



WILD COLUMBINE
(*Aquilegia canadensis* L.)



BROAD-LEAVED ARROW-HEAD
(*Sagittaria latifolia* Willd.)



VIRGINIA COWSLIP OR BLUEBELL
(*Mertensia virginica* (L.) DC.)



HEDGE OR GREAT BINDWEED
(*Convolvulus sepium* L.)



LARGER BLUE FLAG
(*Iris versicolor* L.)



M.E. Eaton

WILD PINK
(*Silene caroliniana* Walt.)



COMMON EVENING PRIMROSE
(*Oenothera biennis* L.)



STAR GRASS
(*Hypoxis hirsuta* (L.) Coville)



WILD GERANIUM OR CRANE'S-BILL
(*Geranium maculatum* L.)



COMMON DAYFLOWER
(*Commelina communis* L.)



BLACK-EYED SUSAN
(*Rudbeckia hirta* L.)



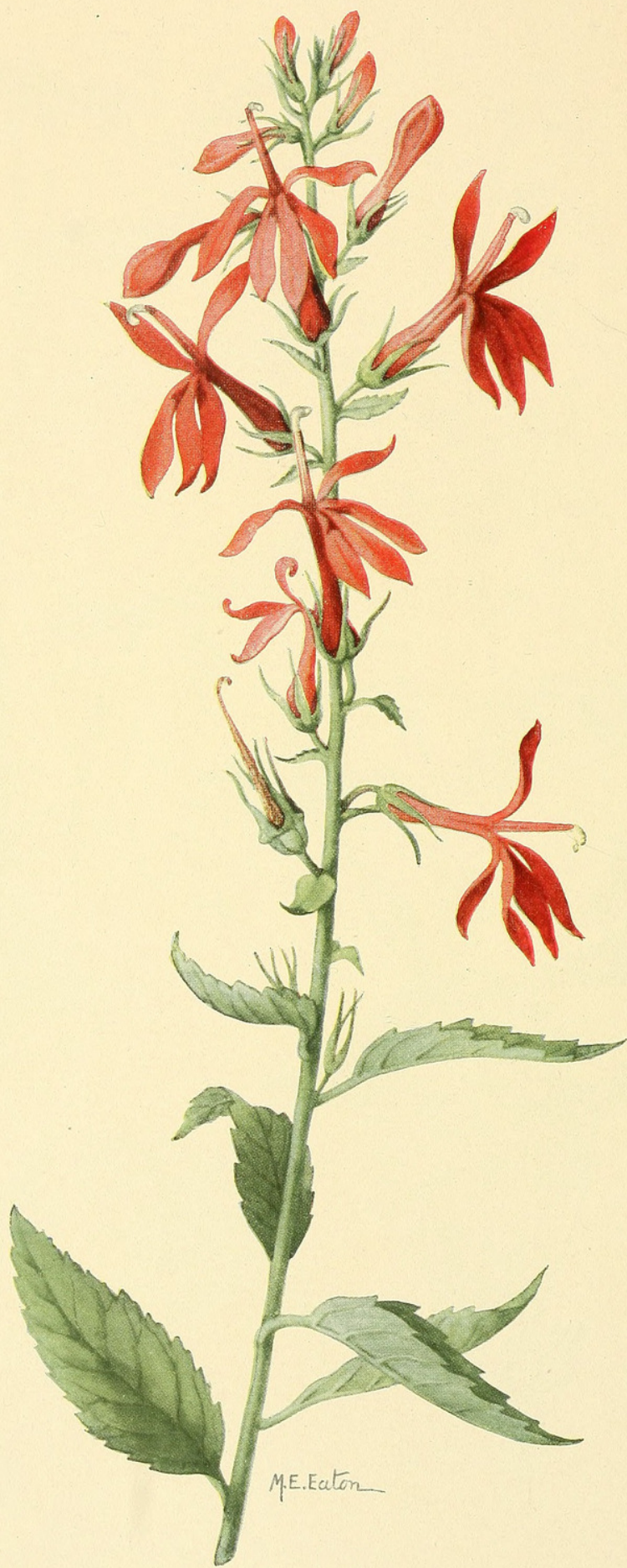
JEWEL-WEED
TOUCH-ME-NOT
(*Impatiens pallida* Nutt.)



BULB-BEARING LOOSESTRIFE
(Lysimachia terrestris (L.) B. S. P.)



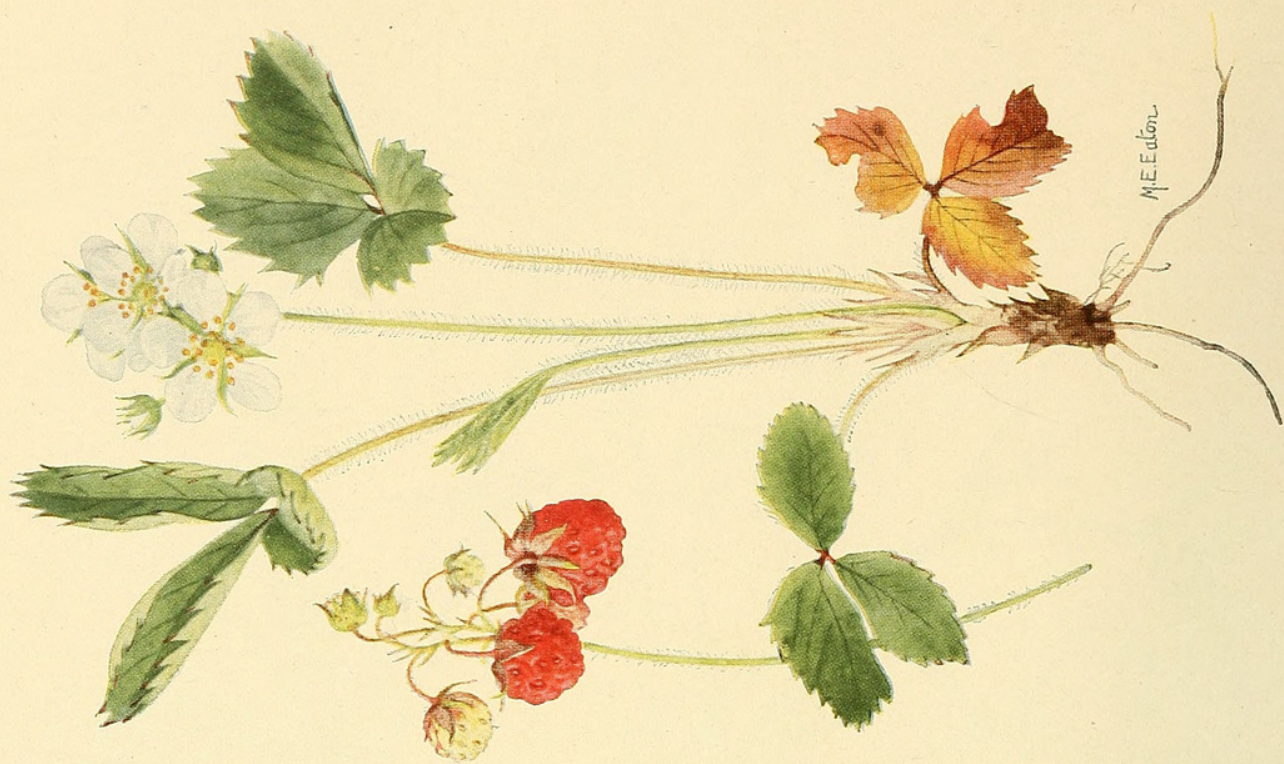
EASTERN BLUE-EYED GRASS
(Sisyrinchium graminoides Bicknell)



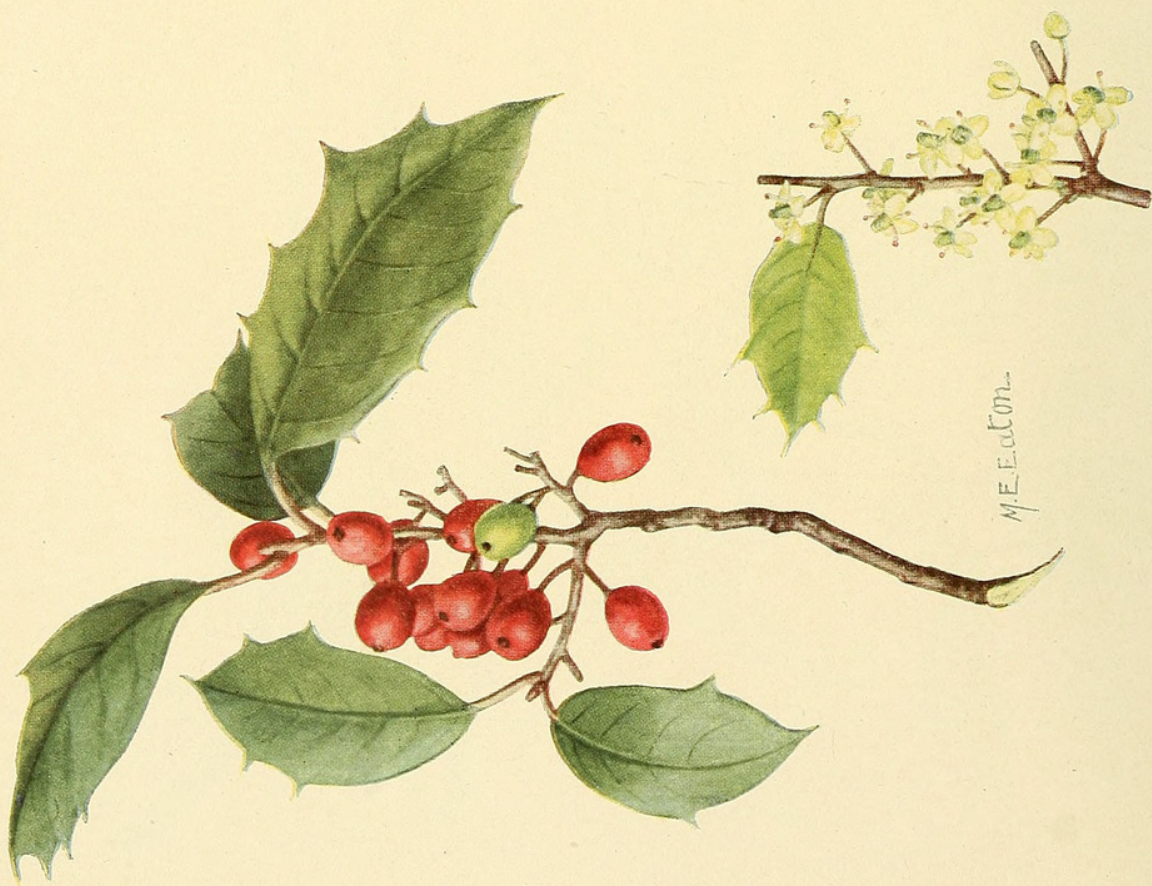
CARDINAL FLOWER
RED LOBELIA
(*Lobelia cardinalis* L.)



SWAMP OR MARSH BUTTERCUP
(*Ranunculus septentrionalis* Poir.)



VIRGINIA OR SCARLET STRAWBERRY



AMERICAN HOLLY



TURK'S CAP LILY
(*Lilium superbum* L.)



WILD YELLOW LILY
CANADA LILY
(*Lilium canadense* L.)



WITCH HAZEL
(*Hamamelis virginiana* L.)



WOODY NIGHTSHADE
BITTERSWEET
(*Solanum Dulcamara* L.)

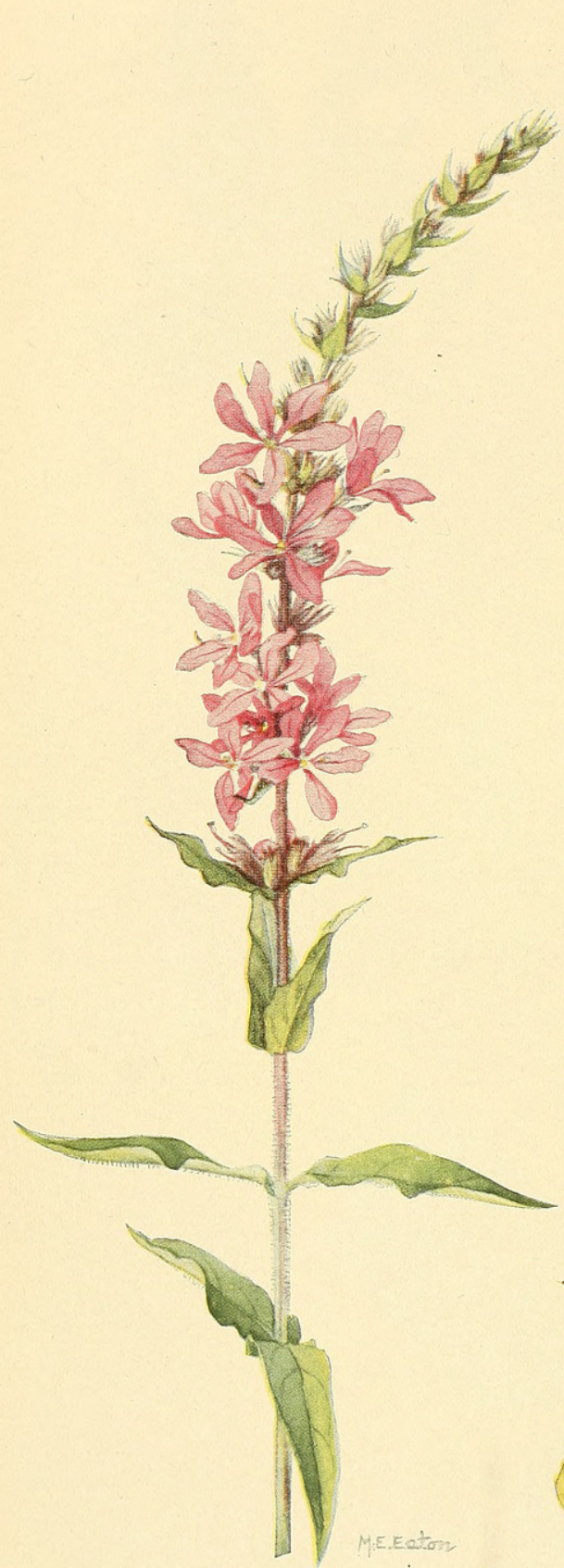


M.E. Eaton

PURPLE FLOWERING RASPBERRY
(*Rubus odoratus* L.)



BLACK HAW OR STAG BUSH
(*Viburnum prunifolium* L.)



PURPLE LOOSESTRIFE
(*Lythrum Salicaria* L.)



MOTH MULLEN
(*Verbascum Blattaria* L.)



SHOWY LADY'S-SLIPPER
(*Cypripedium reginae* Walt.)



TWIN BERRY
PARTRIDGE BERRY
(*Mitchella repens* L.)



MAYFLOWER
TRAILING ARBUTUS
(*Epigaea repens* L.)

AMERICAN WILD FLOWERS

In this number, pages 483-506, the GEOGRAPHIC MAGAZINE prints its first color series of American wild flowers. In future numbers other wild flowers will be pictured in colors, as it is planned gradually to give the members of the National Geographic Society in their Magazine as complete a collection of common wild flowers of all parts of the United States as has been given of the common birds of town and country. There are many hundreds of wild flowers, many more than there are varieties of birds. The present collection contains flowers blossoming from late spring to September. The pictures were made by Miss Mary E. Eaton, and will undoubtedly be admired by every reader for their delicacy and beauty.

In the descriptions accompanying these splendid pictures the spirit in which they were written is that of one of our great botanists, who says:

"Let us content ourselves no longer with being mere 'botanists'—historians of structural facts. The flowers are not mere comely or curious vegetable creations, with colors, odors, petals, stamens, and innumerable technical attributes. The wonted insight alike of scientist, philosopher, theologian, and dreamer is now repudiated in the new revelation. Beauty is not 'its own excuse for being,' nor was fragrance ever 'wasted on the desert air.' The seer has at last heard and interpreted the voice in the wilderness. The flower is no longer a simple passive victim in the busy bee's sweet pillage, but rather a conscious being, with hopes, aspirations, and companionships. The insect is its counterpart. Its fragrance is but a perfumed whisper of welcome, its color is as the wooing blush and rosy lip, its portals are decked for his coming, and its sweet hospitalities humored to his tarrying, and, as it speeds its parting affinity, rests content that its life's consummation has been fulfilled."

This wonderful collection in colors has cost many thousands of dollars to reproduce, but the GEOGRAPHIC believes that the beauty of the subjects and the importance of encouraging the study and preservation of American wild flowers more than justify this expense.

THE WILD COLUMBINE (*Aquilegia canadensis* L.)

(See page 483)

Among all the flowers that bloom, none outshine the wild columbine for wild grace, untrammelled and unconventional beauty, or the idyllic nature of its habitat.

Choosing the stony ground of the inner woodlands for its favorite abiding place, enjoying a long flowering season, covering the April-July period, and cosmopolitan enough to be at home from Nova Scotia to the Northwest Territory and from Florida to the Rocky Mountains, it is one of the most pleasant of our summer visitors.

This striking flower is a child of America; it is said that during the reign of Charles I a young colonist kinsman of the king's gardener sent to him from Virginia specimens of the plant for the adornment of the gardens of Hampton Court.

Like most flowers, the columbine has made remarkable provision for its own propagation. Its nectar it hides far back in its little cornucopias, where only those insects who are able to carry its pollen to some other flower can partake of its sweets.

So the nectar of the columbine is largely re-

served for the big bumblebee and the little humming-bird. The former with his long tongue and strong legs can hang upside down as gaily as an acrobat on a trapeze and drink its nectar while doing so. And the ruby-throated humming-bird finds the inverted position of the honey-cup no disadvantage.

The efforts of the flowers of the field to dress in the colors that delight the senses of the creatures that bear their pollen is strikingly shown in the columbine. In Europe the ruby-throated humming-bird is a stranger, and the columbine wears colors vanishing from red to blue, for the bee is its pollenizing agent there, and, as Sir John Lubbock proved by a striking series of experiments, the favorite color of the bee is blue. On the other hand, in America, where the humming-bird is the principal fertilizing agent, the columbine attires itself in a dainty red that is known to delight "king ruby-throat."

Some of the smaller bees have learned of the discrimination that the columbine practices against them through its length and narrowness of neck, and frequently they may be seen ripping holes in the tips of the petals and getting the nectar without paying their toll of pollen-carrying to the flower. As a defensive measure against this rape of her sweets, the

columbine secretes a bitter juice that often foils the invaders.

Dr. Prior declares that the columbine got its name because of the resemblance of its nectaries to the heads of pigeons in a ring around a dish—a favorite device of ancient artists.

BROAD-LEAVED ARROW-HEAD (*Sagittaria latifolia* Willd.)

(See page 484)

Loving shallow water and muddy soils, the broad-leaved arrow-head is still equally at home on the banks of the Rio Grande and on the shores of Hudson Bay. Its flowering season is from July to September.

No flower of the field or forest can survive long unless it learns to adjust itself to its environment. It is only the cultivated plant that cannot do this. Years of reliance upon man to fight its battles for it have taken from the cultivated plant all ability to fight its own battle of existence. Who ever heard of lettuce being able to flourish outside of the garden? Or the bean? Or the beet? Or the cabbage? Their resourcefulness has been bred out of them and they must have their homes prepared for them.

Not so with weed and wild flower. With no hand to help them, they fight their battle for the survival of the fittest with their own generalship and their own forces. How strikingly is this illustrated by the arrow-head! Loving the water, it must be in a position to maintain itself when the freshet of June comes and submerges it, and again when the drought of August steals the last vestige of water from its pool.

So it is able to breathe under water like a fish and out of the water like a dry-land creature. When it is under water, there are narrow, ribbon-like leaves which give a maximum of surface exposure to the water, and yet a minimum of resistance; but when it grows on dry ground the ribbon-like leaves fall off, and the big, broad arrow-head leaves that give the plant its name assimilate the carbonic acid gas, give off oxygen, and ward off an oversupply of sunshine.

THE VIRGINIA COWSLIP OR BLUE-BELL (*Mertensia virginica* (L.) DC.)

(See page 485)

When Harry Lauder sings about the lassie he loves who is as modest as her namesake, the bluebell, he accords her high praise, for the English bluebell is not fairer or more modest than its American namesake, and who has not noted the simple, drooping modesty of this fair little inhabitant of the meadows of eastern America!

In April and early May it comes out to cheer the waiting world, a little behind the arbutus, the crocus, and the daffodil. It loves the alluvial low ground of the meadow land and ranges from southern Canada to South

Carolina and Kansas. Its flowers stay with us until late May.

No lover of the beautiful has ever failed to pay tribute to the bluebell. Its drooping porcelain-blue bells have won praise from the naturalists of the world. An English writer pays high tribute to them, saying that no flower surpasses the bluebell family in beauty of form and foliage or in the graceful way in which they rise to panicles of blue. The fairest of them he rates the Virginia cowslip.

Every insect that loves nectar can drink at the bluebell's bar, for "broad is the gate and wide is the way, and many there be that go in thereat." But every insect that comes must be a pollen-bearer, for the bluebell needs must have cross-fertilization.

One of the unexplained idiosyncrasies of the bumblebees occurs in conjunction with their feasts out of the bluebell's honey well. Only the female bumblebee is flying when the bluebell blooms, and they are able to sip far deeper cups than the bluebell can offer; but, whether from laziness or mischief or what, they may frequently be seen trying to dodge their duties as pollen-bearers by perforating the cups instead of draining them in a legitimate manner.

HEDGE OR GREAT BINDWEED (*Convolvulus sepium* L.)

(See page 486)

A hobo among flowers is the bindweed. It has traveled up and down the lanes of world-trade for centuries, until it has come to claim most of the northern hemisphere for its abiding place. It is one of America's most bothersome weeds, as any farmer's son can bear witness who has operated a harrow or a grain drill when preparing corn ground for wheat sowing in the fall.

It loves wayside hedges and thickets, where it climbs over everything in its fight for the survival of the fittest; but it simply rejoices when it gets into a corn-field and can utilize the tall stalks of corn as a nature-built trellis for it. In our own country it has found the Rocky Mountains a barrier, and for the time being has had its star of empire arrested here, on its broad sweep around the northern world.

The flowering season of the great bindweed is the June-September period. A close relative of the fair morning-glory, its flowers are shaped like those of that charming summer visitor and behave something like them. It is a rather early riser, and lives out the doctrine that "early to bed and early to rise" produces health, wealth, and wisdom; for it goes to bed when the sun goes down, except on moonlight nights, when it keeps open house for the benefit of certain moths that are its especial friends.

A curious thing about the great bindweed is the fact that it cannot maintain itself, hardy and self-reliant as it is, where its special insect friends do not dwell. In Europe a certain moth flourishes in some districts, is rare in others, and entirely absent in still others. Wherever the moth is numerous the bindweed

is everywhere; where it is scarce the bindweed is an occasional visitor only; but where it does not dwell at all the bindweed never comes. Without the aid of that moth it is unable to set seed and therefore unable to propagate itself.

The bindweed is an exceedingly rapid climber. The twining stems often describe a complete circle in less than two hours, turning always in the direction opposite to that of the hands on the face of a watch. A transverse section of the flower of the bindweed, cut so as to show the passages leading into the nectar chamber, makes it look like the cylinder of a "five-shooter" revolver.

Not only is the great bindweed a relative of the morning-glory, but it is close of kin to the plant from which the "jalap" of the chemical world comes. It itself has some of the therapeutic properties of jalap, and it is said that hogs, which eat almost everything except tomatoes, give it a wide berth.

LARGER BLUE FLAG (*Iris versicolor* L.)

(See page 487)

Among the stateliest and proudest of the members of America's flower family none excels the larger blue flag, which also wears the names of blue iris and fleur-de-lis. Ruskin calls it the flower of chivalry, which has a sword for its leaf and a lily for its heart. Longfellow pronounces it "a flower born in the purple, to joy and pleasance."

The larger blue flag seeks the wet, rich marsh and meadow, where it can find ample moisture for its rich nectar manufactories. It flowers from May to July, and lends its beauties to America from Newfoundland and Manitoba to Florida and Arkansas.

From the standpoint of the botanist, the larger blue flag has an especial interest because of the remarkable care it has taken to evolve a never-failing system of cross-fertilization and to avoid self-fertilization. The position of the stamens is such that it is next to impossible for their pollen to reach the stigmas of the same flower, for these stigmas are protected from the stamens by being borne in pockets on the inner surface of the petal-like, overarching styles.

Therefore the flag flower must look to the insect world entirely for its propagation, and to the bees in particular. So it puts forth a flower that is blue tinted, for its experience has taught it that a bee can be wooed with blue better than with any other color. Dressed in her beautiful gown of blue, the pretty flower maid proves irresistible to the passing bee, who turns aside to drink at her well, and is given her message of life to bear to some other waiting flower. The bee finds the recurving platform of the handsome sepal an ideal landing platform, and from this the dark veins and golden lines form the guide-posts that point with unerring aim toward the nectar cup below.

The iris was long centuries ago adopted by Louis VII, the gallant young Crusader, as the

emblem of his house. It became thereby "the flower of Louis," which was corrupted into "fleur-de-lis."

The iris, or blue flag, is really meant when one speaks of the lily of France. The story runs that King Clovis, beaten on the battle-field as long as he had three black toads upon his shield, finally adopted the iris instead, upon the plea of Queen Clotilde, to whom it had been related by a holy hermit that an angel had brought him a shield containing three irises and shining as the sun. Clovis thereafter was successful on the battle-field. In later reigns the iris was thickly strewn upon the royal standards of France, but Charles V finally reduced them to three to typify the Holy Trinity.

The iris is a plant that insures its life. It has a big rootstock, which contains a powerful hepatic stimulant known as "iridin." In this rootstock it stores up endowment insurance in the days of plenty, so that when the earth is chill, cold, and inhospitable its savings will provide against need.

WILD PINK (*Silene caroliniana* Walt.)

(See page 488)

An attractive little flower is the wild pink, or catchfly, which seeks the dry, gravelly or sandy soil as persistently as the larger blue flag or the broad-leaved arrow-head seeks the soft alluvial or marshy ground. From April to June its delicate pink petals give cheer to many a lonesome place, and it has succeeded in claiming a rather large area for its occupancy, extending from New England to Georgia and Kentucky.

As fresh as the springtime itself are these little flowers, when they open up to join the floral chorus that proclaims that spring has come to stay. They are flowers which never believe in taking chances, when it comes to the question of fertilization, so they have developed two sets of stamens, five to each set. The one set rises first, then the other, so that if one misses the transfer of its pollen the other is likely to supply the resulting deficiency. After all their pollen is shed, three recurved styles put in their appearance out of the depths of the tube, ready to receive pollen brought by the bees and butterflies from other flowers.

The wild pink finds its cupboard of sweets a fair mark for many tiny insects that are large enough to drain its cup of nectar and yet too small to bear away the flower's pollen to some distant mate. So it has provided an effective lock and key to that cupboard, which makes it proof against the pilferer. This lock and key is a gummy, viscid fluid that the pink secretes and spreads around the sticky stem below the flower. And woe betide the creeping thing that is a thief and a robber from the pink's standpoint! For no fly that ever alighted on a piece of man-made fly-paper was more certainly and surely brought to an untimely end than the ant that essays to sip the nectar of a wild pink. Thus we can see that the fly-paper idea is not man's invention at all, but an idea borrowed

from the pink, which he accuses of having no power of invention at all.

Ordinarily we think of the pink as having a pink flower, and, if we reflect at all, that the color we describe as pink lends its name to the flower; but the etymologists mostly disagree therewith. They declare that the pink is the lender and not the borrower, and that the color owes its name to the fact that it so closely imitates the flower. It is said that the word pink as applied to the flower is derived from the verb "pincken," meaning "to scallop," so that the flower borrows its name from an act and transfers it to a color. We habitually use the word pink to express our highest ideals along many lines, thus unconsciously paying high tribute to this beautiful little flower and its relatives. A woman we may describe as the pink of perfection and a man as the pink of courtesy.

COMMON EVENING PRIMROSE (*Oenothera biennis* L.)

(See page 489)

Who has not seen the common evening primrose with its pale yellow flowers "luikin out o' their leaves like wee sons o' the sun" has missed a sight that has gladdened millions of hearts.

In the United States the evening primrose is a hardy warrior in the competition for existence and is not over-particular as to where it is stationed on the battle-front. Roadsides, dry fields, thickets, and the corners of the old-fashioned worm fence are satisfactory stations for it, and it is equally at home in Labrador and Florida and as far west as the Great Plains Mountains.

It is when the sun goes to bed that the evening primrose's morning dawns. It is one of the denizens of the Great White Way of the Flower City, waking while the world sleeps and sleeping while the world wakes.

As the sun approaches the western horizon the evening primrose awakes and bedecks itself in yellow and white, perfumes itself up with the most seductive of sweet-scented odors, and prepares to welcome the sphinx moths that come to tarry and to sip its sweetness through the long and silent night.

Before the dusk grows deep we may behold the visitors arriving and departing and the grand reception in full sway. Now comes a beautiful little moth dressed in rose pink, its wings bordered with yellow; now the Isabella tiger-moth, and now another and another. All of them have long tongues, though it has never been charged that they use them for gossip. The nectar cup of the evening primrose is deep, and the short-tongued moth stands a chance of going hungry.

The primrose, though it revels in the night, is yet somewhat stingy with its favors, for often it will open up only one flower to each stalk. It does this to insist that its messengers who feast on its nectar shall carry its pollen to a flower on another plant.

One night of revelry is enough for a flower

of "milady primrose," for when morning dawns the corolla wilts, hangs awhile, and then drops away; and when we see her next day the freshness is gone, and she presents the appearance of one whose dissipations have laid heavy toll upon her.

But if by any chance no visitor has come during the night to sip its nectar and to be pollen-bearer for it, the primrose does not close when the moths retire at dawn, but keeps open house for an hour or so in the morning, until the bees can repair the neglect or until a humming-bird can pass its way on her rounds. Toward the end of summer, after a sufficient number of seeds have set to insure the future, the primrose becomes more generous of its sweets and often bids welcome to the bees the whole live-long day.

The evening primrose must not be confounded with the true primrose of England and the poets, a very different plant, belonging to a different family.

STAR GRASS (*Hypoxis hirsuta* (L.) Coville)

(See page 490)

The yellow star grass is a quiet and modest little flower that asks only for a chance to live in the dry open woods and fields, gleaming out of the turf by day as the stars gleam out of the heavens by night. From May to October it shines out of the landscape, and it finds but few parts of the United States where it cannot dwell prosperously.

Usually only one of the tiny blossoms on a stalk opens at a time. The others wait their turn, each hoping that those ahead may have the honor of entertaining the tiny bee that delights in their sweets and pays them back in pollen-bearing messenger service. But if a flower "blushes unseen" by the bee for too long a period, it grows tired of "looking and hoping," gives up its ambition for cross-fertilization, and, folding itself as the Arab folds his tent in the night, it brings its own pollen-laden anthers into contact with its own stigma, and thus produces self-fertilization as a last resort against death without posterity.

But if the bee comes the flower is happy, and offers its visitor not only its nectar, but gives it pollen to carry to its home as flour for the bee-bread which the bee's tiny babies must have.

Nature's frugality is revealed in the case of the star grass. When its flower is upright and almost closed, she paints its outside with green color; but when the blossom is spread out the inner side of the petals display the chief decoration.

WILD GERANIUM OR CRANE'S-BILL (*Geranium maculatum* L.)

(See page 491)

This graceful flower, purplish pink or lavender in color, comes in April and goes in July. It has a preference for woods, thickets, and shady woodsides, and does not seek the

open field with its hot sunshine. As far north as Newfoundland, as far south as Georgia, and as far west as the Father of Waters it finds hospitable grounds on which to dwell.

Legend tells us that the geranium is a miracle-made descendant of the mallow. It relates that once the prophet Mohammed had occasion to wash his shirt on the bank of a stream. He then laid it on some mallows to dry. When they discovered the fact that theirs was the honor of supporting the garment of the Prophet, they blushed at the thought of such distinction and turned forthwith into geraniums, which they have remained ever since.

The wild geranium depends entirely upon the bees for its propagation, since it has reached that stage of plant development which renders it incapable of self-fertilization; the pollen is ripe and the anthers have fallen away before the stigma becomes receptive. It is a plant that shoots, so to speak; for when the seeds are ready to be spread abroad, the pod, under the process of drying out, sets a spring; when the seeds are dry enough and hard enough to fare for themselves in the world, the trigger to this spring is pulled by the drying process and the seeds are catapulted some distance.

For generations the world knew nothing of the community of interest between the plant kingdom and the insect world; and then Sprengel, the great botanist, observing the German cousin of the American wild geranium, came to the conclusion that the flower is fertilized by the transfer of pollen by the insect that comes to partake of its nectar.

It was many years later, long after Sprengel had been gathered to his fathers, that Darwin came along with conclusive evidence that Sprengel had told the truth, though not the whole truth. He showed how cross-fertilization is accomplished by insects, and that in the competition for existence the cross-fertilized plant has a great advantage over the one that is self-fertilized.

The plant that led Sprengel to guess at the intimate relationship between the insect world and the flowery kingdom was an unfortunate one for him to put forth to substantiate his case, since he had supposed that the insect caused the flower to fertilize itself, whereas it always protects itself against that very thing. He had not gone far enough with his reasoning to understand that cross-fertilization is the rule and self-fertilization the exception among flowers.

It is generally thought that only the larger bees are the wild geranium's benefactors, for the ordinary little yellow butterfly that one sees along the mud puddles on the country road is a pilferer, while the small bees more often than not drink its nectar without coming in contact with its pollen.

COMMON DAY FLOWER (*Commelina communis* L.)

(See page 492)

The common day flower, loving moist, shady ground, has established itself as a Pan-Ameri-

can blossom. Its range is from southern New York down through tropical America all the way to Paraguay. It is a member of the spiderwort family, and its delicate blue flowers win admiration alike from man and bee. The day flower is an early riser. Its blossom is open and its latch-string out as soon as the bees begin to stir. By noon they have searched is out, gathered its pollen, sipped of its nectar, and paid its toll of fertilization. As soon as this has been done, its lovely petals roll up and wilt into a wet and shapeless mass, never to open again.

The Latin name of the common day flower, "*Commelina*," was given it by Linnæus, the great Swedish botanist. He had three friends, the Dutch botanists Commelyn. Two of the brothers were active and persistent in their work and published the results of their investigations. The third brother, Kaspar, was a deep student, but lacked the energy required in the publication of scientific work. Noting the three petals on the blossom of the day flower, the two of them bright, conspicuous, and attractive, and the third lacking in all those qualities, he named the flower after the brothers to typify their work in life, and the name will doubtless go down to the end of time to remind the world of the lack of ambition and application of Kaspar Commelyn and the energy of his brothers. Kaspar never lived to read the little joke in print, for he died in 1731, before "*Species Plantarum*" appeared.

The blue flower of the day flower was believed by Sir John Lubbock to represent the spirit of striving to please that the flower shows to the bees. After a prolonged study of the evolution of flowers, he came to the conclusion that all blue flowers have descended from ancestors in which the flowers were green; or, to speak more precisely, in which the leaves surrounding the stamens and pistils were green. As their generations went by they became white or yellow, and in succeeding ages gradually brought themselves around to red. From the red they began to turn blue, and a study of all of the flowery kingdom indicated to him that the ultimate rôle of excellence to which the flowers aspire is that they shall be arrayed in blue.

BLACK-EYED SUSAN (*Rudbeckia hirta* L.)

(See page 493)

Fighting her way across the American Continent, black-eyed susan has proven the master of the allied forces of man and nature. In the competition of life she has been able to make a home wherever she sets her foot, and neither the rivalries of the field nor the laws and labors of man have been able to hold her in check.

Black-eyed susan loves dry fields and open, sunny places, and can hold her own with the white ox-eye daisy and the wild carrot in dry weather. Its flowering season is long, opening in May and closing in September. It is one of the little vagrants that has traveled

from the west to the east along the highways of commerce. In years gone by much clover seed was shipped out of the West, and black-eyed susan hoboed her way along with it. Most of the weeds of the field have traveled along with the star of the empire, from the east to the west; but black-eyed susan has reversed the natural order, and already has secured a footing in European flower gardens, if not in European fields. As one authority puts it, "By the middle of July our dry meadows are merry with black-eyed susans, which are laughing from every corner and keeping up a gay mid-summer carnival in company with the yellow lily and brilliant milkweeds. They seem to live in long days of blazing sunlight and are veritable salamanders among the flowers."

Black-eyed susan is one of the most liberal of all the entertainers in the flower world. Bees, wasps, flies, butterflies, and beetles all gather around her festive board, and although the nectar deep down in her tubular brown florets can be found only by the insect with a long and slender tongue, her pollen is accessible to all.

Feeling so richly provided with methods that assure fertilization to her blossom, black-eyed susan inevitably sets many seeds. The result would be a prolific reproduction, even though there were not artificial agencies upon which it could rely for its dissemination. The farmer who stores hay in his barn carries the seeds of black-eyed susan wherever that hay may go, and the one who sows grass seed of any kind, unless he is exceptionally careful to have his seed free from filth, will spread black-eyed susan broadcast along with his grasses.

In these days of wide-spread warfare in Europe, we hear much concerning barbed-wire entanglements and all sorts of defensive works of a similar nature. Black-eyed susan long ago learned to defend herself from would-be pilferers in much the same way. If you will observe her closely you will find her stem full of tiny thistle-like bristles. No creeping creature stands any show of getting past these defenses and up to the nectaries of the flower, because black-eyed susan long generations ago learned that they are not able to serve as pollen-bearers in exchange for her nectar.

THE JEWEL WEED OR TOUCH-ME-NOT (*Impatiens pallida* Nutt.)

(See page 494)

Though somewhat rarer than its close relative, the spotted touch-me-not, the jewel weed, or pale touch-me-not, is a common plant of wet and shady situation in the northern part of the eastern United States. It reaches as far south as Georgia. Its flower is somewhat bell-shaped, almost as broad as long. It develops its stamens first and its pistil afterward, so that self-fertilization is almost impossible and cross-fertilization a usual thing. Late in the season, after the brilliant jewel-like flowers have gone, they bear inconspicuous blossoms which fertilize in the bud and are called *cleistogamus*

flowers. It thus becomes, in a measure, independent of its insect guests for fertilization; but, realizing that degeneracy follows close inbreeding among plants as well as animals, it tries to have as many seeds set by cross-fertilization as possible. It is a curious fact that in England, where there are no humming-birds, the native jewel weed, nineteen times out of twenty, produces *cleistogamus* flowers instead of showy blossoms, and that even when producing the showy blossoms they seldom set seed. Many botanists have wondered whether this does not look like a determination on the part of the plant to secure a firm foothold in its new environment before expending its energies on flowers which, though radiant and attractive, are quite dependent on insect facilities for fertilization and perpetuation.

The jewel weed belongs to the seed-shooting family of plants. Its seed capsule is connected with a delicate hair trigger, and at the slightest touch this sets the seed-spreading mechanism to work with a suddenness that makes one jump. It is from this hair-trigger arrangement that it gets its popular name of touch-me-not. Often the seeds are catapulted a distance of four feet or more.

BULB-BEARING LOOSESTRIFE (*Lysimachia terrestris* (L.) B.S.P.)

(See page 495)

The bulb-bearing loosestrife, if it were as efficacious as legend declares, might be used with effect in Europe today. This legend is the basis of its popular name—a loosing of strife. It is said that in ancient times yokes of oxen were rendered gentle and submissive by attaching a loosestrife plant to the tongue of the cart.

This plant is to be found blooming from July to September in open woodland and along roadsides. It prefers a moist, sandy soil and finds hospitable surroundings in almost the entire eastern half of the United States and Canada. Its yellow flowers are dotted with reddish spots. The slender flower spike is distinctly characteristic; it forms an aggregation of misty yellow color (when a large colony of plants is seen) which is never to be found with other species. Often little elongated bulblets appear at the base of the leaves, and this caused Linnaeus to mistake the plant for a mistletoe that grew on the ground.

EASTERN BLUE-EYED GRASS (*Sisyrinchium graminoides* Bicknell)

(See page 495)

The violet-blue eastern blue-eyed grass, flowering in May and June and lending its beauty to the coastal region from Maine to Florida, is a charming member of the iris family. It is a tall, bending species, with a slender stalk sometimes two feet long. It has been called a little sister of the stately blue flag. Only on bright days do its flowers venture out, and then only one at a time. On being gathered, this

little "eye bright" of the fields promptly closes its eyes and refuses again to open them except under the persuasion of the sunshine itself. The flower of the blue-eyed grass not only takes the sunshiny day to come out, but after that one day is past it closes its eye never to again open it.

CARDINAL FLOWER OR RED LOBELIA (*Lobelia cardinalis* L.)

(See page 496)

Throughout the eastern United States and Canada and as far west as Kansas the red lobelia is one of the most striking of the country's wild flowers. It blossoms from July to September and its favorite haunts are wet, low grounds beside streams and ditches.

Called the cardinal flower, the red lobelia excels its namesake of birdhood in the richness of its colors.

The lobelia was named after Mathis de Lobel, a native of the French city of Lille, who was botanist and physician to James I. The plant has a certain pharmacological resemblance to tobacco. In large doses it is a powerful gastro-intestinal stimulant, causing giddiness, headache, nausea, and extreme prostration, with clammy sweats and irregular pulse.

The closest friend of the red lobelia is the humming-bird, and while the bees sometimes visit it they are never its most welcome guests. Sir John Lubbock, the great English scientist, many years ago presented to the world a striking example in the lobelia of the tendency of plants to color themselves to delight the eyes of their favorite visitors. He found that the humming-bird has a peculiar affinity for red, just as the eye of the bee is delighted with blue. It therefore happens that the shallow-cupped lobelia, which looks mostly to the bees for carrying its pollen, is blue, while the deep-cupped lobelia, whose nectar can be sipped only by the long-billed humming-bird, is red.

The humming-bird reminds one of Eugene Field, who, when asked what his favorite color was, replied: "Why I like any color at all so long as it is red!" Some botanists believe that scarcity of red flowers is due to the fact that there are so comparatively few humming-birds, and it is noted that red flowers are fewer where humming-birds are scarcest, showing again the particular community of interest between the flower and nectar-sipping creatures.

SWAMP OR MARSH BUTTERCUP (*Ranunculus septentrionalis* Poir.)

(See page 497)

One of some 250 species of the crowfoot family, the swamp or marsh buttercup flowers from April to July. Its range is from Georgia and Kentucky northward, and it seldom is found outside of the confines of swamps and low, wet ground. Its flowers are a deep yellow and fully an inch broad. The stem is hollow and generally smooth, though in some instances

it has developed fine hairs. This buttercup is very variable in both size and foliage. It depends mainly upon bee-like flies and very small bees for fertilization. Many of the members of the buttercup family are naturalized flower citizens of North America, having come in from Europe as immigrants many years ago. The marsh buttercup preserves itself from inbreeding by putting out only a few blossoms at a time, thus making more or less certain its cross-fertilization.

The swamp buttercup is not to be mistaken for the common meadow buttercup, which has first place among the members of the family in distribution and hardiness. The marsh buttercup has longer petals and sometimes spreads by developing runners, while the stem of the meadow buttercup is nearly always erect and propagation depends entirely upon seeds. The meadow buttercup has such an acrid flavor and such caustic propensities that cattle will not eat it. In this it follows the example of most of the members of the crowfoot family in secreting such bitter and poisonous juices that they get a wide berth from animal kind. It is said that the juice of the meadow buttercup is capable of raising blisters, and that beggars use it to produce sores upon their skins. The members of the crowfoot family borrow their botanical name from *rana*, which means a frog. It was alleged by Pliny that the buttercup stirs him who eats it into such a gale of laughter that he scarce can contain himself. He further states that unless the eater washes it down with pineapple kernels and pepper dissolved in date wine, he may guffaw his way into the next world in a most unseemly manner.

According to historical authorities, one species of buttercup was used by the ancients to poison their arrows, while the double crowfoot, or St. Anthony, would cure the plague if rubbed on the spot most affected, and was good for lunacy if applied to the neck in the wane of the moon, when it was in the sign of the bull or the scorpion.

AMERICAN HOLLY (*Ilex opaca* Ait.)

(See page 498)

A small, slow-growing evergreen tree, with tiny greenish or yellowish white flowers and round red berries, the American holly loves the moist thickets and is to be found from New England to the Gulf of Mexico and as far west as Texas. The flowering season of this tree is from April to June. Its leaves are thick, rigid, glossy, and edged with spines.

There are many interesting customs and romantic stories in which the holly figures. It is believed that the custom of employing the holly and kindred plants for decorative purposes at Christmas dates back to the time of the Roman Saturnalia, or else to the old Teutonic custom of hanging the interior of dwellings with evergreens as a refuge for sylvan spirits from the inclemency of winter. Even in Pliny's day the holly had all manner of

supernatural qualities attributed to it. Its flowers were said to cause water to freeze; it was believed to repel lightning, and therefore the Romans planted it near their houses; and the story ran that a branch of holly thrown after any stubborn animal, even though it missed him, would serve to subdue him instantly and cause him to lie down meekly beside the stick. Some friends of the holly have suggested that the notion of the Italian peasant that the cattle kneel in their stalls at midnight on the anniversary of Jesus' birth grows out of the survival of the old pagan legend of the effect of the holly upon domestic animals.

In parts of England it is deemed unlucky to introduce the holly into the house before Christmas eve. In some sections the prickly leaf and the non-prickly leaf species are designated as "she" and "he" holly, and the belief is that, according as the holly brought at Christmas is smooth or rough, the wife or the husband will be master of the household for the ensuing twelve months.

The European relative of the American holly has a leaf more spiny and a berry of a deeper red than our own, but it is too tender to withstand the rigorous winter of the North or the hot summers of the South.

VIRGINIA or SCARLET STRAWBERRY (*Fragaria virginiana* Duchesne)

(See page 498)

Who has not gone out into the shady open woodlands and gathered wild strawberries, as toothsome as they are beautiful, has missed one of the charming experiences of life in the country. Its white, loosely clustered flowers; its broad, oval, saw-edged green leaflets, and its glistening red berries make a combination that delights the eye of the most unsentimental. "Doubtless God could have made a better berry, but doubtless He never did," declared the patient fisherman, Izaak Walton, who was also a connoisseur of things to eat. And whoever has tasted a strawberry that represents the last word of the plant breeders' art, and then the strawberry of the open woodland, will agree that cultivation has added nothing to flavor, however much it has added to size. The Duke of Gloucester, who became Richard III, had a weakness for the wild strawberry. It is said that in 1483, as certain great lords were sitting in counsel arranging for his coronation, the duke came in and, "saluting courteously, said to the Bishop of Ely: 'My lord, you have verie good strawberries in your garden in Holbonne; I require you to let me have a mese of them.'"

It is said that during the reign of Henry VIII the price of strawberries was eight cents a bushel.

The favorite haunts of the Virginia strawberry are in dry fields, along roadsides, and in open woodlands. It flourishes from Nova Scotia to the Gulf of Mexico and has secured a foothold as far west as the Dakotas.

The berry of the strawberry is a false fruit.

It is the tiny pincushion-like receptacle of the strawberry flower that fleshens and reddens into the fruit.

The strawberry sends out many children in the shape of runners. These tiny runners take root in the ground, and as soon as they get a firm foothold, the connecting stem promptly wilts and the baby strawberry plant is set loose to fight its own battle in the world. How prolific this strawberry plant may be is strikingly shown by an experiment made some years ago. One plant in three years developed 200 plants, which covered more than seventy times as much ground as the progenitor of the family.

Many people regard the strawberry as the most healthful of fruits. It was the firm conviction of Linnæus that they cured his gout, while others have found them beneficial in fevers and bilious disorders. They are said to have a very excellent effect upon the teeth, dissolving the tartar that gathers upon them.

WILD YELLOW LILY OR CANADA LILY (*Lilium canadense* L.)

(See page 499)

The boundaries of the wild yellow lily's American domain reach from Nova Scotia on the north to Georgia on the south and the western half of the Mississippi Valley on the west. It flowers in June and July and most often is found in low meadows, although it thrives in swamps and fields to some extent.

With its pendulous, brown-dotted, buff-yellow blossom hanging so as to protect its nectar from the rain, the yellow lily is a favorite friend of the wild honey-bee and the leaf-cutting bee, which visit the flower to gather its brown pollen as well as to sip its nectar.

When the Master, in His magnificent Sermon on the Mount, bade the world to "consider the lilies of the field," He did not refer to the lilies we know, but how well does His injunction fit; for what richer lessons can we gain from nature than by studying the life, form, and behavior of the lilies that render such helpful aid in lending enchantment to the summer by their beautiful nodding bells, which seem to toll the hours of flowerland! Less gorgeous, it is true, than its beautiful sister, the Turk's cap, the wild yellow lily still justifies the inspired verdict that Solomon in all his glory was not arrayed as it. Some have called the bell-like flowers of the yellow lily "fairy caps," while others have called them "witch caps." But whether the fairies or whether the witches adorn themselves in such dainty headgear, we know that the bee often uses the flower for a "shelter in the time of storm." Some one has said that the form of the lily stock and flower suggest an exquisite design for a church candelabra.

Among all races and in all ages the lily has been a favorite of man. In both tradition and in legend it has played its rôle. The tomb of the Virgin was filled with lilies to allay the doubts of the ever-doubting Thomas. The Greeks and Romans considered the lily a sym-

bol of purity, and the Easter lily is the symbol of the Christian faith in the hope of a life beyond the grave.

TURK'S CAP LILY (*Lilium superbum* L.)

(See page 499)

Lilium superbum is the Latin name for that beautiful flower we call the Turk's cap, and it deserves the name, for of all the "lilies of the field," it is tallest, stateliest, most prolific of bloom, most variable in form, color, and size. Its domain reaches from Maine to the Carolinas and westward to and including Tennessee and Minnesota. Like many other wild flowers, it loves to be petted by the horticulturist, and responds with wonderful alacrity to good treatment. Growing wild, from three to seven leaves appear in a terminal group on the lily stock. Pampered by the horticulturist, it will crown itself with as many as 40 blossoms and grow to a height of 9 feet. July and August are the months when the Turk's-cap lily lends its flowers to the enrichment of the landscape.

WITCH HAZEL (*Hamamelis virginiana* L.)

(See page 500)

With its home in thicket and low-lying woodland and its range reaching from Nova Scotia to the north of Mexico, the witch hazel is the rear guard of the flower army that marches in panoplied splendor through the spring and summer and fall. Where the trailing arbutus, the jonquil, the crocus, and the buttercup lead the invading hosts of beauty, the witch hazel is so far behind the procession that one might almost wonder whether it be rear guard or straggler.

It follows the fringed gentian, whose beauties have been acclaimed by many poets, and it seldom lends its blossom to the scene before September is well on toward the equinox. From that time until Christmas, even, it gladdens the wood. Surely one may feel when beholding it that time has indeed "grown sleepy at his post and let the exile summer back," or else that it is "her regretful ghost" that stalks abroad. The witch hazel is about the last feast that nature prepares for the insect world. Even its leaves have gone, and it has joined the ranks of the "brown and sere" before its flowers come.

As soon as the insect hosts have rendered their toll of pollen-carrying in exchange for the nectar of the flower, it begins to fade and fall. Then comes the seed pod, which hangs on to the tree all the year following, and does not turn loose its seeds until the witch-hazel flowers come again. Then the large, hard, black seeds are discharged through the rupture of the capsule, whose walls pinch them out. They are discharged with enough force to sting the face sharply if they hit an observer. Thoreau once wrote that he heard in the night a strange snapping sound and the fall of some small body on the floor from time to time. Getting up to investigate, he found it was pro-

duced by the witch-hazel nuts on his desk springing open and casting their seeds across his chamber.

We owe our knowledge of the value of witch-hazel bark for medicinal purposes to the Indians, and it is now used in the making of many kinds of extracts.

For generations the branches of the witch hazel have been used as divining rods for the location of waters and precious ores.

A good story is told on Linnæus in relation to the divining rod made of the branches of the European cousin of the American witch hazel. On one occasion, on one of his trips, his secretary highly extolled the powers of a witch-hazel divining rod. Linnæus was sure that it had no virtue, and to prove it concealed a purse containing one hundred ducats under a flower which grew by itself in a meadow. The divining rod could not locate it, and the assembled company, watching the experiment, trampled down the plant under which it was hidden. When Linnæus went to take it from its hiding place, he could not locate it. His secretary again brought his divining rod into play and told him that it lay somewhere in the opposite direction. Going in the direction the divining rod pointed, Linnæus finally found his gold, and declared that another such experiment would be sufficient to make a proselyte of him.

WOODY NIGHTSHADE OR BITTER-SWEET (*Solanum Dulcamara* L.)

(See page 501)

Like the great bindweed, the woody nightshade has almost girdled the globe in the northern hemisphere. In the United States it has followed the northern part of the country as far westward as Kansas. It is also found in Canada and came to us as a plant immigrant from Europe. It belongs to the potato family and is also a relative of the tomato and the egg-plant. It used to be asserted that the berries were poisonous, even to the touch. Thoreau declared "they hang more gracefully from the river's brim than any pendant in a lady's ear, yet they are considered poisonous; but not to look at, surely. . . . But why should they not be poisonous? Would it not be bad taste to eat these berries which are ready to feed another sense?" It loves the moist thicket and fence row and flowers from May to September. Possessed of no nectar with which to attract the insects, the purple flowers of the nightshade are wall-flowers in the carnivals of floral beauty, and they get few visits from the gallants of the insect world.

PURPLE FLOWERING RASPBERRY (*Rubus odoratus* L.)

(See page 502)

Growing in rocky woodlands, dells, and shady roadsides, flowering from June to August, and claiming as its own a territory reaching from northern Canada to southern Georgia and from the coast to Michigan and Tennessee, the purple flowering raspberry has a beauty all

its own; yet so closely does it resemble the wild rose that many a passerby confounds it, although a glance at the undivided leaves would correct such an error. Although it is called the purple flowering raspberry, it is quite incapable of producing a true purple flower. At first its color is deep crimson pink, which finally fades to an unattractive magenta pink. The large leaves are three to five lobed and a trifle hairy. The fruit is insipid and resembles the flat red raspberry. Some people call it the thimble berry.

The leaves of the purple flowering raspberry are rather large and children often fold the lower ones, which sometime measure a foot across, and make drinking cups of them.

This flower is the "poor relation" of the exquisite wild rose; yet even at that, when its bright blossoms burst forth in rich confusion at the edge of the woods, it lends enchantment to the scene.

BLACK HAW OR STAG BUSH (*Viburnum prunifolium* L.)

(See page 503)

The boy who has not wandered through woodlands and gathered and eaten the smooth bluish-black, sweet and edible fruit of the black haw has missed one of the pleasures of boyhood. The black haw is a very early bloomer, the flat-topped whitish clusters appearing in April and lasting until July. The black haw has its range between the Gulf States and New England and Michigan.

The black haw belongs to the honeysuckle family.

PURPLE LOOSESTRIPE (*Lythrum Salicaria* L.)

(See page 504)

An immigrant from Europe, loving wet meadows, marshy places and banks of streams, and flowering from June to August, the purple loosestrife has secured a foothold in North America and thrives from eastern Canada to Delaware and from the Atlantic seaboard to the Middle States. So beautiful is it that many are ready to forgive Europe for all the weeds it has sent us, when they see an inland marsh in August aglow with this beautiful flowering born to the royal purple. The purple flowering loosestrife is different from any other heretofore mentioned, because it has what are known as trimorphic flowers. Being unable to set seed without the aid of insects, the purple flowering loosestrife has devised a most ingenious sort of arrangement to make sure that it shall not pass away until its flowers have been fertilized.

This plant produces six different kinds of yellow and green pollen on its two sets of three stamens; these six different kinds of pollen are deposited on the stigmas, which are of three different lengths. Darwin showed that only pollen brought from the shortest stamen to the shortest pistil and from the other stamens to the pistils of corresponding length could effectually fertilize the flower. He found

that the reproductive organs when of different length behaved toward one another like different species of the same genus, both with regard to direct productiveness and the character of the offspring. When he made his famous discovery concerning the trimorphism of the loosestrife, he wrote to Gray, the botanist: "I am almost stark, staring mad over *Lythrum*; . . . for the love of heaven have a look at some of your species, and if you can get me some seeds, do."

Dressed in such bright-hued clothing and secreting abundant supplies of nectar at the base of its flower tubes, it is natural that many insects should seek out the purple loosestrife. When visiting the flower, they alight on the stamens and pistils of the upper side first.

MOTH MULLEIN (*Verbascum Blattaria* L.)

(See page 504)

Belonging to the figwort family, other members of which are the great mullein, the blue toad-flax, the butter-and-eggs, the small snapdragon, the turtle-head, the beard-tongue, the monkey-flower, the false foxgloves, the eye-bright, the yellow rattler, the lousewort, and the cow-wheat, the moth mullein is another of those hardy immigrants of the weed world that has traveled up and down the lanes of international commerce, gained a foothold in the United States, and overrun the country almost from ocean to ocean and from lake to gulf. For it the marsh and meadow have little attraction. It prefers the dry, open land of roadside and field, and while the grass of the pasture may be parched in the dry, hot dog-days, the moth mullein, like its larger sister, the great mullein, is somewhat akin to the cactus in its ability to resist drought. If all of the cultivated plants that grow in garden and on farm could defy dry weather with as much success as the mullein, every year in America would be a bonanza crop year. The flowering time of the moth mullein is from June to November. It is one of those plants that have learned to take advantage of the kindness of the agriculturist, as it always stays close to the haunts of man and never thinks of taking to forest and mountain for a habitat.

The moth mullein for many a year has been a rural moth-ball. The country-dwelling housewife has used its leaves in packing away woolen garments of winter to keep out the tiny cloth moths of summer. It is also believed to be a bane to cockroaches, from whence comes the latter part of its scientific name.

John Burroughs was able to see much beauty in the moth mullein in spite of its belonging to the category of weeds. He once declared it a favorite of his, which reminds one of a remark of Dr. Liberty Hyde Bailey concerning the dandelion. He declared that mental attitude has much to do with the attractiveness of flowers—that if a man could only bring himself to think so a dandelion might be as fair a touch to a lawn as a hyacinth. It is also a curious fact that the white ox-eye daisy and the black-eyed susan, which are admired so

much for their beauty and their decorative value, are detested by the farmer, who has to fight them in season and out to prevent them, along with the ragweed, the plantain, and many other weeds from taking possession of his fields and ruining his crop of hay.

SHOWY LADY'S-SLIPPER (*Cypripedium reginae* Walt.)

(See page 505)

Living in peat-bogs, or in rich, low, wet woods, flowering from June to September, and having a range that reaches from Nova Scotia to Georgia and from the Atlantic to the Mississippi, the showy lady's-slipper, a member of the orchid family, has been voted by Dr. Gray the most beautiful belle that ever came out from beneath an orchid roof tree. It never seeks the haunts of man, but tries to remove itself as far from their comings and goings as it can, and it succeeds so well that only the flower lover who is willing to take pains can approach its dwelling-place and behold its liberty in its native environment.

Further than this, it is so persistent in its efforts to be let alone that it has come to have tiny glandular hairs which contain an oil that is somewhat poisonous to the human skin, and it is said that a number of cases of dermatitis have followed the efforts of flower lovers to carry it in triumph out of the woods.

As a member of the orchid family, the showy lady's-slipper shares the tradition of that family's origin, which is one that is neither beautiful nor attractive; for the first Orchis was the son of a nymph and a satyr, hence a fellow of unbounded passion. At a festival of Bacchus, being warm with drink, he attacked a priestess; whereupon the whole congregation fell upon him and rent him limb from limb. His father prayed the gods to put him together again, but the gods refused, tempering their severity, however, by saying that whereas the deceased had been a nuisance in his life, he should be a satisfaction in his death; so they changed him to the flower that bears his name. Even the flower was alleged to retain temper, and to eat its root was to suffer momentary conversion into the satyr state.

THE TWIN BERRY OR PARTRIDGE BERRY (*Mitchella repens* L.)

(See page 506)

Another of the truly "wild" flowers that asks man only to be let alone in the fastness of the forest is the twin berry, which is a member of the madder family. Strange to say, it is a distant relative of the coffee and the cinchona tree, and also of the madder, whose fruits furnish the red dye and the artist's permanent pigment of that name. It is also a relative of the dainty little quaker-lady, the bedstraw, the goose grass, and the wild licorice. Its flowering season is from April to June and it sometimes fills a return engagement in the autumn. Its range is from Nova Scotia to the Gulf of Mexico and from the Atlantic seaboard to Minnesota and Texas.

The flowers of the twin berry have a system of securing cross-fertilization which is different from any of those heretofore described. This is known as dimorphism. There are two different kinds of flowers—the one has mature stamens and immature stigmas and the other has mature stigmas and immature stamens. By this process no flower can fertilize itself and must rely upon its insect benefactor to prevent it from disappearing from the world through lack of ability to mature its seeds. Short-tongued bees and flies cannot reach the twin berry's nectar because of the hairs inside the tube, but the larger bees and butterflies which suck the nectar from the flowers with the tall stamens receive pollen on the exact spot on their long tongues that will come into contact with the sticky stigmas of another flower.

The two flowers at the top of a branch grow united in such a way that they seem to be Siamese twins of flowerland. It is from the fruit resulting from this union that the twin berry gets its name. Experience is said to prove that when only one of the twin flowers is pollinized by insects fruit rarely sets as a result, but when both are pollinized a healthy seeded berry follows.

MAYFLOWER OR TRAILING ARBUTUS (*Epigaea repens* L.)

(See page 506)

The eastern half of North America, from Newfoundland and the Northwest Territory to Florida and the Gulf of Mexico, possesses that delightful little harbinger of spring, the mayflower or trailing arbutus. With its ever-green leaves nipped by the frosts of winter and weather-worn by the cold, relentless battle they must fight for existence through the grim winter, and with its flowers seeming to form nature's prelude to the fragrance of summer, from the days of Plymouth Rock itself the mayflower or trailing arbutus has gladdened the heart of man as it has proclaimed the dawn of spring. The poet tells us that the mayflower was the first sign that the Pilgrim fathers had that the winter was over; that the springtime was coming, and that the summer was appearing in the distance—not only the winter and the springtime and the summer, climatically speaking, but the winter of the Pilgrims' fear, the springtime of their hopes, and the summer of their dreams realized.

With all of its message of hope and cheer, as it proclaims the ending of the season of snow and harbingers the beginning of the season of bud and blossom, the mayflower still resists the effort of man to lead it into captivity. No more is the eagle at home in the farmyard or the cardinal in the cage than the mayflower in the garden. As the imprisoned cardinal pines away and dies when the gilded bars of a bird-cage separate it from its liberty, so the mayflower lives unhappily and unprofitably in the garden, and finally gives up its effort to adapt itself to its new environment as vain. However, man's patience and skill is finding a means of taming this wild flower (see page 518).



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