and a rather disagreeable odour.

d. The Primrose family have delicate salver-shaped or wheel flowers, with the stamens opposite the segments of the corolla.

In the SECOND division the flowers are irregular, ringent, or labiate.

- 15. The Butterwort family *Lentibulariæ.*
- 16. The Broom-rape family *Orobanchaceæ.*
- 17. The Figwort family *Scrophularineæ.*
- 18. The Vervain family *Verbenaceæ.*
- 19. The Labiate family *Labiataæ.*

The Figwort family have a two-celled, many-seeded seed-vessel, like the snapdragon, Linnæan class 14, *Didynamia*, order *Angiospermia*.

The Labiate family have a two-lipped flower, with four small nuts at the bottom of the calyx. It corresponds generally with the Linnæan class 14, *Didynamia*, order *Gymnospermia*.

4. *Monochlamydeæ.* The distinguishing feature of this sub-class or division is the flowers having a single

perianth or none. No plant of this order has both calyx and corolla, as the catkin of the willow or cone of the pine. It includes sixteen families, subdivided into—1, Herbs and small shrubs; 2, Trees principally which are easily distinguished.

1. The Amaranth family *Amaranthaceæ.*
2. The Goosefoot family *Chenopodiaceæ.*
3. The Knawel family *Scleranthaceæ.*
4. The Knotgrass and Sorrel family *Polygonaceæ.*
5. The Sandal family *Santalaceæ.*
6. The Sallow-thorn family *Elæagnaceæ.*
7. The Mezereon family *Thymelaceæ.*
8. The Birthwort family *Aristolochiaceæ.*
9. The Crowberry family *Empetraceæ.*
10. The Spurge family *Euphorbiaceæ.*
11. The Water Starwort family . . *Callitrichaceæ.*
12. The Hornwort family *Ceratophyllaceæ.*
13. The Nettle family *Urticaceæ.*

The other families consist principally of trees.

14. The Elm family *Ulmaceæ.*
15. The Amentaceous families . . *Amentaceæ.*

These include—The Gall or Myrtle family, *Myricaceæ*; the Birch family, *Betulaceæ*; the Willow family, *Salicaceæ*; and the Cupbearing family, *Cupuliferæ.*

16. The Conebearing family . . . *Coniferæ.*

5. *Monocotyledons* or *Endogenæ.* This class has seeds with a single lobe, and is divided into two sub-

classes: 1. *Petaloidæ*; and 2, *Glumacæ*; grass and corn having chaffy bracts instead of petals. The leaves are in parallel veins with the exception of the black bryony family, *Dioscoreacæ*; the Paris family, *Trilliaceæ*. By some botanists these form a supposed connecting link between *Exogenæ* and *Endogenæ*, but they are generally included with the latter. The remaining sixteen families of the *Petaloidæ* are—

1. The Frogbit family *Hydrocharidacæ*.
2. The Orchis family *Orchidacæ*.
3. The Iris and Crocus family . *Iridacæ*.
4. The Daffodil and Snowdrop fam. *Amaryllidacæ*.
5. The Lily family *Liliacæ*.
6. The Meadow-saffron family . *Melanthacæ*.
7. The Water-plantain family . *Alismacæ*.
8. The Flowering Rush family . *Butomacæ*.

The following have inconspicuous flowers. The first three have flowers on a spadix or thick fleshy spike; the remainder without.

9. The Reedmace family *Typhacæ*.
10. The Arum family *Aracæ*.
11. The Sweet Sedge family . . . *Orontiacæ*.
12. The Rush family *Juncacæ*.
13. The Arrowgrass family . . . *Juncagenacæ*.
14. The Pipewort family *Restiacæ*.
15. The Duckweed family *Naiadacæ*.
16. The Pondweed family *Pistiaceæ*.

ENGLISH WILD FLOWERS.

The *Glumaceæ* contain the grasses and sedges only.

Who will say that the time spent in this study is thrown away? It gives additional interest to the walk. It is a source of perennial pleasure. It opens up a new world full of delightful thoughts and joyous associations. It lends a new charm to the landscape. It displays new visions of beauty to the soul. "What greater delight," says dear, loving old Gerarde, in his glorious book on plants, "is there than to behold the earth apparelled with plants as with a robe of embroidered worke, set with orient pearles, and garnished with great diversitie of rare and costly jewels? If this varietie and perfection of colours may affect the eie, it is such in herbes and floueres, that no Appelles, no Zeuxis, ever could by any art expresse the like; if odour or if taste may worke satisfaction, they are both so souveraigne in plants, and so comfortable, that no confection of the apothecaries can equal their excellent virtue. But these delights are in the outward senses; the principal delight is in the mind, singular, enriched with the knowledge of these visible things, setting forth to us the invisible wisdom and admirable workmanship of Almighty Go l."

INDEX TO THE FLOWERS.

Where the scientific name of the flower is in dispute both are given. The places where the wild flowers grow are given in their natural habitat. The time of flowering is arranged as follows: Spring—March, April, and May; Summer—June, July, to the middle of August; Autumn—part of August to October.

COMMON NAME.	SCIENTIFIC NAME.	NATURAL FAMILY.	WHERE FOUND.	TIME OF FLOWERING.	P.
Aaron's-rod.....	<i>Verbasum thapsus</i>	Scrophulariaceæ.....	Waste banks.....	July, August.....	113
Aconite.....	<i>Aconitum napellus</i>	Ranunculaceæ.....	".....	June, July.....	10
" Winter.....	<i>Eranthis hyemalis</i>	".....	".....	December.....	242
Actinomy.....	<i>Artemisia eupatoria</i>	Rosaceæ.....	Field borders.....	June, July.....	212
Alder.....	<i>Alnus glutinosa</i>	Betulaceæ.....	River-sides.....	April.....	49
Alexander.....	<i>Smyrniacum olusatrum</i>	Umbelliferae.....	Sea-side wastes.....	May, June.....	102
Alkanet.....	<i>Anchusa officinalis</i>	Boraginaceæ.....	Walls.....	July, August.....	143
All-heal.....	<i>Stachys sylvatica</i>	Labiatae.....	Shady places.....	".....	210
ALPINE PLANTS:					
Avens.....	<i>Dryas octopetala</i>	Rosaceæ.....	Highlands.....	Summer.....	178
Bearberry.....	<i>Arctostaphylos Alpina</i>	".....	".....	May.....	91
Bistort.....	<i>Polygonum viviparum</i>	Polygonaceæ.....	".....	Summer.....	178
Clustered Saxifrage.....	<i>Saxifraga nivalis</i>	Saxifragaceæ.....	".....	".....	177
Dock.....	<i>Rumex Alpinus</i>	Polygonaceæ.....	".....	July.....	138
Gentian.....	<i>Gentiana nivalis</i>	Gentianaceæ.....	".....	Summer.....	179
Lady's Mantle.....	<i>Achemilla Alpina</i>	Rosaceæ.....	".....	".....	180
Meadow Rue.....	<i>Thalictrum Alpina</i>	Ranunculaceæ.....	".....	".....	180
Saussurea.....	<i>Saussurea Alpina</i>	Compositæ.....	".....	".....	179
Willow-herb.....	<i>Epiobium Alpinum</i>	Onagraceæ.....	".....	".....	179
Amphibious Persicaria.....	<i>Polygonum amphibium</i>	Polygonaceæ.....	Wastes.....	August—October.....	230
Anacharis.....	<i>Anacharis alsinastrum</i>	Hydrocharidaceæ.....	Aquatic.....	Summer.....	95
Anemone, Wood.....	<i>Anemone nemorosa</i>	Ranunculaceæ.....	Woods.....	April.....	53
" Easter.....	<i>A. pulsatilla</i>	".....	".....	Spring.....	58
Angelica.....	<i>Angelica sylvestris</i>	Umbelliferae.....	".....	July.....	123
Annual Knawel.....	<i>Scleranthus annuus</i>	Scleranthaceæ.....	Corn-fields.....	Summer.....	131
Apple.....	<i>Pyrus malus</i>	Rosaceæ.....	Hedgerows.....	May.....	55

COMMON NAME.	SCIENTIFIC NAME.	NATURAL FAMILY.	WHERE FOUND.	TIME OF FLOWERING.	P.
Arage	<i>Atriplex</i>	Chenopodiaceæ	Sea-sides	Autumn	235
Arum	<i>Arum maculatum</i>	Araceæ	Hedgerows	Spring	45
Ash	<i>Fraxinus</i>	Oleaceæ	Woods and hedges	"	50
Asparagus	<i>Asparagus officinalis</i>	Liliaceæ	Sea-sides	Summer	235
Asphodel, Bog	<i>Narthecium ossifragum</i>	Juncaceæ	Marshes	July, August	193
"	<i>Tofieldia palustris</i>	Melanthaceæ	Moorlands	Summer	179
Autumnal Crocus	<i>Colchicum autumnale</i>	Iridaceæ	Meadows	Autumn	223
"	<i>Scilla autumnalis</i>	Liliaceæ	Walls	"	216
Avens, Common	<i>Geum urbanum</i>	Rosaceæ	Shady places	All summer	108
"	<i>Dryas octopetala</i>	"	Highlands	Summer	177
"	<i>Geum rivale</i>	"	Streams	"	183
Azalea	<i>Loiseleuria procumbens</i> , or <i>Gentiana campestris</i>	Ericaceæ	Highlands	Spring	91
Baldmoyne	<i>Menthamantiscum</i>	Gentianaceæ	Moors	Autumn	226
Baldmoney	<i>Hypericum perforatum</i>	Umbelliferae	Highlands	Summer	180
Balm of Warrior's Wound	<i>Hypericum perforatum</i>	Hypericaceæ	Shady places	July	120
Barley Grass	<i>Hordeum</i>	Graminaceæ	Waysides	Summer	160
Base Rocket	<i>Reseda lutea</i>	Resedaceæ	Walls	"	141
Bearberry, Alpine	<i>Arctostaphylos Alpina</i>	Ericaceæ	Highlands	"	91
"	<i>A. uva-ursi</i>	"	Heaths	"	91
Bear's-foot	<i>Helleborus fetidus</i>	Ranunculaceæ	Hedgerows	Spring	82
Bedstraw, Lady's	<i>Galium verum</i>	Rubiaceæ	"	June—August	115
Beech	<i>Fagus sylvatica</i>	Cupuliferae	Woods	Spring	64
Bee Orchis	<i>Ophrys apifera</i>	Orchidaceæ	Pastures	Summer	164
Beet	<i>Beta maritima</i>	Chenopodiaceæ	Sea-sides	August	234
Bentgrass	<i>Agrostis</i>	Graminaceæ	Fields	Summer	153
Betony	<i>Retonica officinalis</i>	Labiatae	Woods	Autumn	121
Bilberry	<i>Vaccinium myrtillus</i>	Vacciniaceæ	Heaths	Spring	90
Bindweed, Great	<i>Calystegia sepium</i>	Convolvulaceæ	Hedges	Summer	116
"	<i>Convolvulus arvensis</i>	"	Waysides	"	126
"	<i>Betula</i>	Betulaceæ	Woods	Spring	64
Birch	<i>Cerasus</i> or <i>Prunus padus</i>	Drupaceæ	"	"	55
Bird Cherry	<i>Primula farinosa</i>	Primulaceæ	Highlands	Summer	177
Bird's-eye Primrose	<i>Listeria nidus avis</i>	Orchidaceæ	Woods	Spring	62
Bird's-nest Orchis	<i>Ornithopus perpusillus</i>	Leguminosæ	Heaths	Summer	175

Bird's-foot Lotus	<i>Lotus corniculatus</i>	Leguminosæ	Pastures	Summer	169
Bistort	<i>Polygonum bistorta</i>	Polygonaceæ	River-sides	"	97
Bitter-sweet	<i>Solanum dulcamara</i>	Solanaceæ	Hedges	"	110
" Vetch	<i>Lathyrus macrorrhizus</i> , or <i>Orobanchae tuberosus</i>	Leguminosæ	Thickets	"	123
Black thorn	<i>Prunus spinosa</i>	Drupaceæ	Hedges	Spring	50
Blackberry	<i>Rubus fruticosus</i>	Rosaceæ	Hedgerows	Summer	64
Black Bryony	<i>Tamus communis</i>	Dioscoreaceæ	Hedges	All summer	116
" Horehound	<i>Ballota nigra</i>	Labiatae	Wastes	Autumn	210
" Mustard	<i>Sinapis nigra</i>	Cruciferae	Fields	Spring	73
Bladder Campion	<i>Silene inflata</i>	Caryophyllaceæ	Waysides	"	56, 108
Bladderwort	<i>Utricularia vulgaris</i>	Lentibulariaceæ	Aquatic	Summer	180
Bloodwort	<i>Sanguisorba officinalis</i>	Rosaceæ	Pastures	"	166
Bluebell	<i>Agrophis nutans</i> , or <i>Hyacinthus nonscriptus</i>	Liliaceæ	Woods	Spring	59
Bog Asphodel	<i>Narthecium ossifragum</i>	Juncaceæ	Marshes	July, August	193
" Bean	<i>Menyanthes trifoliata</i>	Gentianaceæ	"	Summer	194
" Myrtle	<i>Myrica gale</i>	Myricaceæ	"	Spring	98
" Orchis	<i>Malaxis paludosa</i>	Orchidaceæ	"	Aug., September	231
" Pimpernel	<i>Anagallis tenella</i>	Primulaceæ	"	Summer	192
" Stitchwort	<i>Stelaria virginosa</i>	Caryophyllaceæ	Bogs	Spring	99
" Violet	<i>Viola palustris</i>	Violaceæ	"	"	98
Borage	<i>Borago officinalis</i>	Boraginaceæ	Walls	"	86
Box	<i>Buxus sempervirens</i>	Euphorbiaceæ	Woods	"	64
Bramble	<i>Rubus fruticosus</i>	Rosaceæ	Hedgerows	Summer	64
Brandy-bottle	<i>Nuphar lutea</i>	Nymphaeaceæ	Aquatic	May—July	186
Broad-leaved Garlic	<i>Allium ursinum</i>	Liliaceæ	Woods	Spring	67
Brooklime	<i>Veronica beccabunga</i>	Scrophulariaceæ	Streams	Summer	184
Broom	<i>Sarothamnus scoparius</i>	Leguminosæ	Heaths	Spring	89
" Rape	<i>Orobanche major</i>	Orobanchaceæ	"	"	90
" Lesser	<i>O. minor</i>	"	Fields	"	90
Bryony, White	<i>Bryonia dioica</i>	Cucurbitaceæ	Hedges	Summer	55
Buckbean	<i>Tamus communis</i>	Dioscoreaceæ	"	"	56
Buckthorn	<i>Menyanthes trifoliata</i>	Gentianaceæ	Marshes	"	194
Bugle	<i>Rhamnus catharticus</i>	Rhamnaceæ	Woods	May, June	66
	<i>Ajuga reptans</i>	Labiatae	Hedges	Spring	79

COMMON NAME.	SCIENTIFIC NAME.	NATURAL FAMILY.	WHERE FOUND.	TIME OF FLOWERING.	P.
Bulbous Crowfoot.....	<i>Ranunculus bulbosus</i>	Ranunculaceæ.....	Pastures.....	Spring.....	76
Buckwheat, Climbing.....	<i>Polygonum convolvulus</i>	Polygonaceæ.....	Corn-fields.....	June.....	125
Bugloss, Small.....	<i>Anchusa or <i>Lycopets arenensis</i></i>	Boraginaceæ.....	".....	Spring.....	75
" Viper's.....	<i>Ficium vulgare</i>	".....	Walls.....	Summer.....	139
Bullace.....	<i>Prunus tinetia</i>	Drupaceæ.....	Hedges.....	Spring.....	51
Burdock.....	<i>Arctium lappa</i>	Compositæ.....	Wastes.....	Summer.....	138
Bur-marigold.....	<i>Bidens tripartita</i>	".....	River-sides.....	Autumn.....	229
Burnet, Rose.....	<i>Rosa spinosissima</i>	Rosaceæ.....	".....	Summer.....	198
Burnet, Great.....	<i>Sanguisorba officinalis</i>	".....	Pastures.....	".....	106
Salad.....	<i>Poterium sanguisorba</i>	".....	".....	".....	168
" Reed.....	<i>Sparanium ramosum</i>	Typhaceæ.....	River-sides.....	Autumn.....	228
Butcher's Broom.....	<i>Ruscus oculeatus</i>	Liliaceæ.....	Bushy places.....	Spring.....	92
Butterbur.....	<i>Petasites vulgaris, or</i> <i>Tussilago petasites</i>	Compositæ.....	Moist places.....	".....	93
Butter-and-eggs.....	<i>Linaria vulgaris</i>	Scrophulariaceæ.....	Hedges.....	July, August.....	211
Buttercups.....	<i>Ranunculus reptans</i> and <i>Bulbosus</i>	Ranunculaceæ.....	Pastures.....	Spring.....	76
Butterdock.....	<i>Rumex obtusifolius</i>	Polygonaceæ.....	Wastes.....	Summer.....	137
Butterwort.....	<i>Pinguicula vulgaris</i>	Lentibulariaceæ.....	Marshes.....	July.....	191
Cabbage.....	<i>Brassica oleracea</i>	Crucifereæ.....	Sea-sides.....	Spring.....	100
Campion.....	<i>Anthemis nobilis</i>	Compositæ.....	Heaths.....	Autumn.....	218
" Stinking.....	<i>A. cotula</i>	".....	Wastes.....	July, August.....	218
Campion, White.....	<i>Lychnis vespertina</i>	Hydrophyllaceæ.....	Hedges.....	Spring.....	218
Canada Weed.....	<i>Anacharis aleinastrum</i>	Hydrocharidaceæ.....	Aquatic.....	Summer.....	95
Canary Grass.....	<i>Phalaris canariensis</i>	Graminaceæ.....	Moist places.....	".....	151
Canterbury Bells.....	<i>Campanula trachelium</i>	Campanulaceæ.....	Woods.....	Autumn.....	201
Caper Spurge.....	<i>Euphorbia lathyris</i>	Euphorbiæ.....	Thickets.....	July, August.....	207
Capitate Mint.....	<i>Mentha aquatica</i>	Labiatae.....	Wastes.....	Autumn.....	230
Carline Thistle.....	<i>Carlina vulgaris</i>	Compositæ.....	".....	Summer.....	137
Carrageen Moss.....	<i>Chondrus crispus</i>	Algæ.....	Seaweed.....	".....	7
Carrot, Wild.....	<i>Daucus carota</i>	Umbellifereæ.....	Waysides.....	Spring.....	131
Catchfly, Dover.....	<i>Silene nutans</i>	Caryophyllaceæ.....	Cliffs.....	Summer.....	199
Cat's-foot.....	<i>Gnaphalium, or</i> <i>Antennaria dioica</i>	Compositæ.....	Heaths.....	".....	175

COMMON NAME.	SCIENTIFIC NAME.	NATURAL FAMILY.	WHERE FOUND.	TIME OF FLOWERING.	P.
Corn Flak.....	<i>Iris pseudacorus</i>	Iridaceæ.....	River-sides.....	Summer.....	183
" Gromwell.....	<i>Lithospermum arvense</i>	Borraginacæ.....	Fields.....	".....	126
" Marigold.....	<i>Chrysanthemum segetum</i> ..	Compositæ.....	".....	".....	129
" Mint.....	<i>Mentha arvensis</i>	Labiatæ.....	".....	".....	131
" Salad.....	<i>Valerianaella, or Fedtia olitoria</i>	Valerianacæ.....	".....	April—June.....	71
" Sow Thistle.....	<i>Sonchus arvensis</i>	Compositæ.....	".....	Autumn.....	217
" Spurrey.....	<i>Spergularia arvensis</i>	Illecebracæ.....	".....	Spring.....	126
Corydalis.....	<i>Corydalis clavicularis</i>	Fumariacæ.....	Hedges.....	Summer.....	118
Cotton Grass.....	<i>Eriophorum</i>	Cyperacæ.....	Bogs.....	Spring.....	99
" Thistle.....	<i>Onopordum acanthium</i>	Compositæ.....	Wastes.....	Summer.....	136
" Weed.....	<i>Filago Germanica, or</i> <i>Gnaphalium Germanicum</i>	".....	".....	".....	174
Couch Grass.....	<i>Triticum repens</i>	Graminacæ.....	Heaths.....	".....	161
Cowberry.....	<i>Vaccinium vitis idææ</i>	Vacciniacæ.....	Heaths.....	Spring.....	90
Cowslip.....	<i>Primula veris</i>	Primulacæ.....	Pastures.....	".....	79
Cow Parsnip.....	<i>Heracleum sphondylium</i> ..	Umbelliferæ.....	Woods.....	Summer.....	123
" Wheat.....	<i>Melampyrum pratense</i>	Scrophulariacæ.....	".....	".....	120
" Lesser.....	<i>M. sylvaticum</i>	".....	Heaths.....	".....	178
Crab.....	<i>Pyrus malus</i>	Rosacæ.....	Hedges.....	Spring.....	55
Craberry.....	<i>Oxyccoccus palustris</i>	Vacciniacæ.....	Heaths.....	".....	91
Crane's-bill.....	<i>Geranium</i>	Geraniacæ.....	Waysides.....	".....	56
Creeping Buttercup.....	<i>Ranunculus reptans</i>	Ranunculacæ.....	Pastures.....	".....	76
" Cinqufoil.....	<i>Potentilla reptans</i>	Rosacæ.....	Waysides.....	Summer.....	173
Cress, Rock.....	<i>Arabis stricta</i>	Cruciferæ.....	Rocks.....	Spring.....	85
Crocus, Purple.....	<i>Crocus vernus</i>	Iridacæ.....	Meadows.....	".....	224
" Saffron.....	<i>C. aureus</i>	".....	".....	".....	224
Cross-leaved Heath.....	<i>Erica tetralix</i>	Ericacæ.....	Moors.....	Autumn.....	231
Crow Garlic.....	<i>Allium vineale</i>	Liliacæ.....	Fields.....	Summer.....	127
Cuckoo Flowers.....	<i>Lycchnis flos-cuculi</i>	Caryophyllacæ.....	Moist places.....	Spring.....	94
Cuckoo's Meat.....	<i>Oxalis acetosella</i>	Oxalidacæ.....	Woods.....	".....	61
Cuckoo Pint.....	<i>Arum maculatum</i>	Aracæ.....	Hedgerows.....	".....	45
Cudweed, Dwarf.....	<i>Gnaphalium supinum</i>	Compositæ.....	Heaths.....	Summer.....	175
Cursed Thistle.....	<i>Cnicus arvensis</i>	".....	Fields.....	".....	137
Cypress Spurge.....	<i>Euphorbia cyparissias</i>	Euphorbiacæ.....	Woods.....	July, August.....	207
Daffodil.....	<i>Narcissus pseudo narcissus</i>	Anaryllidacæ.....	".....	Spring.....	59

Palsy	<i>Bellis perennis</i>	Compositæ	Everywhere.....	March, October ... 5
Pandelion	<i>Taraxacum dens Leonis</i>	"	Meadows	Spring
Daneweed	<i>Fryngium campestre</i>	Umbelliferæ	Fields.....	July, August
Danewort	<i>Sambucus ebulus</i>	Caprifoliacæ	Ruins.....	Summer
Darnel	<i>Lolium temulentum</i>	Graminacæ	Fields.....	142
Dead Nettle, Red	<i>Lamium purpureum</i>	Labiata	Waysides	125
" White	<i>L. album</i>	"	"	45
Deadly Nightshade	<i>Atropa belladonna</i>	Solanacæ	Walls	Spring, October ... 43
Deftford Plink	<i>Dianthus armeria</i>	Caryophyllacæ	Meadows	Spring
Devil's-bit	<i>Scabiosa succisa</i>	Dipsacæ	"	Summer
Dock	<i>Rumex</i>	Polygonacæ	Wastes	167
" Bloody-veined	<i>R. sanguineus</i>	"	"	137
" Fiddle	<i>R. pulcher</i>	"	"	137
" Water	<i>R. aquaticus</i>	"	"	137
Dodder	<i>Cuscuta Europæa</i>	Cuscutacæ	Moist places	188
Dog's Mercury	<i>Mercurialis perennis</i>	Euphorbiacæ	Fields	July
Dog Rose	<i>Rosa canina</i>	Rosacæ	Woods	July—September. 218
" Violet	<i>Viola canina</i>	Violacæ	Hedges	Summer
Dogwood	<i>Cornus sanguinea</i>	Cornacæ	"	106
Dove's-foot Geranium.....	<i>Geranium molle</i>	Geraniacæ	Waysides	47
Dover Catchfly	<i>Silene nutans</i>	"	Cliffs	55
Dragon's-mouth.....	<i>Anthriscum majus</i>	Caryophyllacæ	Summer	199
Dropwort	<i>Spiræa filipendula</i>	Scrophulariacæ	Walls	June
"	<i>Ceanothus fistulosa</i>	Rosacæ	Pastures	135
" Water	<i>Ceanothus crocata</i>	Umbelliferæ	Aquatic	183
" Willow-leaved.....	<i>Spiræa salicifolia</i>	"	Moist places	190
Duckweed	<i>Lemna</i>	Rosacæ	Aquatic	189
Dulse	<i>Rhodymenia palmata</i>	Pistiacæ	Sea-sides	183
Dwarf Mallow	<i>Malva rotundifolia</i>	Rhodymeniacæ	Waysides	96
Dwale	<i>Atropa belladonna</i>	Malvacæ	Walls	7
Dutch Clover	<i>Myrica gale</i>	Solanacæ	Fields.....	Summer
Myrtle	<i>Genista tinctoria</i>	Leguminosæ	Bogs	Spring
Dyer's Greenwood	<i>Reseda luteola</i>	Leguminosæ	Heaths	81
" Weed	<i>Bunium flexuosum</i>	Resedacæ	Walls	98
Earthnut	<i>Rosa rubiginosa</i>	Umbelliferæ	Meadows	Summer
Esparagine	"	Rosacæ	Waysides	140
"	"	"	"	233
"	"	"	"	107

COMMON NAME.	SCIENTIFIC NAME.	NATURAL FAMILY.	WHERE FOUND.	TIME OF FLOWERING.	P.
Elder	<i>Sambucus nigra</i>	Caprifoliaceæ	Waysides	Spring	54
" Dwarf	<i>S. ebulus</i>	"	Walls	Summer	142
" Elecampane	<i>Inula helenium</i>	Compositæ	River-sides	Autumn	228
Enchanter's Nightshade	<i>Circea lutetiana</i>	Onagrææ	Woods	Summer	66
Everlasting, Mountain	<i>Gnaphalium dioica</i>	Compositæ	Highlands	"	175
Eyebright	<i>Euphrasia officinalis</i>	Scrophulariaceæ	Heaths	"	175
Fennel	<i>Feniculum vulgare</i>	Umbelliferae	Sea-sides	"	201
Featherfoil	<i>Hottonium palustris</i>	Primulacæ	Aquatic	"	185
Fiddle Dock	<i>Rumex pulcher</i>	Polygonacææ	Wastes	"	137
Field Gentian	<i>Gentiana campestris</i>	Gentianacææ	Heaths	Autumn	226
" Knaulia	<i>Knantia arvensis</i>	"	Fields	Summer	129
" Madder	<i>Sherardia arvensis</i>	Dipsacææ	"	"	127
" Scorpion Grass	<i>Veronica agrestis</i>	Rubiaceæ	"	"	184
" Speedwell	<i>Myosotis arvensis</i>	Scrophulariaceæ	"	"	70
Figwort, Knotted	<i>Scrophularia nodosa</i>	"	Woods	Spring	120
Flax	<i>Linum usitatissimum</i>	Linacææ	Fields	Summer	130
" White	<i>L. catharticum</i>	"	Waysides	"	130
Fleabane	<i>Pulicaria dysenterica</i>	Compositæ	River-sides	Autumn	229
Flixweed	<i>Sisymbrium Sophia</i>	Cruciferae	Waysides	June—September	214
Flowering Fern	<i>Osmunda regalis</i>	Filices	Marshes	Summer	99
" Rush	<i>Butomus umbellatus</i>	Butomacææ	"	Spring	187
Fluellin	<i>Linaria spuria and elatine</i>	Scrophulariaceæ	Fields	"	56, 130
Fly Orchis	<i>Ophrys muscifera</i>	Orchidacææ	Pastures	Summer	164
Fool's Parsley	<i>Ethusa cynapium</i>	Umbelliferae	Waysides	"	132
Forget-me-not	<i>Myosotis palustris</i>	Horaginacææ	Moist places	"	184
Foxglove	<i>Digitalis purpurea</i>	Scrophulariaceæ	Waysides	"	112
Foxtail Grass	<i>Alopecurus</i>	Graminacææ	Meadows	"	150
Fragrant Orchis	<i>Gymnadenia conopsea</i>	Orchidacææ	Heaths	"	175
Fritillary	<i>Fritillaria meleagris</i>	Liliacææ	Meadows	Spring	80
Frogbit	<i>Hydrocharis morsus ranae</i>	Hydrocharitidacææ	Aquatic	Summer	187
Fuller's Herb	<i>Saponaria officinalis</i>	Caryophyllacææ	Wastes	"	141
Fumitory	<i>Fumaria officinalis</i>	Fumariacææ	Fields	Spring	71
" Furze	<i>Ulex Europæus</i>	Leguminosæ	Heaths	"	89, 242
" Winter	<i>U. tianus</i>	"	Waysides	Winter	241
Gale	<i>Myrica gale</i>	Myricacææ	Bogs	Spring	98

Garlic, Trecle-Mustard.....	Cruciferae.....	Hedgerows.....	Spring.....	51
Gentian, Blue.....	Gentianaceæ.....	Moors.....	Autumn.....	226
Geranium.....	Geraniaceæ.....	Waysides.....	April, October.....	56
Germander Speedwell.....	Scrophulariaceæ.....	Woods and hedges.....	May, June.....	56
Giant Bellflower.....	".....	Woods.....	Autumn.....	208
Gillyflower.....	Caryophyllaceæ.....	Rocks.....	Summer.....	145
Gill-run-along-the-ground.....	Labiatae.....	Hedgerows.....	Spring.....	44
Glasswort.....	Chenopodiaceæ.....	Sea-sides.....	Autumn.....	233
Globe Flower.....	Ranunculaceæ.....	Highlands.....	Summer.....	177
" Crow-silk.....	Algae.....	Aquatic.....	98
Goat's-beard.....	Compositæ.....	Pastures.....	August.....	220
Golden Rod.....	".....	Woods.....	Autumn.....	208
Saxifrage.....	Saxifragaceæ.....	Marshes.....	Spring.....	99
Good King Harry.....	Chenopodiaceæ.....	Wastes.....	Autumn.....	215
Goosefoot.....	".....	".....	".....	213
Goosegrass.....	Rubiaceæ.....	Waysides.....	May—July.....	114
Goosefoot, Sea.....	Chenopodiaceæ.....	Sea-sides.....	Autumn.....	234
Gorse.....	Leguminosæ.....	Heaths and hedges.....	89, 241
Grasses.....	Graminaceæ.....	Meadows.....	Summer.....	147
Grass of Parnassus.....	Droseraceæ.....	Marshes.....	Autumn.....	331
Great Spearwort.....	Ranunculaceæ.....	Bogs.....	Summer.....	195
" Bindweed.....	Convolvulaceæ.....	Hedges.....	".....	116
" Bladderwort.....	Lentibulariaceæ.....	Aquatic.....	June.....	186
" Burnet.....	Rosaceæ.....	Pastures.....	Summer.....	166
Greater Knapweed.....	Compositæ.....	".....	".....	167
Greenman Orchis.....	Orchidaceæ.....	Woods.....	Spring.....	63
Gromwell, Corn.....	Boraginaceæ.....	Fields.....	Summer.....	126
Ground Ivy.....	Labiatae.....	Hedgerows.....	Spring.....	44
Groundsel.....	Compositæ.....	Wastes.....	".....	84
Guilder Rose.....	Caprifoliaceæ.....	Hedgerows.....	".....	52
Hair Grass.....	Graminaceæ.....	Heaths.....	Summer.....	153
Hairy Greenweed.....	Leguminosæ.....	".....	".....	181
Rock Cress.....	Cruciferae.....	Rocks.....	Spring.....	85
<i>Sisymbrium alitaria</i>				
<i>Geniana campestris</i>				
<i>Veronica</i>				
<i>Veronica chamaedrys</i>				
<i>Campanula latifolia</i>				
<i>Dianthus caryophyllus</i>				
<i>Glechoma hederacea</i>				
<i>Salicornia herbacea</i>				
<i>Trollius Europæus</i>				
<i>Conferæ</i>				
<i>Tragopogon pratense</i>				
<i>Salidago virgaurea</i>				
<i>Chrysosplenium oppositifolium</i>				
<i>Chenopodium Bonus</i>				
<i>Henricus</i>				
".....				
<i>Galium aparine</i>				
<i>Sueda fruticosa</i>				
<i>Ulex</i>				
<i>Parnassia palustris</i>				
<i>Ranunculus lingua</i>				
<i>Calystegia sepium</i>				
<i>Utricularia vulgaris</i>				
<i>Sanguisorba officinalis</i>				
<i>Centaurea scabiosa</i>				
<i>Aceris anthropophora</i>				
<i>Lithospermum arvense</i>				
<i>Nepeta glechoma</i> , or <i>Glechoma hederacea</i>				
<i>Senecio vulgaris</i>				
<i>Viburnum opulus</i>				
<i>Arta</i>				
<i>Genista pilosa</i>				
<i>Arabis stricta</i>				

COMMON NAME.	SCIENTIFIC NAME.	NATURAL FAMILY.	WHERE FOUND.	TIME OF FLOWERING.	P.
Hairy Turluca	<i>Thrinacia hirta</i>	Cichoraceæ	Pastures	Autumn	221
" Willow Herb	<i>Epilobium hirsutum</i>	Onograceæ	Moist places	Summer	190
Harebell	<i>Campanula rotundifolia</i>	Campanulaceæ	Heaths	"	225
Hare's-foot Trefoil	<i>Trifolium arvense</i>	Leguminosæ	"	May—July	172
Harrif	<i>Galium aparine</i>	Rubiaceæ	Waysides	Autumn	114
Hawk's-beard	<i>Crepis</i>	Compositæ	Pastures	"	221
Hawkweed	<i>Hieracium</i>	"	Pastures	"	221
Hawthorn	<i>H. pilosella</i>	"	Pastures	"	221
Hazel	<i>Crataegus oxyantha</i>	Rosaceæ	Hedgerows	Spring	55
Heartsease	<i>Corylus avellana</i>	Cupulifereæ	"	"	42
Heath	<i>Viola tricolor</i>	Violaceæ	Fields	Summer	74
" Fine-leaved	<i>Erica</i>	Ericaceæ	Heaths	"	172
Heather	<i>E. cinerea</i>	"	"	"	172
Hedge Garlic	<i>Calluna vulgaris</i>	"	Moors	"	172
" Mustard	<i>Sisymbrium alliaria</i>	Crucifereæ	Waysides	Spring	51
" Parsley	<i>S. officinale</i>	"	"	June—September	214
Hellebore, Green	<i>Geethusa cynapium</i>	Umbellifereæ	"	Summer	132
" Stinking	<i>Helleborus viridus</i>	Ranunculaceæ	Woods	Spring	52
Helleborine, Purple	<i>H. foetidus</i>	"	"	"	52
" White	<i>Epipactis latifolia</i>	"	"	Autumn	207
Hemlock	<i>B. grandiflora</i>	"	"	June	208
" Stork's-bill	<i>Conium maculatum</i>	Umbellifereæ	Wastes	Summer	143
" Water Dropwort	<i>Erodium cicutarium</i>	Geraniaceæ	Walls	"	135
Hemp Agrimony	<i>Gnaphalium crocata</i>	Umbellifereæ	Aquatic	"	189
" Nettle, Common	<i>Eupatorium cannabinum</i>	Compositæ	River-sides	"	185
Hembane	<i>Galopsis tetralit</i>	Labiata	Wastes	"	131
Herb Bennet	<i>Hyoscyamus niger</i>	Solanaceæ	"	"	142
" Paris	<i>Geum urbanum</i>	Rosaceæ	Waysides	June—September	108
" Robert	<i>Paris quadrifolia</i>	Trilliaceæ	Woods	Spring	66
" Twopence	<i>Geranium Robertianum</i>	Geraniaceæ	Hedgerows	Spring and Sum	56
Hoary Mullein	<i>Lysimachia nummularia</i>	Primulaceæ	River-sides	Autumn	229
" Plantain	<i>Verbascum pulcherrimum</i>	Scrophulariaceæ	Waysides	Summer	114
" Stock	<i>Plantago media</i>	Plantaginaceæ	Pastures	"	166
"	<i>Matthiola incana</i>	Crucifereæ	Sea-sides	Spring	101
"	<i>Ilex aquifolium</i>	Aquifoliaceæ	Hedges	Winter	240

Holy Hay.....	<i>Onobrychis sativa</i>	Leguminosæ.....	Fields.....	Summer.....	74
" Herb.....	<i>Verona officinalis</i>	Verbenacæ.....	Wastes.....	".....	141
Honeysuckle.....	<i>Capicea</i>	Caprifoliacæ.....	Hedges.....	".....	111
Hop.....	<i>Humulus lupulus</i>	Urticacæ.....	Waysides.....	".....	116
Horehound.....	<i>Marrubium vulgare</i>	Labiatæ.....	Waysides.....	Autumn.....	216
" Black.....	<i>Ballota nigra</i>	".....	".....	".....	210
Horned Poppy.....	<i>Glaucium luteum</i>	Papaveracæ.....	Rocks.....	".....	198
Hornwort.....	<i>Ceratophyllum</i>	Ceratophyllacæ.....	Aquatic.....	".....	96
Horse Radish.....	<i>Cochlearia armorata</i>	Cruciferæ.....	Highlands.....	Spring.....	102
Horsetail.....	<i>Equisetum</i>	Equisetacæ.....	Wastes.....	".....	188
Hound's Berry.....	<i>Cornus sanguinea</i>	Cornacæ.....	Hedges.....	".....	55
" Tongue.....	<i>Cynoglossum officinale</i>	Boraginacæ.....	Waysides.....	Summer.....	109
House Leek.....	<i>Sempervivum tectorum</i>	Crassulacæ.....	Walls.....	".....	134
Hyacinth, Wild.....	<i>Hyacinthus non-scriptus</i> , or <i>Agraphis nutans</i>	Liliacæ.....	Woods.....	Spring.....	59
Hurt-suckle.....	<i>Centaurea cyanus</i>	Compositæ.....	Fields.....	Summer.....	128
Hyssop, Hedge.....	<i>Polygala vulgaris</i>	Polygalacæ.....	Pastures.....	".....	180
Iris, Purple.....	<i>Iris fetidissima</i>	Iridacæ.....	Moist places.....	".....	184
Irish Ivy.....	<i>Helix vegetata</i>	Araliacæ.....	Walls.....	Winter.....	240
Ivy.....	<i>Hedera helix</i>	".....	".....	".....	240
Ivy-leaved Bellflower, Sm. Lettuce.....	<i>Campanula hederacea</i> <i>Lactuca muralis</i>	Campanulacæ..... Compositæ.....	Woods..... Walls.....	Autumn..... Summer.....	208, 232 140
" Speedwell.....	<i>Veronica hederifolia</i>	Scrophulariacæ.....	Fields.....	Spring.....	70
" Toadflax.....	<i>Linaria cymbalaria</i>	".....	Walls.....	".....	83
Jack-by-the-hedge.....	<i>Sisymbrium altitara</i>	Cruciferæ.....	Hedges.....	Spring.....	51
Jack-so-to-bed-at-noon.....	<i>Tragopogon pratense</i>	Compositæ.....	Pastures.....	August.....	220
Jerusalem Cowslip.....	<i>Pulsinaria officinalis</i>	Boraginacæ.....	Woods.....	Spring.....	66
Juniper.....	<i>Juniperus communis</i>	Coniferæ.....	Heaths.....	".....	91
Kecks.....	<i>Githuse</i>	Umbelliferæ.....	Waysides.....	".....	132
Kidney Vetch.....	<i>Anthyllus vulneraria</i>	Lekuminosæ.....	Pastures.....	Summer.....	169
Knapweed, Black.....	<i>Centaurea niger</i>	Compositæ.....	".....	".....	167
Knaulia.....	<i>Knaulia arvensis</i>	Dipsacæ.....	Fields.....	".....	129
Knauel, Annual.....	<i>Scleranthus annuus</i>	Scieranthacæ.....	".....	".....	131
Knokgrass.....	<i>Polygonum aviculare</i>	Polygonacæ.....	Wastes.....	".....	84
Knotted Figwort.....	<i>Scrophularia nodosa</i>	Scrophulariacæ.....	Woods.....	".....	120
Lady's Bedstraw.....	<i>Galium verum</i>	Rubiacæ.....	Heaths and hedges.....	".....	115

COMMON NAME.	SCIENTIFIC NAME.	NATURAL FAMILY.	WHERE FOUND.	TIME OF FLOWERING.	P.
Lady's Finger	<i>Anthyllis vulneraria</i>	Leguminosæ	Pastures	Summer	169
" Mantle	<i>Alchemilla vulgaris</i>	Rosacæ	Hill pastures	"	180
" Hair	<i>Briza media</i>	Graminæ	Pastures	"	155
Lady Orchis	<i>Orchis fusca</i>	Orchidacæ	Moors	Spring	63
Lady's Seal	<i>Tamus communis</i>	Dioscoreacæ	Hedgerows	June	56
" Slipper	<i>Lotus corniculatus</i>	Leguminosæ	Meadows	Summer	169
" Smock	<i>Cardamine pratensis</i>	Cruciferae	"	Spring	18
" Tresses	<i>Nicotia spiralis</i>	Orchidacæ	Downs	Autumn	225
Lamb's Lettuce	<i>Valerianella, or Fedia oleria</i>	Valerianacæ	Fields	Spring	71
Laver	<i>Porphyra</i>	Algæ	Sea-sides	"	8
Lentil	<i>Eryum lens</i>	Leguminosæ	Hedges	Summer	117
Lettuce, Ivy-leaved	<i>Lactuca virosa</i>	Compositæ	Walls	"	140
Lily of the Valley	<i>Convallaria majalis</i>	Liliacæ	Woods	May	65
Linnæa	<i>Linnæa borealis</i>	Caprifoliacæ	"	Summer	122
Ling	<i>Calluna vulgaris</i>	Ericacæ	Heaths	"	173
Livelong	<i>Sedum telephium</i>	Crassulacæ	Fields	"	134
Lobelia	<i>Lobelia Dortmanna</i>	Lobeliacæ	Rivers	Autumn	226
London Pride	<i>Saxifraga umbrosa</i>	Saxifragacæ	Mountains	Summer	176
" Rocket	<i>Sisymbrium irio</i>	Cruciferae	Waysides and wastes	"	214
Loosestrife, Yellow	<i>Lysimachia vulgaris</i>	Primulacæ	River-sides	Autumn	229
" Purple	<i>Lythrum salicicaria</i>	Lythracæ	"	Summer	183
" Long Purple }					
Lords and Ladies	<i>Arum maculatum</i>	Aracæ	Hedges	Spring	45
Lousewort	<i>Pedicularis palustris</i>	Scrophulariæ	Marshes	Summer	191
Loveage	<i>Liquisticum Scoticum</i>	Umbelliferæ	Sea-sides	"	201
Love-in-idleness	<i>Viola tricolor</i>	Violacæ	Fields	"	74
Lucerne	<i>Medicago sativa</i>	Leguminosæ	"	Spring	74
Lucie Gowan	<i>Trolium Europæus</i>	Ranunculacæ	HIGHLANDS	Summer	177
Lungwort	<i>Pulmonaria officinalis</i>	Boraginacæ	Woods	Spring	66
Madder	<i>Rubia peregrina</i>	Rubiacæ	Rocks	Summer	143
" Field	<i>Sherardia arvensis</i>	"	Fields	"	127
Maiden Pink	<i>Dianthus deltoides</i>	Caryophyllacæ	Meadows	"	171
Mallow, Common	<i>Malva sylvestris</i>	Malvacæ	Waysides	"	110
" Dwarf	<i>M. rotundifolia</i>	"	"	"	110

Mallow, Musk	<i>M. moschata</i>	Malvacæ	Waysides	Summer	171
Mare's-tail	<i>Hippuris vulgaris</i>	Haloragacæ	Aquatic	"	186
Marigold	<i>Chrysanthemum coronarium</i>	Compositæ	Gardens	"	129
Marjoram	<i>Origanum vulgare</i>	Labiatæ	Heaths	"	173
Marsh Cinquefoil	<i>Comarum palustre</i>	Ericacæ	Bogs	"	193
" Cudweed	<i>Gnaphalium uliginosum</i>	Compositæ	"	"	232
" Felwort	<i>Swertia perennis</i> , and	Gentianacæ	"	Autumn	232
" Gentian	<i>Gentiana pneumonanthe</i>	Malvacæ	Marshes	Summer	192
" Mallow	<i>Aithya officinalis</i>	Ranunculacæ	"	Spring	78
" Marigold	<i>Callia patustris</i>	Orchidacæ	"	Autumn	231
" Orchis	<i>Malaxis paludosa</i>	Hypericacæ	Bogs	Summer	192
" St. John's Wort	<i>Hypericum eloides</i>	Caryophyllacæ	Marshes	Spring	99
" Stitchwort	<i>Stellaria glauca</i>	Valerianacæ	"	Summer	192
" Valerian	<i>Valeriana dioica</i>	Violacæ	Bogs	Spring	98
" Violet	<i>Viola patustris</i>	Graminacæ	Moors	Summer	149
" Mat Grass	<i>Nardus stricta</i>	Compositæ	Pastures	"	167
" Matfeilon	<i>Centaurea scabiosa</i>	Rosacæ	Hedges	Spring	55
" May	<i>Cratægus oxyantha</i>	Geraniacæ	Woods	Summer	122
" Meadow Crane's-bill	<i>Geranium pratense</i>	Orchidacæ	Pastures	Spring	163
" Orchis	<i>Orchis morio</i>	Melanthacæ	Meadows	Autumn	223
" Saffron	<i>Colchicum autumnale</i>	Labiatæ	River-sides	Summer	169
" Sage	<i>Salvia pratensis</i>	Rosacæ	"	"	182
" Meadow-sweet	<i>Spiræa ulmaria</i>	Leguminosæ	Pastures	Spring	125
" Medic.	<i>Medicago lupulina</i>	Umbelliferæ	Highlands	Summer	180
" Mew	<i>Mentha athamanticum</i>	Euphorbiacæ	Woods	"	122
" Mercury, Dog's	<i>Mercurialis perennis</i>	Compositæ	Seasides	Autumn	234
" Mezereon	<i>Daphne mezereum</i>	Resedacæ	Walls	Summer	141
" Michaelmas Daisy	<i>Aster tripolium</i>	Compositæ	Pastures	Autumn	222
" Mignonette, Wild	<i>Reseda lutea</i>	Compositæ	Waysides	Summer	136
" Milfoil	<i>Achillea millefolium</i>	"	Pastures	"	180
" Milk Thistle	<i>Carduus nutans</i>	Polygalacæ	Rushy places	June	153
" Milkwort	<i>Polygala vulgaris</i>	Graminacæ	Moist places	Autumn	230
" Millet Grass	<i>Milium</i>	Labiatæ	Woods	Winter	239
" Mint	<i>Mentha</i>	Loranthacæ	River-sides	Autumn	229
" Mistletoe	<i>Viscum album</i>	Frustracæ	"	"	229
" Moneywort	<i>Lysimachia nummularia</i>	"	"	"	229

COMMON NAME.	SCIENTIFIC NAME.	NATURAL FAMILY.	WHERE FOUND.	TIME OF FLOWERING.	P.
Mother-of-thousands	<i>Linaria cymbalaria</i>	Scrophulariaceæ	Walls	Spring	83
Monk's Rhubarb	<i>Rumex Alpinus</i>	Polygonaceæ	Highlands	Summer	188
Moon Daisy	<i>Chrysanthemum leucanthemum</i>	Compositæ	Pastures	"	167
Moschatel	<i>Ajora moschatelina</i>	Caprifoliaceæ	Hedgerows	"	52
Moss Campion	<i>Silene acaulis</i>	Caryophyllaceæ	Heaths	"	176
Mossy Saxifrage	<i>Saxifraga hypnoides</i>	Saxifragaceæ	Highlands	"	176
Moth Mullein	<i>Verbascum blattaria</i>	Scrophulariaceæ	Wastes	"	114
Mountain Avens	<i>Dryas octopetala</i>	Rosaceæ	Highlands	"	177
" Violet	<i>Viola lutea</i>	Violaceæ	"	"	177
Mouse-ear Chickweed	<i>Cerastium vulgatum</i>	Caryophyllaceæ	Walls	Spring	84
Mugwort	<i>Artemisia vulgaris</i>	Compositæ	Wastes	Autumn	215
Mullein, Great	<i>Verbascum thapsus</i>	Scrophulariaceæ	Waysides	Summer	113
Hoary	<i>V. pulcherrimum</i>	"	"	"	113
Musk Mallow	<i>Malva moschata</i>	Malvaceæ	"	"	171
" Thistle	<i>Carduus nutans</i>	Compositæ	Wastes	"	186
" Musk Stork's-bill	<i>Erodium moschatum</i>	Geraniaceæ	Mountain pastures	"	135
Mustard	<i>Sinapis nigra</i>	Crucifereæ	Fields	Spring	73
" Hedge	<i>Sisymbrium officinalis</i>	"	Waysides	June—September	214
Narcissus	<i>Narcissus poeticus</i>	Liliaceæ	Woods	Spring	59
Nettle, Common	<i>Urtica dioica</i>	Urticaceæ	Wastes	"	86
" Roman	<i>U. pilulifera</i>	"	"	"	86
" Small	<i>U. urens</i>	"	"	"	86
Nettle-leaved Bellflower	<i>Campanula trachelium</i>	Campanulaceæ	Woods	Autumn	208
Nipplewort	<i>Lapsana communis</i>	Cichoraceæ	Pastures	"	213
Nosebleed	<i>Achillea millefolium</i>	Compositæ	Ruins	"	232
Nightshade, Deadly	<i>Atropa belladonna</i>	Solanaceæ	Woods	Spring	87
" Enchanter's	<i>Circæa vernalis</i>	Onagraceæ	Woods	"	66
" Woody	<i>Solanum dulcamara</i>	Solanaceæ	Hedges	"	110
Nottingham Catchfly	<i>Silene nutans</i>	Caryophyllaceæ	Cliffs	Summer	199
Oak Grass	<i>Quercus pedunculata</i>	Cupulifereæ	Woods	Spring	63
Old Man's Beard	<i>Avena</i>	Graminaceæ	Waysides	Summer	159
Orache	<i>Clematis vitalba</i>	Ranunculaceæ	"	Spring and Sum.	212
"	<i>Atriplex</i>	Chenopodiaceæ	Sea-sides	Autumn	234
Orchis, Bee	<i>Ophrys apifera</i>	Orchidaceæ	Pastures	Summer	164

Orchis, Bird's Nest.....	Orchidaceæ.....	Woods.....	Spring.....	63
" Dwarf.....	".....	Woods.....	Summer.....	164
" Early Purple.....	".....	Woods.....	Spring.....	63
" Fly.....	".....	Pastures.....	Summer.....	164
" Fragrant.....	".....	Chalky hills.....	".....	176
" Green Man.....	".....	Woods.....	Spring.....	63
" Lady.....	".....	Woods.....	".....	63
" Marsh.....	".....	Marshes.....	Autumn.....	231
" Meadow.....	".....	Moist places.....	Summer.....	164
" Pyramidal.....	".....	Pastures.....	".....	163
" Spotted Palmate.....	".....	Meadows.....	".....	164
".....	".....	Pastures.....	".....	164
Orphile.....	".....	Fields.....	".....	184
Ox-eye Daisy.....	Crassulacæ.....	Pastures.....	".....	167
.....	Compositæ.....	Meadows.....	Spring.....	79
Oxlip.....	Primulacæ.....	Hedges.....	".....	42
Palm Willow.....	Salicæ.....	Fields.....	Summer.....	74
Pansy.....	Violacæ.....	Waysides.....	".....	132
Parsley, Fool's.....	Umbelliferæ.....	Woods.....	".....	9
Parsnip.....	".....	".....	".....	123
" Cow.....	".....	Aquatic.....	".....	190
" Water.....	".....	Woods.....	Spring.....	58
Pasque-flower.....	Ranunculacæ.....	Fields.....	Summer.....	122
Paul's Betony.....	Scrophulariacæ.....	Meadows.....	".....	118
Pea, Everlasting.....	Leguminosæ.....	Walls.....	".....	139
Pearwort.....	Caryophyllacæ.....	".....	".....	140
Pellitory of the Wall.....	Urticacæ.....	River-sides.....	Autumn.....	230
Pennyroyal.....	Labiata.....	Walls.....	Spring.....	87
Pennywort.....	Crassulacæ.....	Steep holmes.....	".....	199
Peony.....	Ranunculacæ.....	River-sides.....	Autumn.....	230
Peppermint.....	Labiata.....	Woods.....	Summer.....	120
Perforated St. John's Wort.....	Hypericacæ.....	Hedges.....	Spring.....	52
Periwinkle.....	Apocynacæ.....	Fields.....	Autumn.....	204
Pheasant's-eye.....	Ranunculacæ.....	Heaths.....	Spring.....	181
Petty Whin.....	Leguminosæ.....	Pastures.....	Summer.....	228
Pignut.....	Umbelliferæ.....	".....	".....	
<i>Listeria nidus avis</i>				
<i>Orchis ustulata</i>				
<i>O. mascula</i>				
<i>Ophrys muscifera</i>				
<i>Gymnadenia conopsea</i>				
<i>Aceras anthropophora</i>				
<i>Orchis fusca</i>				
<i>Malaxis paludosa</i>				
<i>Orchis latifolia</i>				
<i>O. morio</i>				
<i>O. pyramidalis</i>				
<i>O. maculata</i>				
<i>Sedum telephium</i>				
<i>Chrysanthemum leucanthemum</i>				
<i>Primula elatior</i>				
<i>Salix caprea</i>				
<i>Viola tricolor</i>				
<i>Aithusa cynapium</i>				
<i>Pastinaca sativa</i>				
<i>Heracleum sphondylium</i>				
<i>Stum latifolium</i>				
<i>Anemone pulsatilla</i>				
<i>Veronica serpyllifolia</i>				
<i>Pisum</i>				
<i>Sagina procumbens</i>				
<i>Parietaria officinalis</i>				
<i>Mentha pulegium</i>				
<i>Cotyledon umbilicus</i>				
<i>Peonia corallina</i>				
<i>Mentha piperita</i>				
<i>Hypericum perforatum</i>				
<i>Vinca major and minor</i>				
<i>Aconitum autumnale</i>				
<i>Genista Anglica</i>				
<i>Ranunculus flaccuosus</i>				

COMMON NAME.	SCIENTIFIC NAME.	NATURAL FAMILY.	WHERE FOUND.	TIME OF FLOWERING.	P.
Pilewort	<i>Ficaria ranunculoides</i>	Ranunculaceæ	Hedges	Spring	47
Pimpernel	<i>Anagallis arvensis</i>	Primulacæ	Fields	"	117
Pink, Cheddar	<i>Dianthus cæsius</i>	Caryophyllacæ	Rocks	Summer	143
" Deptford	<i>D. armeria</i>	"	Pastures	"	171
" Maiden	<i>D. deltoides</i>	"	"	"	171
" Proliferous	<i>D. prolifer</i>	"	"	"	171
Pink-o'-my-John	<i>Viola tricolor</i>	Violacæ	Fields	Spring	74
Plague-flower	<i>Petasites vulgaris</i>	Compositæ	River-sides	"	93
Plantain	<i>Plantago major</i>	Plantaginacæ	Waysides	Summer	165
" Hoary	<i>P. media</i>	"	Pastures	"	166
" Water	<i>Alisma plantago</i>	Alismacæ	River-sides	"	189
Ploughman's Spikenard	<i>Conyza squarrosa</i>	Compositæ	Woods	Winter	238
Plume Thistle	<i>Cnicus arvensis</i>	"	Wastes	Summer	137
Pondweed	<i>Potamogeton</i>	Naiadacæ	Aquatic	"	96
Poppy, Red	<i>Papaver rhæas</i>	Papaveracæ	Fields	"	127
" Welsh	<i>Meconopsis Cambrica</i>	"	Rocks	"	143
" White	<i>Papaver somniferum</i>	"	Fields	"	128
" Yellow Horned	<i>Glaucium luteum</i>	"	Sea-sides	"	198
Premnose Scabious	<i>Scabiosa succisa</i>	"	Pastures	"	167
Primrose	<i>Primula vulgaris</i>	Dipsacæ	Woods	Spring	47
Privet	<i>Ligustrum vulgare</i>	Oleacæ	"	"	67
Provision-flower	<i>Polygala vulgaris</i>	Polygalacæ	Pastures	Summer	180
Proliferous Pink	<i>Dianthus prolifer</i>	Caryophyllacæ	"	"	171
Pyramidal Orchis	<i>Orchis pyramidalis</i>	Orchidacæ	Meadows	"	164
Purple Clover	<i>Trifolium pratense</i>	Leguminosæ	"	"	80
" Iris	<i>Iris fetidissima</i>	Iridacæ	Moist places	Spring	184
" Loosestrife	<i>Lythrum salicaria</i>	Lythracæ	Rivers	Summer	183
" Orchis	<i>Orchis mascula</i>	Orchidacæ	Woods	Spring	62
" Saxifrage	<i>Saxifraga oppositifolia</i> , or <i>Sonchus</i>	Saxifragacæ	Mountains	Summer	176
" Sow Thistle	<i>Malguedium Alpinum</i>	Cichoracæ	"	"	179
Quaking Grass	<i>Briza media</i>	Graminacæ	Pastures	"	155
Ragwort	<i>Senecio Jacobæa</i>	Compositæ	"	July—September	234
Razed Robin	<i>Lychnis flos-cuculi</i>	Caryophyllacæ	Moist places	Spring	94
Raunpung Funitory	<i>Fumaria capreolata</i>	Fumariacæ	Fields	"	73

Ransoms	<i>Allium ursinum</i>	Liliaceæ	Woods	Spring	67
Raspberry	<i>Rubus idæus</i>	Rosaceæ	"	Summer	64
Rattle, Red	<i>Pedicularis palustris</i>	Scrophulariaceæ	Marshes	"	191
" Yellow	<i>Rhianthus crista galli</i>	"	Meadows	"	170
Red Bartsia	<i>Bartsia odorata</i>	Caryophyllaceæ	Fields	May—July	130
" Campion	<i>Lycchnis diurna</i>	Gentianaceæ	Waysides	Summer	66
" Centaury	<i>Erythraea centaurium</i>	Labiata	Heaths	Spring	181
" Dead Nettle	<i>Lamium purpureum</i>	"	Waysides	Summer	43
" Hemp Nettle	<i>Galeopsis ladanum</i>	Papaveraceæ	Fields	Summer	131
" Poppy	<i>Papaver rhæa</i>	Valerianaceæ	"	"	127
" Valerian	<i>Centranthus rubra</i>	Graminaceæ	Moist places	"	144
Reed	<i>Arundo phragmites</i>	Typhaceæ	Marshes	"	161, 228
Reed-mace	<i>Typha latifolia</i>	Leguminosæ	River-sides	Autumn	228
Re-st Harrow	<i>Ononis arvensis</i>	Plantaginaceæ	Wastes	Summer	138
Rib Grass	<i>Plantago lanceolata</i>	Graminaceæ	Meadows	"	165
Ribbon Grass	<i>Phalaris arundinaceæ</i>	Crucifera	"	Spring	151
Rock Cress	<i>Arabis stricta</i>	Cistaceæ	Rocks	Summer	85
" Rose	<i>Helianthemum vulgare</i>	Polygalaceæ	"	"	143
Rogetion-flower	<i>Polygala vulgaris</i>	Urticaceæ	Pastures and banks	Spring	180
Roman Nettle	<i>Urtica pilulifera</i>	Onograceæ	Wastes	Summer	86
Rosebay Willow Herb	<i>Epilobium angustifolium</i>	Rosaceæ	Highlands	Spring	190
Rose, Burnet	<i>Rosa spinosissima</i>	"	Rocky places	Summer	198
" Dog	<i>R. canina</i>	"	Hedgerows	"	106
" Trailing	<i>R. arvensis</i>	"	"	"	107
Rose-root	<i>Sedum rhodiola</i> , or <i>Rhodiola rosea</i>	Crassulaceæ	Highlands	"	177
Rush, Flowering	<i>Butomus umbellatus</i>	Juncaceæ	River-sides	Spring	187
Rushes	<i>Juncus</i>	Graminaceæ	Moist places	Autumn	228
Rye or Ray Grass	<i>Lotium perenne</i>	Labiata	Meadows	Summer	160
Sage, English	<i>Salvia verbenaca</i>	Leguminosæ	Pastures	July	168
Saint/oin	<i>Onobrychis sativa</i>	Crucifera	Fields	Spring	166
St. James's Wort	<i>Capsella bursa pastoris</i>	Compositæ	Wastes	"	83
St. John's Wort	<i>Hypericum segetum</i>	Hypericaceæ	Fields	Summer	129
"	<i>Hypericum calycinum</i>	"	Woods	July	119
"	<i>H. perforatum</i>	"	"	Summer	120
St. Patrick's Cabbage	<i>Saxifraga umbrosa</i>	Saxifragaceæ	Highlands	"	176

COMMON NAME.	SCIENTIFIC NAME.	NATURAL FAMILY.	WHERE FOUND.	TIME OF FLOWERING.	P.
St. Peter's Herb.....	<i>Crithmum maritimum</i>	Umbelliferæ.....	Sea-cliffs.....	Autumn.....	233
Salad, Burnet.....	<i>Poterium sanguisorba</i>	Rosacæ.....	Pastures.....	Summer.....	166
Saltwort.....	<i>Salicornia herbacea</i>	Chenopodiaceæ.....	Sea-sides.....	Autumn.....	233
" Prickly.....	<i>Salsola kali</i>	".....	".....	".....	233
Samphire.....	<i>Crithmum maritimum</i>	Umbelliferæ.....	Aquatic.....	July—September.....	233
Sandwort.....	<i>Arenaria serpyllifolia</i>	Caryophyllaceæ.....	Wastes.....	Summer.....	140
" Fine-leaved.....	<i>Arenaria tenuifolia</i>	".....	".....	".....	140
" Purple.....	<i>A. eulora</i>	".....	".....	".....	140
Saxifrage, Alpine.....	<i>Saxifraga nivalis</i>	Saxifragaceæ.....	Mountains.....	".....	177
" Mossy.....	<i>S. hypnoides</i>	".....	Rocks.....	".....	176
" Purple.....	<i>S. oppositifolia</i> , or <i>Sonchus</i>	".....	Moist hills.....	".....	176
" Starry.....	<i>S. stellaris</i>	".....	".....	".....	176
" Yellow Mountain.....	<i>S. aizoides</i>	".....	".....	".....	176
Scabious.....	<i>Scabiosa columbaria</i>	Dipsacæ.....	Fields.....	".....	168
Scarlet Pimpernel.....	<i>Anagallis arvensis</i>	Primulacæ.....	".....	".....	117
Scorpion Grass, Long.....	<i>Myosotis collina</i>	Scrophulariaceæ.....	Sandy places.....	Spring.....	73
".....	<i>M. arvensis</i>	".....	Fields.....	".....	73
Scotch Thistle.....	<i>Onopordon acanthium</i>	Compositæ.....	Wastes.....	Summer.....	136
Scottish Asphodel.....	<i>Tofieldia palustris</i>	Melanthaceæ.....	Highlands.....	".....	179
Scurvy Grass.....	<i>Cochlearia officinalis</i>	Cruciferae.....	".....	".....	101
SEA-SIDE PLANTS:					
Arrow Grass.....	<i>Triglochin maritimum</i>	Juncagraceæ.....	Sea-sides.....	May—August.....	200
Beet.....	<i>Beta maritima</i>	Chenopodiaceæ.....	".....	Autumn.....	234
Blite.....	<i>Suaeda fruticosa</i>	".....	".....	".....	234
Buckthorn.....	<i>Hippophaë rhamnoides</i>	Elæagnaceæ.....	".....	Spring.....	101
Cabbage.....	<i>Brassica oleracea</i>	Cruciferae.....	".....	".....	100
Campion.....	<i>Silene maritima</i>	Caryophyllaceæ.....	".....	Summer.....	196
Convolvulus.....	<i>Calyptegia sodanella</i>	Convolvulaceæ.....	".....	".....	198
Gromwell.....	<i>Mertensia maritima</i>	Boraginaceæ.....	".....	Spring.....	102
Heath.....	<i>Frankenia levis</i>	Frankeniaceæ.....	".....	Summer.....	201
Holly.....	<i>Eryngium maritimum</i>	Umbelliferæ.....	".....	Autumn.....	235
Kale.....	<i>Crabe maritima</i>	Cruciferae.....	".....	Summer.....	196
Lavender.....	<i>Statice limonium</i>	Plumbaginaceæ.....	".....	".....	199
Mallow.....	<i>Lavator arborea</i>	Malvaceæ.....	".....	".....	199
Milkwort.....	<i>Glaux maritima</i>	Primulacæ.....	".....	".....	197

SEA-SIDE PLANTS continued:

Pea.....	<i>Lathyrus maritimus</i>	Leguminosæ	201
Plantain	<i>Plantago maritima</i>	Plantaginacææ	200
Poppy	<i>Glaucium luteum</i>	Papaveracææ	198
Pu slane	<i>Honkenya peploides</i>	Chenopodiaceæ	235
Rocket	<i>Cakile maritima</i>	Cruciferaæ	202
Sandwort.....	<i>Arenaria maritimum</i>	Caryophyllacææ	197
Stock	<i>Matthiola sinuata</i>	Cruciferaæ	101
Stork's-bill	<i>Erodium maritima</i>	Geraniacææ	202
Southernwood	<i>Artemisia maritima</i>	Compositæ	236
Selfheal	<i>Carex</i>	Cyperacææ	148
Septfoil.....	<i>Prunella vulgaris</i>	Labiatæ	223
Shamrock.....	<i>Comarum palustre</i>	Rosacææ	193
Sheepsbit.....	<i>Trifolium repens</i>	Leguminosæ	81
Shepherd's Purse	<i>Jasione montana</i>	Campauulacææ	174
" Needle	<i>Capella bursa pastoris</i>	Cruciferaæ	82
Sibbaldia	<i>Scandix pecten</i>	Umbelliferaæ	132
Sickle Herb.....	<i>Sibbaldia procumbens</i>	Rosacææ	178
Silverweed	<i>Prunella vulgaris</i>	Labiatæ.....	223
Slimpler's Joy	<i>Potentilla anserina</i>	Rosacææ	109
Sloe.....	<i>Verbena officinalis</i>	Verbenacææ	141
Snakeshead	<i>Prunus spinosa</i>	Rosacææ	50
Snakeweed	<i>Fritillaria meleagris</i>	Liliacææ	80
Snappedragon	<i>Polygonum bistorta</i>	Polygonacææ	97
Sneezwort	<i>Antirrhinum majus</i>	Scrophulariacææ	134
Soapwort	<i>Achillea ptarmica</i>	Compositæ	221
Soldier's Woundwort	<i>Saponaria officinalis</i>	Caryophyllacææ	141
Solomoi's Seal	<i>Achillea millefolium</i>	Compositæ	222
Sow Thistle.....	<i>Polygonatum multiflorum</i>	Liliacææ	65
Sorrel.....	<i>Sonchus oleraceus</i>	Cichoracææ	219
" Sheep's	<i>Rumex acetosa</i>	Polygonacææ	170
" Spearwort	<i>R. acetosella</i>	"	170
Speedwell.....	<i>Ranunculus flammula</i>	Ranunculacææ	195
Spignel.....	<i>Veronica chamaedrys</i>	Scrophulariacææ	70
Spinach.....	<i>Meum athamanticum</i>	Umbelliferaæ	180
	<i>Spinacia oleracea</i>	Chenopodiaceæ	8
		Highlands	
		Pastures	
		Waysides	
		Wastes	
		Thickets	
		Meadows	
		River-sides	
		Walls	
		Pastures	
		Wastes	
		Thickets	
		Meadows	
		River-sides	
		Walls	
		Pastures	
		Wastes	
		Woods	
		Fields	
		Pastures	
		"	
		Marshes	
		Waysides	
		Mountains	
		Sea-sides	

COMMON NAME.	SCIENTIFIC NAME.	NATURAL FAMILY.	WHERE FOUND.	TIME OF FLOWERING.	P.
Spindle Tree	<i>Euonymus Europæus</i>	Celastracæe	Hedgerows	Spring	45
Spotted Hemlock	<i>Conium maculatum</i>	Umbelliferæ	Wastes	Summer	142
" Persicaria	<i>Polygonum maculatum</i>	Polygonacæe	Rivers	Autumn	230
Spreading Bellflower	<i>Campanula reptans</i>	Campanulacæe	Hedgerows	"	212
Spurge, Caper	<i>Euphorbia amygdaloides</i>	Euphorbiacæe	Woods	"	207
" Wood	<i>E. Cyparissias</i>	"	"	"	207
" Laurel	<i>Daphne laureola</i>	Thymelacæe	Thickets	Winter	242
" Sun	<i>Euphorbia helioscopia</i>	Euphorbiacæe	Wastes	Summer	216
Squill, Autumnal	<i>Scilla autumnalis</i>	Liliacæe	Walls	Autumn	216
Starry-headed Trefoll	<i>Trifolium stellatum</i>	Leguminosæ	Sea-sides	Summer	197
Starwort	<i>Callitriche verna</i>	Callitricacæe	"	"	95
Stitchwort	<i>Stellaria holostea</i>	Caryophyllacæe	Woods	Spring	67
Stock, Hoary	<i>Matthiola incana</i>	Cruciferæ	Sea-sides	"	101
" Sea	<i>M. sinuata</i>	"	"	"	101
Stoncrop, English	<i>Sedum Anglicum</i>	Crassulacæe	Walls	Summer	134
" Biting	<i>S. acre</i>	"	"	"	133
" White	<i>S. album</i>	"	"	"	134
Stork's-bill Hemlock	<i>S. erodium</i>	Graminacæe	Rocks	"	134
Strangle Tare	<i>Vicia tetrasperma</i>	Leguminosæ	Walls	July, August	125
" Weed	<i>Cuscuta</i>	Crassulacæe	Fields	"	218
Strawberry	<i>Fragaria vesca</i>	Rosacæe	Woods	Spring	64
Succory, Blue	<i>Cichorium intybus</i>	Compositæ	Fields	Summer	128
Sundew	<i>Drosera rotundifolia</i>	Droseracæe	Marshes	"	193
Sun Spurge	<i>Euphorbia helioscopia</i>	Euphorbiacæe	Wastes	July—September,	216
Sweet Briar	<i>Rosa rubiginosa</i>	Rosacæe	Hedgerows	Summer	107
" Flag	<i>Acorus calamus</i>	Orontiacæe	Streamlets	Autumn	227
" Vernal Grass	<i>Anthriscanthum odoratum</i>	Graminacæe	Pastures	Summer	149
" Violet	<i>Viola odorata</i>	Violacæe	Hedgerows	Spring	46
" Woodruff	<i>Asperula odorata</i>	Rubiacæe	Woods	"	64
Tamarisk	<i>Tamarix gallica</i>	Tamaricacæe	Sea-sides	Summer	200
Tansy	<i>Tanacetum vulgare</i>	Compositæ	Hedges	Autumn	211
Tare	<i>Erum lens</i>	Leguminosæ	Fields	Summer	117
Tassel Grass	<i>Ruppia maritima</i>	Naiadacæe	Sea-sides	"	197
Tasteless Stoncrop	<i>Sedum saxangulare</i>	Crassulacæe	Walls	"	133
Teazle, Fuller's	<i>Dipsacus fullonum</i>	Dipsacæe	Woods and thickets	July, August	219

Teazle, Wild	<i>Dipsacus sylvestris</i>	Dipsacæ	Hedgerows	July August	219
Teazle-headed Trefoil	<i>Trifolium maritimum</i>	Leguminosæ	Sea-sides	Summer	197
Thistles	<i>Carduus</i>	Compositæ	Waysides	"	136
Thorn Apple	<i>Datura stramonium</i>	Solanacæ	Wastes	"	142
Thrift	<i>Armeria maritima</i>	Plumbaginacæ	Cliffs	"	176
Throatwort	<i>Campanula latifolia</i>	Campanulacæ	Woods	Autumn	208
Thyme	<i>Thymus serpyllum</i>	Labiatæ	Heaths	Summer	173
Toadflax, Yellow	<i>Linaria vulgaris</i>	Scrophulariacæ	Hedges	"	211
" Ivy-leaved	<i>L. cymbalaria</i>	"	Walls	Spring	83
Tormentil	<i>Tormentilla</i>	Rosacæ	Waysides	Summer	174
Tower Cress	<i>Arabis turrita</i>	Cruciferæ	Walls	Spring	85
Trailing Dog Rose	<i>Rosa arvensis</i>	Rosacæ	Hedges	Summer	107
Traveller's Joy	<i>Hypericum humifusum</i>	Hypericacæ	Heaths	"	174
Treacle Hare's-ear	<i>Clematis vitalba</i>	Ranunculacæ	Hedges	Spring	212
" Mustard	<i>Erysimum orientale</i>	Cruciferæ	Cliffs	Summer	52
" Wormseed	<i>Sisymbrium albaria</i>	"	Hedges	Spring	51
Tubular Dropwort	<i>Erysimum cheiranthodes</i>	"	Fields	Summer	52
Tulip	<i>Gnaphalium fistulosa</i>	Umbelliferæ	Aquatic	"	191
Tutsau	<i>Tulipa sylvestris</i>	Liliacæ	Chalk-pits	Spring	88
Twayblade	<i>Hypericum androsaemum</i>	Hypericacæ	Waysides	Summer	119
Valerian, Great	<i>Aceras anthropophora</i>	Orchidacæ	Woods	Spring	62
" Marsh	<i>Valeriana officinalis</i>	Valerianacæ	Moist places	June, July	185
" Red	<i>Valeriana dioica</i>	"	Marshes	Summer	192
Venus' Comb	<i>Centranthus rubra</i>	"	Walls	July—September	144
Veronica	<i>Scandix pecten</i>	Umbelliferæ	Fields	Summer	132
Vervain	<i>Veronica officinalis</i>	Scrophulariacæ	Waysides	Spring	57, 70
Vetch	<i>Vicia</i>	Verbenacæ	Wastes	Summer	15, 141
Violet, Sweet	<i>Viola odorata</i>	Leguminosæ	Hedges	"	117
" Dog	<i>V. canina</i>	Violacæ	Hedgerows	Spring	46
Viparious Alpine Bistort	<i>Polygonum viviparum</i>	Polygonacæ	"	All summer	178
Virgin's Bugloss	<i>Echium vulgare</i>	Boraginacæ	Walls	Summer	139
Virgin's Bower	<i>Clematis vitalba</i>	Ranunculacæ	Ruins	"	212
Wallflower	<i>Cheiranthus cheiri</i>	Cruciferæ	Walls	Spring	83
Wall Germander	<i>Teucrium chamaedrys</i>	Labiatæ	"	Summer	134
" Pellitory	<i>Parietaria officinalis</i>	Urticacæ	"	"	140

COMMON NAME.	SCIENTIFIC NAME.	NATURAL FAMILY.	WHERE FOUND.	TIME OF FLOWERING.	P.
Wall Pennywort	<i>Cotyledon umbilicus</i>	Crasulaceæ	Walls	Spring	87
Wake-Robin	<i>Arum maculatum</i>	Aceraceæ	Hedges	"	45
Water Archer	<i>Sagittaria sagittifolia</i>	Alismaceæ	Aquatic	Summer	188
"	<i>Geum rivale</i>	Rosaceæ	River-sides	"	183
"	<i>Nasturtium officinalis</i>	Cruciferae	Streams	"	184
"	<i>Ranunculus aquatilis</i>	Ranunculaceæ	River-sides	Spring	94
"	<i>Nymphaea alba</i>	Nymphaeaceæ	Rivers	Summer	186
"	<i>Nuphar lutea</i>	"	"	"	186
"	<i>Myriophyllum spicatum</i>	Haloragaceæ	Pools	"	289
"	<i>Sium latifolium</i>	Umbelliferae	River-sides	"	190
"	<i>Polygonum hydropiper</i>	Polygonaceæ	Moist places	"	230
"	<i>Alisma plantago</i>	Alismaceæ	"	Autumn	230
"	<i>Senecio aquaticus</i>	Compositæ	"	Summer	189
"	<i>Stratiotes aloides</i>	Hydrocharidaceæ	"	"	188
"	<i>Veronica anagallis</i>	Scrophulariaceæ	Still waters	"	187
"	<i>Callitriche verna</i>	Callitricaceæ	Moist places	"	184
"	<i>Anacharis aisinastrum</i>	Hydrocharidaceæ	Aquatic	"	95
"	<i>Hottonia palustris</i>	Primulaceæ	"	"	95
"	<i>Plantago major</i>	Plantaginaceæ	River-sides	Summer	185
Waybread	<i>Viburnum lantana</i>	Caprifoliaceæ	Pastures	"	165
Wayfaring Tree	<i>Cnicus arvensis</i>	Compositæ	Hedges	Spring	53
Waythistle	<i>Reseda luteola</i>	Resedaceæ	Waste places	Summer	137
Weld	<i>Meconopsis Cambrica</i>	Papaveraceæ	Walls	"	140
Welsh Poppy	<i>Galium palustre</i>	Rubiaceæ	Rocks	"	143
White Bedstraw	<i>Trifolium repens</i>	Leguminosæ	Moist places	"	188
"	<i>Lamium album</i>	Labiatae	Pastures	Spring	81
"	<i>Marrubium vulgare</i>	"	Waysides	March, September	148
"	<i>Papaver somniferum</i>	Papaveraceæ	Fields	Autumn	210
"	<i>Hydrocotyle vulgaris</i>	Umbelliferae	Wet places	Summer	128
"	<i>Cratogeomys orycantha</i>	Rosaceæ	"	Spring	97
"	<i>Draba verna</i>	Cruciferae	Hedges	"	55
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