FAMILIAR

WILD FLOWERS

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FIGURED AND DESCRIBED BY

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

"These are thy works, Parent of Good,
Almighty! Thine this universal frame
Thus wondrous fair. Thyself how wondrous then!
Unspeakable; who sitt'st above the heavens,
To us invisible, or dimly seen
In these Thy lowest works; yet these declare
Thy goodness beyond doubt, and power divine."

MILTON.

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CONTENTS.

SUMMARY.

It should be prefaced that this Summary merely professes to give a brief epitome of each of the plants represented in this volume, and that it is principally a condensation from the writings of Hooker, Lindley, Bentham, or other authorities on the subject.*

SWEET BRIAR, *ROSA RUBIGINOSA. Nat. Ord., Rosaceæ.*—Calyx tube ovoid; calyx segments, five in number. Corolla of five petals, pink, fragrant. Flowers often solitary. Stamens numerous. Achenes numerous. Fruit pear-shaped. Leaves pinnate, glandulose, fragrant, small, much-toothed, stipulate. Stem prickly. Bush or shrub.—Hedges and thickets; often cultivated. Perennial. Flowering throughout summer.

BROOM, *SAROTHAMNUS SCOPARIUS. Nat. Ord., Leguminosæ or Papilionaceæ.*—Calyx campanulate, two-lipped, minutely toothed, much shorter than corolla. Flowers large, bright yellow, papilionaceous, axillary. Standard broad. Stamens monadelphous. Ovary one-celled. Style one, very long. Stigma one. Pod or legume flat, much longer than calyx, many-seeded, hairy at margin. Lower leaves on short stalks, composed of three small obovate leaflets; upper leaves stalkless, often single. Stems angled, smooth, green, wiry. Large shrub.—Dry hilly wastes, banks. May, June. Perennial.

TUTSAN, *HYPERICUM ANDROSÆMUM. Nat. Ord., Hypericaceæ.*—Calyx of five broad sepals, unequal, as long as petals. Corolla of five petals, large, deciduous. Flowers few in number, grouped at ends of the branches. Twisted in æstivation. Stamens numerous, pentadel-

* See Prefatory Note to the Summary, Series I.

phous. Styles three, short. Ovary three-celled. Fruit baccate; seeds numerous. Leaves in pairs, sessile, cordate at base, obtuse, large, with small pellucid dots. Stalk short, woody.—Hedges, copses, open woods. June, July, August. Perennial.

BLACKTHORN, *PRUNUS COMMUNIS. Nat. Ord., Rosaceæ.*—Calyx inferior, deciduous, five-lobed. Flowers of five petals, equal, small, white; nearly stalkless, appearing in early spring before the leaves develop. Stamens perigynous, numerous. Style one. Carpel one. Anthers conspicuous, two-celled. Fruit globular, black, with purplish bloom, very astringent to taste. Leaves alternate, stipulate, ovate, stalked, serrate. Stem much branched. Stipules free, in pairs. A small tree.—Hedges, copses, woods. Flowering in April. Perennial.

WALLFLOWER, *CHEIRANTHUS CHEIRI Nat. Ord., Cruciferæ.*—Calyx erect, bisaccate, of four sepals. Corolla of four petals, large, varying in colour, fragrant. Stamens six in number, two shorter than the other four. Style and ovary one. Stigma two-lobed. Fruit, a flattened, two-celled pod, two to three inches in length. Leaves alternate, lanceolate, entire, acute, slightly hairy. Stems erect, woody, forking.—Old walls, ruined buildings, rocks. May and June. Perennial.

CREEPING BELL-FLOWER, *CAMPANULA RAPUNCULOIDES. Nat. Ord., Campanulaceæ.*—Calyx segments five, conspicuous, deeply cut, recurved. Corolla campanulate, with five deeply-cut segments. Flowers unilateral, drooping, axillary, racemose. Æstivation valvular. Stamens five; filaments dilated at base. Anthers distinct, spreading. Stigma three-cleft, recurved. Fruit a capsule, dry, globular, opening by clefts at base. Leaves alternate, exstipulate; lower leaves large, heart-shaped, on long stalks; upper leaves small, acutely pointed, and stalkless. Stem erect, slightly branching. Root-stock creeping.—Woods and shady hedges. July, August. Perennial.

HEATHER, *ERICA CINEREA. Nat. Ord., Ericaceæ.*—Calyx of four small and narrow sepals, persistent. Corolla ovoid, four-lobed, crimson, drooping. Flowers in dense terminal racemes, whorled. Stamens eight; anthers two-celled. Style and stigma one. Fruit

capsular, four-celled. Leaves generally three in a whorl, having fascicles of small leaves in their axils; linear, dark green. Stem grey and wiry. Growth bushy.—Dry wastes, commons, mountain-sides. July, August, September. Perennial.

WOOD SAGE, *TEUCRIUM SCORODONIA. Nat. Ord., Labiatæ.*—Calyx tubular, five-toothed. Corolla irregular, shorter than stamens, monopetalous, five-lobed, upper lip very small. Flowers in pairs in lateral and terminal racemes, having a bract at each pedicel. Stamens four, ascending, parallel, didynamous, two lower ones longer than the others. Stigma two-lobed. Leaves in pairs, much wrinkled, stalked, coarsely serrate. Stems erect, hairy, square. Root-stock creeping.—Woody hill-sides, stony banks. July, August. Perennial.

TUFTED VETCH, *VICIA CRACCA. Nat. Ord., Leguminosæ.*—Calyx gibbous at base, five-toothed. Corolla papilionaceous. Flowers thickly clustering, racemose, on long peduncles. Stamens ten, diadelphous, nine being in one bundle and the tenth, the upper one, distinct. Style with a tuft of hair below stigma. Pod flattened, containing some seven or eight seeds. Leaves pinnate, ending in tendril; leaflets numerous, stipulate. Stems weak, climbing.—Thickets and hedgerows. June, July, August. Perennial.

FLEABANE, *PULICARIA DYSENTERICA. Nat. Ord., Compositæ.*—Flower-heads large, terminal or springing from axils of upper leaves. Rays very numerous, linear, widely spreading, bright yellow. Involucre hemispherical, closely covered with numerous small and narrow scales. Leaves simple, alternate, cordate at base, embracing stem, very waving in outline, downy. Stem branching, downy.—Ditch-sides, damp pasturage, roadsides. July, August, September. Perennial.

PURPLE LOOSE-STRIFE, *LYTHRUM SALICARIA. Nat. Ord., Lythraceæ.*—Calyx inferior, tubular, six long and six short segments, persistent. Petals ordinarily six. Flowers in whorls at terminations of branches. Stamens twelve, six long and six short, inserted within tube of calyx. Ovary one. Style one, filiform. Ovary and capsule two-celled. Leaves in pairs or threes, sessile, lanceolate, entire,

exstipulate, embracing stem. Bracts conspicuous. — Wet ditches, river-sides. July, August, September. Perennial.

IVY-LEAVED TOAD-FLAX, *LINARIA CYMBALARIA. Nat. Ord., Scrophulariaceæ.*—Calyx persistent, five-cleft. Corolla monopetalous, irregular, deciduous, spurred at base, closed by palate. Flowers small, borne on axillary peduncles. Stamens four, didynamous. Style one; stigma two-lobed. Capsule two-celled, globular. Leaves on long stalks, five-lobed, fleshy; veins obscure, often purple on under surface. Stems long, filiform, trailing.—Rocks and old walls, preferably in damp situations. May, June, July, August, September, October. Perennial.

BETONY, *BETONICA OFFICINALIS. Nat. Ord., Labiatæ.*—Calyx tubular, ovate, ten-ribbed, five-toothed. Corolla irregular, tubed, upper lip erect, the lower lobed and spreading. Stamens four, in pairs beneath upper lip, two long, two short. Ovary one, four-lobed. Stigma two-lobed. Fruit a smooth nut. Leaves few in number, opposite, lower ones on long stalks, upper ones on short stalks or sessile, coarsely crenate, veining conspicuous. Stem square, hairy. Flowers in dense whorls arranged in a terminal spike. Bract large.—Woods and hedgerows. June, July, August. Perennial.

ROCK ROSE, *HELIANTHEMUM VULGARE. Nat. Ora., Cistaceæ.*—Calyx of five sepals, three large, ribbed, and equal, and two smaller outer ones. Corolla deciduous, five petals, crumpled, broadly spreading. Stamens numerous, hypogynous. Style one, filiform. Stigma simple. Capsule with three valves. Leaves opposite, on short stalks, lanceolate, green above, grey beneath. Stipules linear-lanceolate. Flowers in loose racemes: flower-stems drooping before and after flowering. Stems shrubby, procumbent.—Dry pasturage and hill-sides. July, August, September. Perennial.

MONEYWORT, *LYSIMACHIA NUMMULARIA. Nat. Ord., Primulaceæ.*—Calyx deeply five-cleft. Corolla regular, deeply five-lobed, cup-like, large, bright yellow. Stamens five. Ovary superior, one-celled. Style one. Stigma capitate. Fruit a one-celled capsule opening at the top. Flowers on axillary peduncles. Leaves opposite, shortly

stalked, broadly ovate, shining. Stem prostrate, creeping, rooting.—Moist shady banks. June, July. Perennial.

RED VALERIAN, *CENTRANTHUS RUBER. Nat. Ord., Valerianaceæ.*—Calyx adherent to ovary, its border developing with the ripening fruit into a feathery pappus. Corolla five-cleft, spurred, tubular, monopetalous, crimson. Stamen one. Style filiform. Ovary one-celled. Leaves opposite, exstipulate, ovate-lanceolate, entire. Stem smooth, slight bloom on it, and this bloom often extends to the foliage. Plant branching and bushy.—Chalk-pits, old walls, cliffs. June, July, August, September. Perennial.

DEADLY NIGHTSHADE, *ATROPA BELLADONNA. Nat. Ord., Solanaceæ.*—Calyx deeply five-cleft, cup-shaped. Corolla campanulate, regular, monopetalous, five-lobed, hypogynous, deciduous, dull purple. Flowers axillary on short stems or at the forking of stems. Stamens five, shorter than corolla and inserted in it. Style one. Stigma obtuse. Fruit a berry, two-celled, large, globular, poisonous, black, shining. Leaves large, entire, in pairs of unequal size, ovate, stalked, exstipulate. Stems spreading and branching.—Waste places, ruins. June, July, August. Perennial.

YELLOW LOOSE-STRIFE, *LYSIMACHIA VULGARIS. Nat. Ord. Primulaceæ.*—Calyx deeply five-cleft. Corolla large, bright yellow, rotate, deeply five-lobed. Stamens five, connected at base, unequal. Style one. Stigma capitate. Ovary one-celled. Fruit a globular capsule, opening at summit. Inflorescence paniculate, freely branching. Stem erect, branching, often downy. Leaves in twos, threes, or fours, entire, conspicuously veined, ovate-lanceolate, almost or quite sessile. Bracts large and conspicuous.—Water-sides. July, August. Perennial.

TANSY, *TANACETUM VULGARE. Nat. Ord., Compositæ.*—Flower-heads discoid, numerous. Florets tubular, uniform, homochromous, bright yellow. Inflorescence corymbose. Involucre hemispherical, imbricated. Achene angular. Leaves large, pinnate, each segment deeply toothed and divided, alternate, strongly smelling when bruised. Stem erect, stout. Root-stock large and creeping.—Roadsides and hedgerows. August and September. Perennial.

HEDGE STACHYS, *STACHYS SYLVATICA. Nat. Ord., Labiatæ.* —Calyx sub-campanulate, five-toothed, ten-ribbed. Corolla monopetalous, hypogynous, irregular, tubular, upper lip erect, entire, concave; lower lip lobed and spreading. Flowers in whorls, forming terminal spikes. Stamens four, two larger than the other two. Ovary one, deeply four-lobed. Stigma two-lobed. Achenes four. Leaves opposite, large, cordate, crenate, stalked, hairy. Strongly smelling. Root-stock creeping, Stem hairy, square in cross section.—Woods and shady banks. June, July, August. Perennial.

YELLOW WATER-LILY, *NUPHAR LUTEA. Nat. Ord., Nymphaceæ.*—Calyx of a varying number of sepals, five or six, concave, yellow, fleshy, much larger than the petals. Petals numerous, fragrant, inserted on receptacle, yellow. Stamens numerous. Anthers linear, inserted on receptacle, yellow, often passing into more or less petaloid forms. Stigma peltate, rayed. Fruit baccate, globular or flask-like, crowned by disk of stigma. Leaves cordate, floating. Stems thick and succulent.—Lakes, ponds, and gently moving streams. July, August. Perennial.

SHEPHERD'S NEEDLE, *SCANDIX PECTEN. Nat. Ord., Umbelliferæ.*—Calyx adherent, teeth obsolete. Corolla of five unequal petals; petals obovate, with inflected points; white, minute. Stamens five. Styles two. Carpels two, with five obtuse ribs. Universal involucre wanting, or represented by a single leaf. Partial involucre of several leaves. Umbels of only two or three rays, terminal or springing from axils of upper leaves. Fruit ribbed, oblong, linear, with very long beak. Leaves alternate, triply pinnate, embracing the stem with their sheathing bases.—Fields. June, July, August, September. Annual.

LEOPARD'S-BANE, *DORONICUM PARDALIANCHES. Nat. Ord., Compositæ.*—Florets collected into one head on receptacle; central florets tubular, outer florets ligulate, numerous. Heads heterogamous. Florets of the ray without a pappus. Receptacle naked. Involucre hemispherical, clothed with double row of equal linear scales. Achene terete. Flower-heads on long peduncles, few in number. Leaves few in number; radical leaves on long petioles, cordate; intermediate leaves

with the petiole expanded at base into two clasping ears; upper leaves clasping and sessile. Stems erect, slightly branching.—Rocks or woods, and as an outcast from gardens. May, June, July. Perennial.

FIELD THISTLE, *CARDUUS ACANTHOIDES. Nat. Ord., Compositæ.*—Florets all equal, crimson, tubular. Receptacle large, having bristles between the florets. Achenes glabrous. Pappus of simple hairs. Flower-heads often slightly drooping, globose, aggregated. Involucre globose, clothed with linear, imbricated, sharply-pointed bracts. Leaves pinnatifid, spinous, decurrent. Stem erect, prickly, and fringed with decurrent bases of leaves.—Waste lands and waysides. June, July, August. Annual.

FRITILLARY, *FRITILLARIA MELEAGRIS. Nat. Ord., Liliaceæ.*—Perianth petaloid, campanulate, of six distinct pieces; nectariferous depressions at base; ordinarily chequered, but sometimes white. Stamens six, inserted at base of perianth. Style one, three-cleft at apex. Fruit dry, capsular, three-celled. Stem single-flowered. Leaves linear-lanceolate, alternate, parallel-veined. Root bulbous.—Meadows. April, May. Perennial.

HEDGE MUSTARD, *SISYMBRIUM OFFICINALE. Nat. Ord., Cruciferæ.*—Calyx of four sepals, equal at base, slightly spreading. Petals four, minute, yellow. Stamens six, tetradynamous. Ovary one. Style one. Stigma entire. Pods tapering, pubescent, pressed to main stalk, almost sessile, two-valved. Stem erect, rigid, tough, freely branching. Leaves dull green, very variable in form, deeply pinnatifid, terminal portions often much larger than the laterals; upper leaves hastate, but little divided.—Waste places, roadsides. June, July, August. Annual.

YELLOW RATTLE, *RHINANTHUS CRISTA-GALLI. Nat. Ord,, Scrophulariaceæ.*—Calyx greatly inflated, four-toothed, flattened, contracted at mouth. Corolla irregular, monopetalous, deciduous; upper lip compressed, entire; lower lip spreading, three-lobed. Stamens four, in pairs. Style one. Stigma two-lobed. Capsule two-celled, flattened, orbicular. Flowers in axils of upper leaves, forming loose spike. Leaves sessile, opposite, coarsely serrate, lanceolate, promi-

nently veined. Stem erect, smooth, branching, spotted.—Pasture land May, June, July. Parasitic. Annual.

HEDGE CALAMINT, *CALAMINTHA CLINOFODIUM. Nat. Ord., Labiatæ.* — Calyx tubular, two-lipped, thirteen-veined, nearly equal at base, five acute teeth. Corolla monopetalous, hypogynous, irregular; upper lip straight, nearly flat, three-lobed; lower lip, two-lobed. Flowers in dense, sessile whorls in the axils of the leaves. Stamens four, the two anterior the longest. Ovary one, four-lobed. Stigma two-lobed. Bracts linear, numerous. Stem square in section, weak. Leaves opposite, ovate, stalked, slightly serrate, soft to the touch. — Hedges, borders of copses. July, August, September. Perennial.

DOVE'S FOOT CRANE'S-BILL, *GERANIUM MOLLE. Nat. Ord., Geraniaceæ.*—Calyx of five persistent sepals. Corolla regular, five deeply-notched, heart-shaped petals, clawed, pink, fugacious. Stamens ten, alternately long and short. Ovary five-lobed, terminating in long awn or beak. Stigmas five. Flowers in pairs on peduncles. Leaves round, deeply lobed, hairy; lower leaves numerous, on long stalks, freely lobed; upper leaves fewer, smaller, less cut into segments. Stems weak, spreading, often red in colour, hairy.—Dry pasturage, banks, and roadsides. May, June, July, August. Annual.

CREEPING THISTLE, *CNICUS ARVENSIS. Nat. Ord., Compositæ.*—Florets tubular. Pappus sessile, deciduous, plumose. Receptacle bristly. Achenes compressed, glabrous. Flower-heads rather small, in terminal corymbs, globose. Involucre ovate, scales large, appressed, terminating in slight spine. Leaves alternate, narrow, pinnatifid, spinous, waved, shining, embracing stem. Root creeping. Stems erect, slightly branching.—Fields and roadsides. July, August. Perennial.

MELANCHOLY THISTLE, *CNICUS HETEROPHYLLUS. Nat. Ord., Compositæ.* Flower-heads large, crimson, growing singly on long peduncles. Bracts of involucre glabrous, lanceolate, imbricate, appressed, acuminate. Involucre flask-like. Stems high, much furrowed, covered with a white cottony down. Leaves on under side downy,

green above, clasping the stem, bordered with small teeth, undivided, not prickly, not decurrent.—Damp mountain pasturage. July, August. Perennial.

LILY OF THE VALLEY, *CONVALLARIA MAJALIS. Nat. Ord., Liliaceæ.*—Perianth campanulate, six-cleft, segments recurved at extremities, drooping, fragrant, white, deciduous. Stamens six, inserted on sides of perianth. Ovary three-celled. Style one. Stigma one. Inflorescence racemose. Berry three-celled, globular. Bracts at the base of the pedicels. Peduncle radical, leafless, twisted, semi-cylindrical. Root creeping. Leaves two, radical, large, ovate, united at their bases in a scaly sheath, veining prominent.—Woods. May, June, July. Perennial.

NETTLE-LEAVED BELL-FLOWER, *CAMPANULA TRACHELIUM. Nat. Ord., Campanulaceæ.*—Calyx tube adnate with ovary, five broad, erect, and deeply-cut hairy segments. Corolla campanulate, five-cleft, regular, æstivation valvular. Stamens five. Style one, its upper half pubescent. Stigma trifid. Flowers variable in inflorescence, sometimes in short axillary racemes, at others solitary. Fruit a dry, turbinate capsule, opening at base by lateral clefts. Leaves alternate, exstipulate; lower leaves large, on long stalks, cordate, coarsely serrate; upper leaves lanceolate, small, almost stalkless. Stem erect, tough, angular.—Woods. July, August, September. Perennial.

CORN CROWFOOT, *RANUNCULUS ARVENSIS. Nat. Ord, Ranunculaceæ.*—Calyx of five spreading sepals. Petals, five, small, pale yellow. Stamens numerous. Carpels few, large, flattened, very prickly. Leaves alternate, three-cleft into long narrow segments; these segments either entire or again triply divided; dull green. Upper leaves very simple in character, linear. Stem erect, branching, glabrous.—Corn-fields and amongst crops. May, June, July. Annual.

RED MEADOW CLOVER, *TRIFOLIUM PRATENSE. Nat. Ord., Leguminosæ.*—Calyx hairy, of five unequal teeth, the lowest being the largest. Petals papilionaceous, reddish purple, turning brown after flowering. Flowers sessile, fragrant, in dense ovoid terminal heads,

with two sessile, trifoliate leaves beneath them. Stamens ten, diadelphous. Style simple. Ovary one-celled. Legumes few-seeded. Leaves alternate, trifoliate, each leaflet often marked with a white lunulate spot; the leaflets obovate or obcordate, serrate. Stipules, large. Stalk erect, hairy.—Meadows, roadsides. May, June, July, August, September. Perennial.

COLTSFOOT, *TUSSILAGO FARFARA. Nat. Ord., Compositæ.* —Flower-heads monæcious, bright yellow, solitary, terminal, inner florets tubular, outer ligulate; the florets of the ray very numerous, the rays very narrow; florets of the disk sterile, few. Pappus pilose. Receptacle naked. Involucre of a single row of scales. The flowering stems erect, clothed with small, narrow, alternate scales, and appearing before the leaves. Root-stock creeping. Leaves radical, large, cordate, angular, toothed, their under surface covered with a white down.—Clayey soils, railway embankments, waste ground. March, April. Perennial.

DEVIL'S-BIT SCABIOUS, *SCABIOSA SUCCISA. Nat. Ord., Dipsaceæ.*—Calyx surmounted by four bristles, surrounded by membranaceous involucel. Corolla with oblique limb, four-lobed, purple. Stamens four, distinct, nearly equal; anthers large. Ovary one-celled. Style one, filiform. Flowers collected into a dense, globular head. The involucre many-leaved. Receptacle scaly. Radical leaves, stalked, ovate, entire, stem-leaves few in number, hairy, opposite, narrow, slightly toothed. Root-stock short and abruptly ending.—Meadows. July, August, September, October. Perennial.

WALL PENNYWORT, *COTYLEDON UMBILICUS. Nat. Ord., Crassulaceæ.*—Calyx very small, five sepals. Corolla campanulate, five teeth. Stamens ten, inserted at base of corolla. Carpels five. Ovary superior. Flowers pendulous, racemose. Leaves mostly radical, on long stalks, orbicular, fleshy, peltate, crenate, depressed in centre. Stem erect, succulent, simple or slightly branched.—Old buildings, rocks, wayside walls. June, July, August. Perennial.

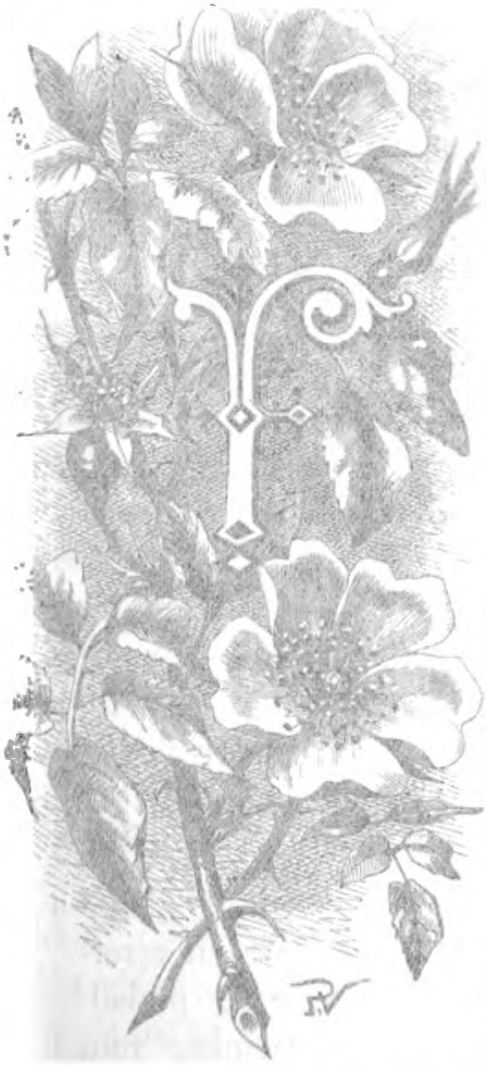
SMALL KNAPWEED, *CENTAUREA NIGRA. Nat. Ord., Compositæ.*—Florets purple, all equal, or at times the outer row larger and

sterile; disk florets perfect. Achenes compressed, crowned by ring of minute bristles. Flower-heads borne on terminal peduncles. Involucre globular; bracts imbricate, deeply fringed. Leaves rough to the touch, varying in form; lower leaves stalked, lobed, sublyrate; upper, linear-lanceolate, entire or slightly toothed, sessile. Stems erect, wiry, freely branched.—Meadows, hedgerows. June, July, August, September. Perennial.

VALERIAN, *VALERIANA OFFICINALIS. Nat. Ord., Valerianaceæ.* —Calyx tube adnate with ovary, the border opening out after flowering into a feathery pappus. Corolla five-lobed, gibbous, small. Stamens three. Ovary one-celled. Fruit dry, one-seeded, indehiscent. Inflorescence corymbose. Leaves pinnate or pinnatifid; segments lanceolate, deeply toothed, very variable in number; upper leaves few, small, and of few segments; lower leaves on long foot-stalks. Flowering-stems erect, simple, or very slightly branching.—Damp hedgerows, moist woods, sides of streams. June, July, August. Perennial.

SWEET BRIAR

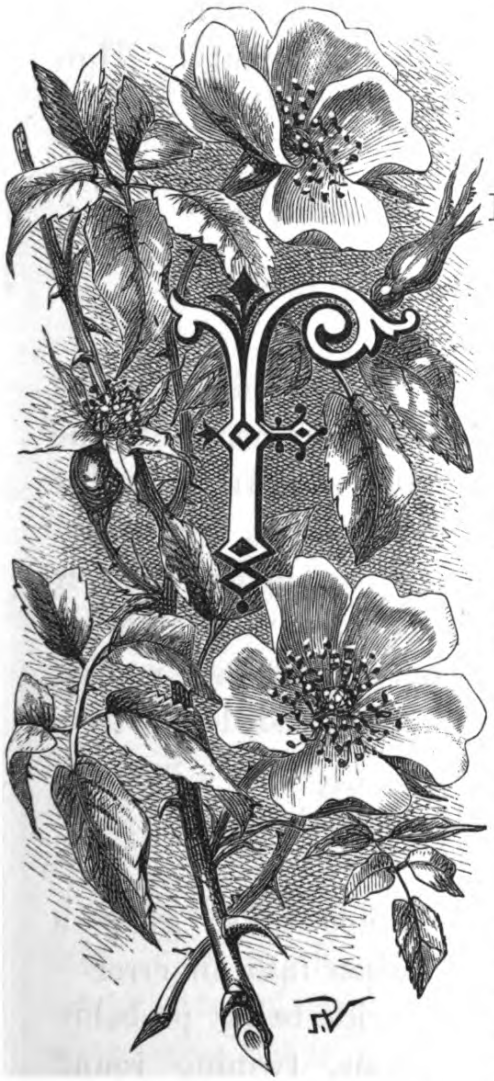
FAMILIAR WILD FLOWERS.



[illegible] tractive [illegible] the [illegible] it [illegible] beauty of form and [illegible] a charm to the [illegible] of wild roses that [illegible] our hedge rows, but adds to these a fragrance of foliage that is peculiarly its own. [illegible] probably most of our readers will have formed their acquaintance with the plant from having found it cherished in some cottage garden. Like the snowdrop, the foxglove, and many other plants, it pays a certain price for its place in popular esteem, and is rarely suffered to remain in its native *habitat*.

WEET BRIAR

FAMILIAR WILD FLOWERS.



SWEET-BRIAR.

Rosa rubiginosa. Nat. Ord., Rosaceæ.

FEW of our wild plants are more enduringly attractive than the subject of our present illustration, for it not only possesses all the beauty of form and odour and colour that gives so great a charm to the other species of wild roses that adorn our hedgerows, but adds to these a fragrance of foliage that is peculiarly its own. Hence probably most of our readers will have formed their acquaintance with the plant from having found it cherished in some cottage garden. Like the snowdrop, the foxglove, and many other plants, it pays a certain price for its place in popular esteem, and is rarely suffered to remain in its native *habitat.*

Under its older name of eglantine we find its praises sung by many poets. The botanist may possibly at times in his analysis and dissection run some little risk of losing the sense of the living beauty of the blossom that he demolishes in his search after structure and systematised facts, while the poet and artist, less concerned with technicalities, and often really ignorant of much that is wonderful in the adaptations of means to ends, do, nevertheless, by a few touches, picture to us this living beauty. How redolent and appreciative, for example, are these lines of Shenstone :—

> "Come, gentle air! and while the thickets bloom
>
> * * * *
>
> Convey the woodbine's rich perfume,
> Nor spare the sweet-leaved eglantine."

How we find them recalling to us some woodland glade, blossoming in all the wealth of the summer, and the scarcely moving air bearing to us the rich fragrance of the honeysuckle clusters! In Spenser, too, we read—"Sweet is the eglantine;" and Drayton again calls it "sweetest eglantine." Milton, in one very familiar passage, introduces the plant not only by its two names, but as though two distinct flowers were intended—

> "At my window bid good-morrow,
> Through the sweet-briar, or the vine,
> Or the twisted eglantine."

Here, we are afraid, with all deference to so great a poet, we can only feel that he has fallen into an error—the "twisted" woodbine or honeysuckle being probably intended, as its long rope-like stems, twining round each other, would make the epithet he uses a very appropriate one. Shakespeare introduces the two plants very

beautifully and with perfect clearness, in his description of the bank—

> "Quite over-canopied with luscious woodbine,
> With sweet musk roses and with eglantine,"

so that we see that long before the time of Milton the name and individuality of each plant was well established. In another well-known passage of Shakespeare the sweetness of "the leaf of eglantine" is again referred to. With Keats it is "the pastoral eglantine;" with Mant "the fragrant eglantine;" and Scott speaks of a scene where

> "Nature scatter'd free and wild
> Each plant and flower, the mountain's child.
> Here eglantine perfumed the air,
> Hawthorn and hazel mingled there."

The sweet-briar was one of Scott's favourite shrubs, and we not long ago met an interesting proof of this fact in one of his letters. The note in question was written by him from Edinburgh to William Laidlaw, his friend and agent at Abbotsford, soon after that property had come into his possession. In one part he says—"You must get some one to stick in a few wild roses, honeysuckles, and sweet-briars in suitable places, so as to produce the luxuriance we see in the woods which Nature herself plants. We injure the effect in our planting, so far as beauty is concerned, by neglecting underwood." We find in the account sent in that the "few sweet-briars" numbered two thousand.

The flowers of the sweet-briar are somewhat smaller than those of the dog-rose, and are often a deeper pink, though this strength of colour differs in various plants, some being richer in tint than others. The fragrant odour of the foliage is itself so distinctive of the plant that no lengthy description is here necessary. The sweet-

briar appears to delight in open copses, though at times we find it amongst the mass of plants that crowd on each other in some old hedgerow. It seems to be more especially partial to chalk, and its delicate blossoms are displayed during the months of June and July.

Like almost everything else, the sweet-briar was, in the "good old times," accredited with remedial virtues. Many of these remedies date as far back as Pliny, and subsequent writers adopt them without question, contenting themselves with adding, "as Plinie sayth." The briar-wood pipes so largely used by smokers are made, not from the wood of the present plant, but from that of the tree heath (*Erica arborea*). The wood comes from the south of France, and our English name is a corruption from the French word for heath, *bruyère*.

The sweet-briar is the *Rosa rubiginosa* of the botanist. Its generic name has already received full explanation in our comments on a preceding species of wild rose. The specific name is the feminine form of the Latin word for rusty, a good deal of a brownish-red tint being often found on both stems and foliage, which are, in botanical parlance, rubiginous.

BROOM

[illegible] the desolating war-
[illegible] to our [illegible] the
[illegible] of Plantagenet. While
we hold the praises of the bear
sung by our greatest poets, we hold too, that the golden
broom shares almost equally their regard.

As a device, the broom was from a very early period
the chosen plant of Bretagne. Fulke of Anjou wore it as
his personal cognisance; and Henry II. of England, his
grandson, as a claimant of that province, also adopted it,

THE BROOM.

Sarothamnus scoparius. Nat. Ord., Papilionaceæ.

LIKE the preceding flower, the sweet-briar, the subject of our present illustration is one that is not only dear to all lovers of natural beauty, but is also enshrined in the memory of all students of our history and literature. While the sweet-briar suggests to our minds the national emblem, the rose of England, the badge of Yorkist and Lancastrian, and the device of the Tudors at the close of the desolating wars that bore its name, the broom no less recalls to our mind the line of Plantagenet. While we find the praises of the briar sung by our greatest poets, we find, too, that the golden broom shares almost equally their regard.

As a device, the broom was from a very early period the chosen plant of Bretagne. Fulke of Anjou bore it as his personal cognisance; and Henry II. of England, his grandson, as a claimant of that province, also adopted it,

and it was henceforth borne by the rest of his race, its mediæval name, *planta genista*, giving the family title, Plantagenet. It may be seen on the great seal of Richard I., this being what we may term its first recognised and official heraldic appearance. In the chapel of the Tudor Henry VII., at Westminster, we find the broom introduced in the stained glass of the windows, but here it would probably be employed simply from its beauty, apart from any symbolic significance. Another interesting use of it may be seen in the order of knighthood, the "Cosse de Genest," established by St. Louis of France, on the occasion of his marriage, in the year 1234. The collar of the order was composed alternately of the *fleur-de-lys* of France and the broom-flower, the motto being *Exaltat humiles*—"He exalteth the lowly." This order was for a long time held in high esteem; and amongst the foreign potentates who received it we find the name of our own Richard II.

Turning now to the literary side of our subject, to see what measure of appreciation the broom has received, we find in Chaucer the line—

> "Amid the broom he basked him in the sun,"

a suggestion of the great open wastes and commons glowing in the sunlight, and golden with the countless blossoms of the gorse and broom; while Shakespeare, on the other hand, finds in the tangled thicket a retreat for shade and solitude, and writes of the

> "Broom groves,
> Whose shadow the dismisséd bachelor loves."

The delicate odour of the blossom has naturally not escaped notice. Spenser writes, "Sweet is the broom flowre;" and

Wilson, again, dwells on "the fragrance of the yellow broom."

The vigour of its growth on the open moorland, or amidst the rocks of the bleak mountain-side, is often referred to. It is "the thick entangled broom" of Thomson; and we find it again in the graphic descriptions of Scott—

> "And now to issue from the glen
> No pathway meets the wanderer's ken,
> Unless he climb, with footing nice,
> A far projecting precipice.
> The broom's tough roots his ladder made,
> The hazel saplings lent their aid;
> And thus an airy point he won,
> Where, gleaming with the setting sun,
> One burnished sheet of living gold,
> Loch Katrine lay beneath him rolled."

The broom is invariably found on dry situations, such as railway-embankments, high-lying moorland, or hilly and mountainous slopes. Its fondness for high land is noticed by Wordsworth, in the lines—

> "The broom
> Full-flowered, and visible on every steep,
> Along the copses runs in veins of gold."

And Mary Howitt associates the "yellow broom blowing" with "the mountain-side wilds." The image used by Wordsworth, "veins of gold," recalls the lines of Cowper, where he speaks of

> "The broom,
> Yellow and bright as bullion unalloyed."

This richness of colour and the large size of the blossom make it a very conspicuous feature in the wild moorland landscape. It flowers early in the year; Wharton gives its flowering as one of the indications of opening summer—

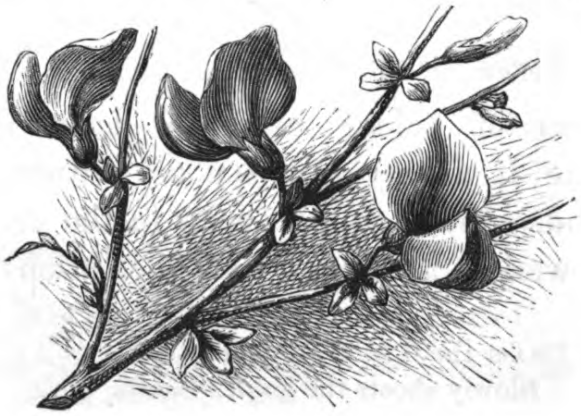
> "O'er the field of waving broom
> Slowly shoots the golden bloom."

The plant bears a profusion of blossoms, and these, in turn, are followed by the large black pods. All who have enjoyed a day of brilliant sunshine on the heathy wastes soon after the broom has finished flowering cannot have failed to hear the mimic artillery all around them as the genial warmth caused the broom-pods to open. After they have shed their seeds they curl up. The blossoms yield an abundant supply of honey: the bees have, indeed, no finer field for their industry than what we ordinarily call waste land, their richest supplies being gathered from the wide expanses covered with broom, heather, and thyme.

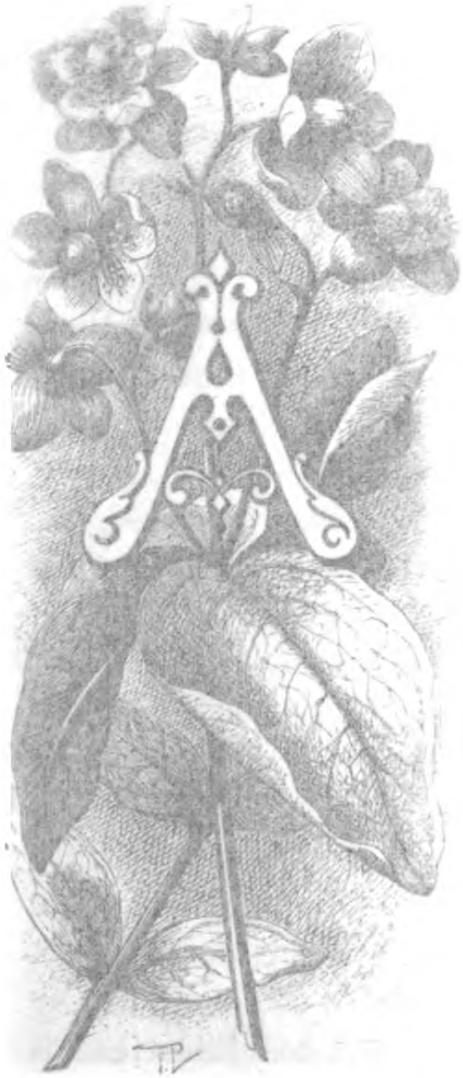
Culpepper says of the broom—"To spend time in writing a description hereof is altogether needless, it being so generally used by all the good housewives almost throughout this land to sweep their houses with, and therefore very well known to all sorts of people."

> "The vagrant artist oft at eve reclines,
> And broom's green shoots in besoms neat combines."

The results of the vagrant's art, we need scarcely remind our readers, are often called brooms, from the material of which they are made; and its generic name, *Sarothamnus*, points out this use of the plant, as it is compounded from the Greek words signifying "to sweep," and "a shrub."

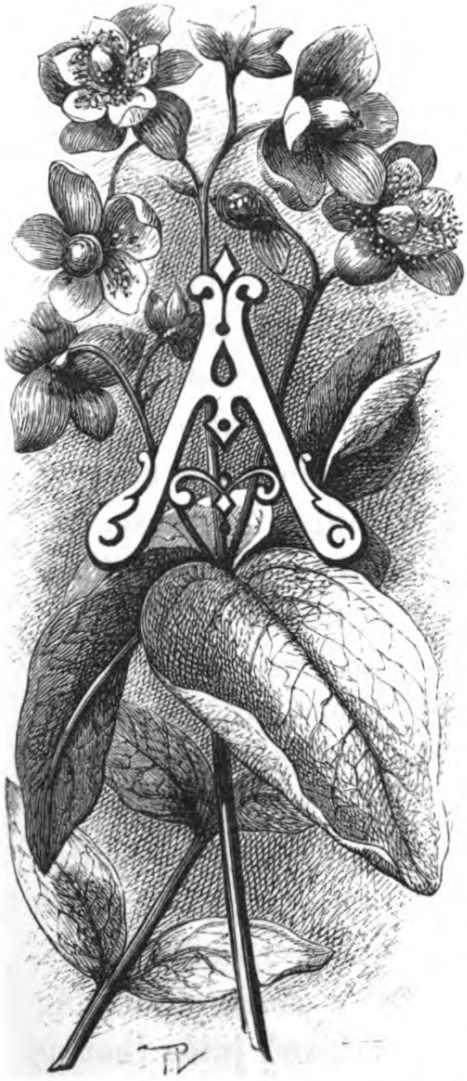


TUTSAN.



[illegible] wild plants [illegible] in the rus[illegible] [illegible] be considered to owe their presence there to the g[illegible] of simples a[illegible] in olden times—a use that [illegible] grandmothers adhered to a great extent when foreign drugs were with great difficulty procurable, and that still survives to a considerable degree in many rural districts, where the herb-doctor is often an old woman, and prescribes for her

TUTSAN.



TUTSAN.

Hypericum Androsæmum. Nat. Ord., Hypericaceæ.

ALTHOUGH the tutsan is not so familiar as many other plants, it is spread fairly commonly throughout Britain, being in some districts better known than in others. It may often, too, be met with in old-fashioned country gardens. Though the lovers of plants are by no means extinct, and may often transplant to their own gardens some wildling that from its beauty or rarity has attracted them, most of the old English wild plants found blossoming in the rustic flower-bed may be considered to owe their presence there to the great use of simples and herbs in olden times—a use that our grandmothers affected to a great extent when foreign drugs were with great difficulty procurable, and that still survives to a considerable degree in many rural districts, where the herb-doctor is often an old woman, and prescribes for her

neighbours and the country round, the radius varying with her repute.

The tutsan is in French called *Toute-saine,* or all-heal; and Parkinson, writing in the reign of Elizabeth, points out that it is from this that our English name is evidently derived. The common valerian (*Valeriana officinalis*) is by some old writers called all-heal, but the French *Toute-saine,* or tutsan, and the English all-heal are now equally neglected. The tutsan should be looked for in open woods, copses, and shrubberies, and it is on this account sometimes called park-leaves—a name, however, that is much less commonly given to it. In some mediæval books it is written *Tutsayne,* a still nearer approach, in sound at least, to the French. Lobel says it is so called "because, like the panacea, it cures all sicknesses and diseases." Alas! the "panacea" is rarer even than the tutsan.

The generic name is derived from two Greek words signifying superior and a spectre, as several of the plants forming the genus are supposed to protect the possessor from the power of evil spirits! The St. John's wort (*Hypericum perforatum*) was in an especial degree accredited with these supernatural powers, and was by the monkish writers called the *Fuga demonum.* The specific name, *Androsæmum,* is derived from two Greek words signifying man and blood, in allusion to the dark-red juice that is contained in the capsules, and which at once becomes apparent when they are bruised. An old fanciful name for the plant is "balm of the warrior's wound"—a name applied from the mediæval belief that plants had their healing virtues indicated in some way to the eye, the blood-red juice of the tutsan pointing out its use as an application to wounds. Fuchs says that the name arises

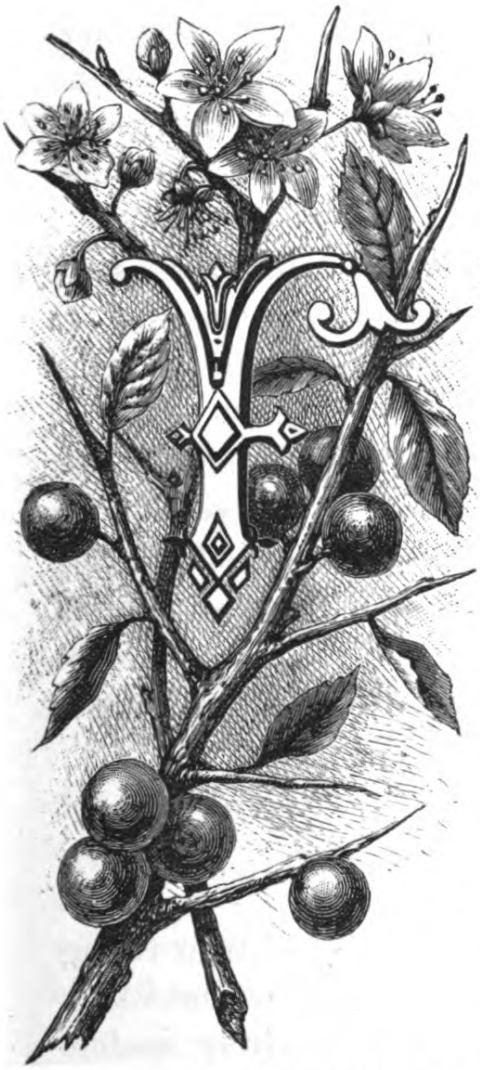
from the blood-red stains left on the fingers after rubbing the flowers; while Gerarde has yet another theory to explain the name, for he says that "the leves, floures, and seeds stamped and put into a glasse with oile olive, and set in the sunne for certaine weekes, doth make an oile of the colour of blood, which is a most pretious remedy for deep wounds and those that are thorow the body." In some herbals the tutsan is called St. Peter's wort, in Germany it is *Konrad's kraut*, in Wales it is the *Creulys bendiged*, and in Ireland the *Beahnua Firion*.

The tutsan is found all along the western side of Great Britain, and it is not uncommon in the south-western counties of England; but it is more rarely found on the eastern side. We remember, however, to have found it in a hedge near Guildford; and in turning to Curtis's "Flora Londinensis," we see that he speaks of having found it in Oak of Honour Wood, near Norwood, a southern suburb of the metropolis; and in John Martin's English translation (A.D. 1732) of Tournefort's "History of Plants," he records Wimbledon, Highgate, and Muswell Hill as localities near London where he has found it. The tutsan is frequently met with in Ireland.

Lyte, in his "Niewe Herball," a translation from Dodoens, gives a quaintly graphic description of the plant. Dodoens' name was, after the fashion of the time, Latinised into Dodonæus; he was a Flemish physician, and his book achieved a great popularity at that day and is still well worth getting hold of. Lyte dedicated his labours to Queen Elizabeth:—"Tutsan is like to St. John's worte and St. Peter's grasse. It hath many rounde stalkes comming out of one roote, the which do bring forth leves, much larger than the leves of the Saint

John's wurte: in ye beginning greene, but after that the seede is ripe they ware redde, and than being brused betwixt one's fingers, they yield a redde sappe or iuyce. At the toppe of the stalkes groweth smal knoppers or round buttons, the which in their opening do bring for the floures like to St. John's grasse but greater; whan they are fallen or perished there appeareth little smal pellots or round balles, very red at the beginning, but afterward of a browne and very darke-redde colour when they be ripe, like to the colour of clotted or congeled drie bloud, in which knops or bearies is conteyned the side, which is small and browne. The roote is hard and of a wooddie substance, yearely sending forth new springs."

BLACKTHORN.



BLACKTHORN.

Prunus communis. Nat. Ord., Rosaceæ.

FEW of our hedgerow shrubs are more noticeable than the blackthorn, or more different in appearance at different times of the year. The holly bursts into a crimson glow during autumn's declining days, and stands out in its evergreen brilliancy of foliage amongst the leafless shrubs that surround it, but its flowers are small and inconspicuous, and not one in a hundred who have noticed the crimson clusters of berries could describe the blossoms that precede them. The hawthorn, with its masses of fragrant and snow-white blossoms, is as beautiful a plant as the blackthorn in the spring, but its crimson berries will not compare with the rich purple bloom of the sloes. Comparisons, however, are proverbially odious; and as we recall the sunny masses of guelder-rose blossom and its rich crimson bunches of luscious-looking berries, or the coral-like and quaintly-formed fruit of the spindle-tree, or the sombre

berries, again, of the elder or privet, we forbear, in the presence of so much beauty, in our attempt—*aut Cæsar, aut nullus*—to give the blackthorn the priority. Suffice it, then, to say that the blackthorn, whether seen in the early spring, when it is one mass of pure white blossom, or in the autumn, when its branches are laden with its clusters of purple fruit, is a beautiful object, and one that cannot fail to be very familiar to all dwellers in the country.

The flowers of the blackthorn appear before the leaves, so that we see nothing but the countless blossoms, and as these appear early in the year, and in great profusion, the tree is a very noticeable feature in the hedgerow; the fall of the petals rivals the falling snow that is not uncommonly contemporaneous. It will often be noticed that we get a spell of sharp weather and cutting winds as the blackthorn is flowering, and this period is in many parts of the country known as blackthorn winter. We have in autumn seen the ground beneath the bushes quite purpled over from the fallen fruit, the

> "Sloes austere,
> Hard fare, but such as boyish appetite disdains not."

As boys are practically omnivorous, the fact of their eating the fruit must not be considered a proof of its esculent value. As a matter of fact the berries are excessively austere and astringent, and few persons who have cut their wisdom teeth will be found willing to enter on a second experiment of their quality. Cottagers sometimes gather them and make a kind of preserve of them, but it cannot be a very economical preparation, as the amount of sugar required must be enormous; and they also make a kind of wine of them—winter-pick wine, as it is ordinarily called. It is

also whispered that the berries are used in a mixture of various ingredients that is at present supplied to wine-drinkers as choice old port, while the leaves have been largely used as an adulterant of tea. Teetotaller and toper alike unconsciously share in the gifts of this beneficent shrub, that supplies to thirsty souls the product of Oporto and the cup of choice Bohea, though detractors have not been wanting who have called either decoction sloe-poison. The unripe fruit is sometimes pickled in salt and vinegar, but this we have never ventured on; the bare suggestion is amply sufficient. Some of our readers will recall the lines in Bloomfield where he speaks of the bird-boy gathering the clustering sloes and roasting them over the fire, and it is only fair to say that when the fruit has been mellowed by frost it becomes much more palatable.

The accepted botanical name of the plant is now *P. communis,* but in the earlier books the Linnean name is given, *P. spinosa.* The generic name is the Latin word for a plum-tree. *Communis* needs no explanation, while *spinosa* is the Latin adjective for prickly, and refers to the sharp thorns with which the branches are armed. A variety called the bullace may sometimes be met with, and the garden kinds of plum probably spring from the blackthorn, though these have been so long in cultivation that it is impossible to speak with perfect accuracy. Gerarde, in the reign of Elizabeth, refers to sixty sorts of plums growing in his garden in Holborn, and other references to them in our literature show them to have been freely cultivated. The Shakespearian line, "I will dance and eat plums at your wedding," at once occurs to our minds, but even in Chaucer's time it was a familiar tree, for he writes :—

"And many homely trees there were
That peaches, coines, and apples bere,
Medlers, plummes, peers, chesteinis,
Cherise, of whiche many one faine is.'

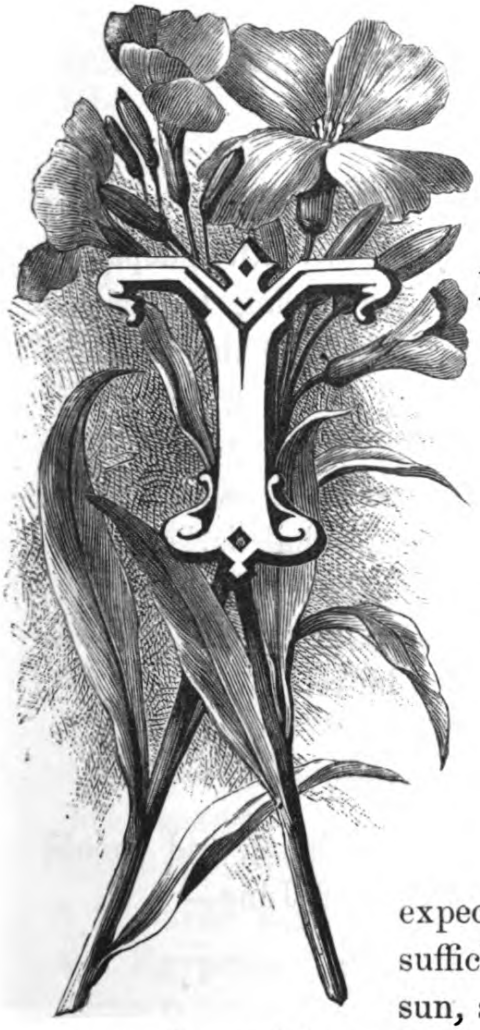
Culpepper begins his description of "plumbs" with such gratuitous wantonness of discourtesy that we merely quote his opening remark, and then hand him over to the reprobation of our readers. He states that "all plumbs are under Venus, and are, like women, some better and some worse." The English translation of Dodoens says of "plummes" that "some apparteyne to the garden, and some are of a wilde kinde. The garden or tame plummes are of divers kindes, some white, some yellow, some blacke, some of the colour of a chesnut, and some of a lyght or cleare redde, and some great and some smal, some sweet and dry, some freshe and sharpe, whereof each kinde hath a particular name. The wilde plummes are the least of all, and are called Slose, Bullies, and Snagges."

WALLFLOWER.

WALLFLOWER

[illegible]

[illegible] lover in it [illegible] perfectly [illegible] all over reader. But [illegible] have been the [illegible] of all to see it in [illegible] habitat, the crumbling [illegible] of some old castle. [illegible] plants delight in [illegible] good [illegible] of soil, others seem to thrive under the most adverse conditions, and amongst the rocks in the masonry of some old abbey, where we would expect the lack of earth, the insufficiency of moisture, the scorching sun, and the fierce rush of the breeze to render existence impossible, we oftentimes find a perfect garden. We have in such places seen the wallflower, the bugloss, the snapdragon, harebells, the stonecrop, and even such plants as the elder and the dog-rose, growing in wild profusion. To this short list many other flowers might be added, and the stone fences that are so common in some parts of the country yield equally "happy hunting-grounds" for the botanist and lover of plants. Amongst



WALLFLOWER.

Cheiranthus Cheiri. Nat. Ord., Cruciferæ.

THE wallflower in its cultivated state will, no doubt, be perfectly familiar to all our readers, but it may not have been the happiness of all to see it in its native habitat, the crumbling walls of some old ruin. While most plants delight in a good body of soil, others seem to thrive under the most adverse conditions, and amidst the cracks in the masonry of some old abbey, where we should expect the lack of earth, the insufficiency of moisture, the scorching sun, and the fierce rush of the breeze to render existence impossible, we often find a perfect garden. We have in such positions seen the wallflower, the bugloss, the snapdragon, harebells, the stonecrop, and even such plants as the elder and the dog-rose, growing in wild profusion. To this short list many other flowers might be added, and the stone fences that are so common in some parts of the country yield equally "happy hunting-grounds" for the botanist and lover of plants. Amongst

these lovers of plants we may include one of our greatest poets, and one perhaps second to none in his appreciation of natural beauty—Scott—as we recall his lines—

> "The rude stone fence, with fragrant wallflowers gay,
> To me more pleasure yields
> Than all the pomp imperial domes display."

The fragrance of the wallflower has led to its cultivation; but though the garden flowers have, by cultivation, departed somewhat from the wild type, the petals being larger and more highly and variously coloured than in the child of nature, the wildling has a sturdy vigour of growth that the more sheltered garden plant lacks. As the "flower of the solitary place, grey ruins' golden crown," it has its praises sung by Moir in a passage that is, unfortunately, too long to quote, yet too good to mutilate. Its home and its fragrance are concisely brought before us by Burns, in one of his poems, where he refers to

> "Yon roofless tower,
> Where wallflowers scent the dewy air."

The wallflower is one of our earlier plants, and should be looked for in May and the beginning of June—

> "When apple-trees in blossom are,
> And cherries of a silken white,
> And kingcups deck the meadows fair,
> And daffodils in brooks delight;
> When golden wallflowers bloom around,
> And purple violets scent the ground,
> And lilac 'gins to show her bloom,
> We then may say the May is come."

The common name of the plant, wallflower, is, of course, bestowed upon it from its being so essentially a lover of old walls, but we sometimes find it referred to as the gilliflower, or gillofer, a corruption of the French *giroflier* and

Italian *garofano.* We need scarcely remind any who read these remarks that the etymology of our language was in mediæval times in a very chaotic state, and we find the plant appearing in various old authors as the gilofre, the gyllofer, jereflouris, and gariofilus, all more or less corrupt renderings of the Latin *Caryophyllum,* a name bestowed on it from its clove-like odour. The name was, however, originally bestowed on the true clove, a species of pink; and while some of our earlier writers refer to this latter plant as the gillofer, later authors have transferred the name to the wallflower.

The botanical name, *Cheiranthus,* is not altogether clear in meaning. It was bestowed upon the genus by the great Linnæus, and the motive that influenced his choice seems to have been lost. Some authorities boldly go to the Greek, and taking the words in that language which stand for "the hand" and "a flower," consider that the matter is settled, that the fragrance and beauty of the flower are such that one willingly carries it in the hand and forms it into nosegays, much in the same way as we see by the Egyptian mural paintings in the tombs that the lotus was a favourite flower amongst that ancient people. We see the Egyptian ladies carrying it in their hands at social gatherings or adorning themselves with chaplets of the blossoms. Such a flower might truly be called *Cheiranthus,* but the term seems somewhat far-fetched as applied to the wallflower, which might share it at least equally appropriately with many others—the violet, the primrose, the cowslip, and other rural favourites. Another explanation of the term is based on the Arabic word *Kheyry.* In mediæval times the Arabic authorities are often quoted in science and medicine, and we find that the name we have

given was applied by them, not, indeed, to the wallflower, but to a somewhat similar plant, bearing red and richly-scented flowers. The Greek *anthos* was added to this, to make it harmonise in appearance and sound with the other botanical names springing chiefly from Greek and Latin sources. We are asked further to believe that the early writers, resenting, as they well might do, this barbarous admixture of two languages in the one word, found in the Greek word *cheir*, "the hand," something very equivalent in sound to the Arabic, and so "kheyry-anthos" grew into "cheir-anthos."

The wallflower does not seem to have attracted the notice of the earlier herbalists so much as many other equally common flowers did, though we should have imagined that in their quaint hunting after analogies the plant which beautified the ruin and adorned the ravages of time would have been held fit application for the decaying human frame. We may see something of this, perhaps, in Gerarde's suggestion that "the oyle of wallflowers is good to be used to annoint a paralyticke." According to another old author, "it stayeth inflammations and swellings, and comforteth and strengtheneth any weak part."

CREEPING CAMPANULA

[illegible] to know that it [illegible] with its [illegible] flowers [illegible] and the [illegible]

We have ourselves in Surrey found it growing among the dense vegetation of the old fashioned hedgerows, the old wasteful type that we seldom meet with—a tangled mass of maple, bramble, hawthorn, black bryony, gutter-rose, and twenty other things, in some places two feet high and in others ten, and in thickness almost equally variable.

CREEPING BELL-FLOWER.

Campanula rapunculoides. Nat. Ord., Campanulaceæ.

THOUGH the creeping bell-flower is not often met with in a wild state, and some may therefore hardly hold it to be a legitimate addition to our present series, we claim the indulgence of such readers, and base our claim on the fact that the creeping bell-flower, though rarely seen in the hedgerow, is not uncommonly to be met with in the gardens of cottagers, and those who see and admire it there will be interested to know that it claims relationship with its fellow bell-flowers of the meadow and the heath. We have ourselves in Surrey found it growing amongst the dense vegetation of the old-fashioned hedgerows—the old wasteful type that we sometimes meet with—a confused mass of maple, bramble, hawthorn, black bryony, guelder-rose, and twenty other things, in some places two feet high and in others ten, and in thickness almost equally variable.

Such a hedge is, and quite legitimately, the horror of the methodical cultivator with whose balance-sheets such a state of things is in direct antagonism, but it is equally legitimately the delight of the botanist and the artist, who find in its rich confusion a perfect wealth of interest and beauty. The true home of the creeping bell-flower is in the open glades of woods, and in fields that are to some extent shaded by surrounding foliage. When it is once established amidst congenial surroundings, either in the woodland recesses or in the rural garden, its creeping root and general vitality enable it to hold its ground, and as the plant is a perennial, it may with confidence be looked for year after year. An author to whose pages we turned on this subject says that the plant is "difficult of extirpation," but we could hardly imagine any one testing the point practically, as the graceful beauty of the plant renders it a very desirable acquisition, either to the many charms of woodland scenery or to the glowing flower border. The long lines and borderings of scarlet geraniums, calceolarias, and the like, that are made up of dozens or hundreds of similar plants, are a floral heresy that the cottager has hitherto escaped, and which all of botanical tastes and an eye for the picturesque will carefully eschew; and we certainly shall not extirpate our treasured specimen of creeping bell-flower in our own garden to make room for any number of circles in blue, diamonds in red, or zig-zags in yellow, whether compounded of Countess of Ellesmere petunias, Amy Hogg zonate pelargoniums, Prince of Orange calceolarias, or Beauty of Ravensbourne lobelias. Even with those who are snared by an attractive name, our plant again may put in a plea for non-extirpation, for those who find Amy

Hogg poetic or Victor Verdier suggestive of beauty should surely derive some satisfaction from the sonorous roll of *Campanula rapunculoides.*

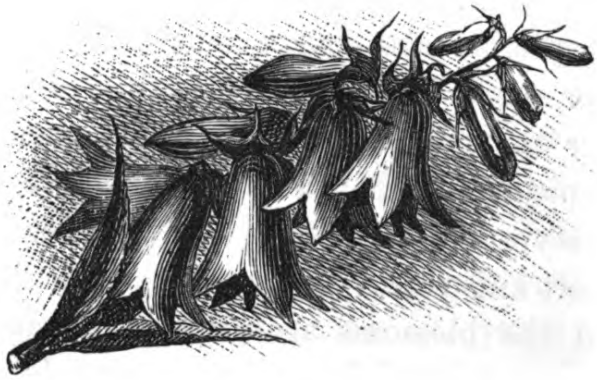
The creeping bell-flower calls for but little description, as our illustration will convey a very fair idea of its general appearance. One point that will at once strike every one is the depth to which the segments of the bell are cut in, as compared with the harebell (*C. rotundifolia*), or most of our other species. The stem is either simple or very slightly branched, and rises to a height of some two feet. It derives its familiar name of creeping campanula from the character of the root. The lower leaves of the plant are somewhat heart-shaped, but more elongated than such typical heart-shaped leaves as those of the violet, and they are placed on long stalks, while the upper leaves are stalkless, and what is termed lanceolate in form—*i.e.*, like a lance-head. All are toothed on the edges, the lower ones coarsely, the upper more finely. The flowers point downwards and grow singly along the stalk, a small leaf being given off at each springing point. All the flowers spring from the same side of the stalk, and make a bevy of blossoms all pointing in one direction, the gradual tapering from the fully expanded flowers to the small terminal buds being a beautiful and noticeable feature in the inflorescence. The calyx segments are conspicuous and deeply cut, and as the flower expands are turned back. In the interior of the flower the stigma, with its three recurving lobes, is very conspicuous, and below this the five anthers encircling the style may be seen. Each anther is supported on a very short and slight-looking filament. The capsules that succeed the blossoms are roundish, almost globular, and surmounted by the five calyx segments. The seeds

are emitted from small lateral clefts; the seeds themselves are small and very numerous.

Ten species of campanula are recognised as British, and several other members of the genus, as the well-known Canterbury-bell (*C. medium*), are familiar garden flowers. Of the wild ones we have already figured the harebell—the "azured harebell" of Shakespeare, the "blue harebell" of Ben Jonson, and a favourite with many others from whose works we must now forbear to quote. In addition to the present species, we shall hope to introduce to our readers the clustered bell-flower and the nettle-leaved bell-flower, both of them common, and both attractive and interesting species.

The generic name, as we have already pointed out—though we may here be allowed the repetition, to save reference to a former description—signifies a little bell, and its appropriateness we need scarcely stay to dwell upon, especially as we see the resemblance again insisted on in our common English names for all the species—bell-flowers.

Both Gerarde and Parkinson describe the plant as of a "watchet colour." "Watchet" probably means "of the colour of woad"—that is, bluish.



HEATHER.

HEATHER.

Erica cinerea. Nat. Ord., Ericaceæ.

OF all the delights that the country life affords surely none can exceed the enjoyment, the exhilarating influence, of a ramble over the heathy moorland. The rich umbrageous forest has a great and special beauty of its own, and as we wander beneath the far-stretching overshadowing arms of the giant beeches, and see the startled squirrels leap with perilous agility from bough to bough, or listen to the belling of the deer, not far away, but invisible amidst the stalwart bracken, we cannot fail to feel the beauty of the scene. The sombre shade of its rich purple, however, here and there flecked with gold as a few sunbeams struggle through the canopy of shade, and the almost perfect stillness involuntarily affect us; loud, careless speech seems almost a profanation, and as we stand amid the forest monarchs, see their lofty branches interlacing overhead, and hear the soughing of the summer breeze as it gently stirs their topmost shoots,

the quiet, awed feeling grows upon us, for we stand beneath the roof of a cathedral grander than any human pile, and catch the strains of a harmony no human voices can give us. The open moorland, on the contrary, gives a sense of exhilaration, and the heart and chest alike expand, for before us in the quivering sunlight stretch miles and miles of rolling country, till the purple horizon melts into the azure of the sky, and all the foreground glows with the rich crimson of the heath or the gold of the furze. As the butterflies flit past us, and the "busy bee," busier than ever with a sense of the importance of harvesting as much as possible of the nectar spread around, goes bustling by, while the lark shoots into the vault of heaven, and pours from thence his ecstasy in song, we share the universal happiness, and as we struggle knee-deep through the heather, and draw in deep draughts of the pure air, the mere sense of living becomes an exquisite enjoyment.

Our readers, possibly, at this point may say that this sort of thing is all very well, but what about the heath itself, the ostensible cause? All that we know about the heath shall be duly set down in good time, but if our feeble attempt to describe the home of the heath shall send our readers in quest of it themselves, we shall have done them a far greater service than any pictured presentment or verbal description we can offer them is worth.

Though it is now some years since we saw it, we remember perfectly the curious effect we once observed on the North Welsh coast. When at sunset the mountains round Penmanmawr were all clothed in purple, one of them nightly assumed a redder tinge than any of the others. At the distance from which we were then viewing the range

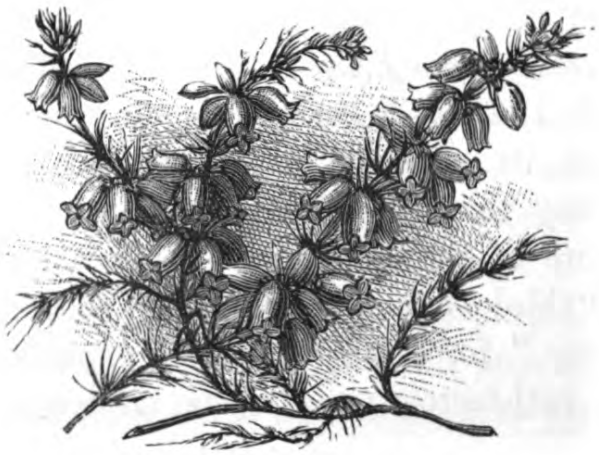
the reason of this was a puzzle to us, but we afterwards found, on a closer acquaintance, that this particular mountain was almost entirely covered from head to foot with heather, and that this profusion of intense colour and these hundreds of thousands of small crimson bells, were, in the aggregate, sufficient to suffuse the whole mountain-side with a warmer glow than that of its more sparsely-covered neighbours.

Vast tracts of country in Scotland, Ireland, and Wales are covered by the heath, and we meet with it again in the moorland districts of Western and Northern England, and the great stretches of common that are so characteristic of Surrey. It grows generally with the cross-leaved heath and the ling, two other species which we shall hope to introduce to our readers. In colour it is the richest of the three, though in grace of form and delicacy of tint the cross-leaved heath, *Erica tetralix*, is a close rival. All three species flower during July, August, and September. A fortnight often makes a great difference in the appearance of the common, as almost all the plants flower at the same time. If it be visited too early, a mass of green meets the eye; if it be visited too late, the purpled-crimson splendour has changed into the brown hue of decay.

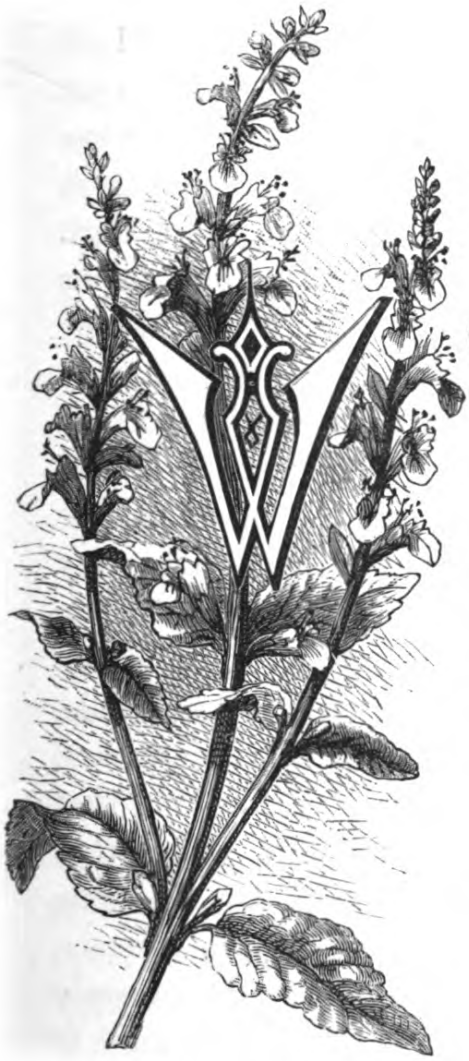
The generic name *Erica* is by some writers said to be derived from the Greek verb to break, a name bestowed upon it from its supposed power of destroying calculus, but others say that the name was given to it from the fragile nature of its branches. We seem to want the proverbial "third course," or what the cookery-books call "another way," for neither of these explanations of the word seems satisfactory: we find no reference of a reliable

character to its healing powers, and so far from its being a fragile plant, this and another species are largely made into besoms, a service to which they would certainly not be put if they strewed with their fragments the rooms they were supposed to cleanse. The specific name *cinerea* is Latin in its origin, and refers to the ashy grey of the stems.

The heather grows rather bushy, as it branches a good deal, the clumps being about eighteen inches high. The leaves are more pointed than in any of our other heaths; ordinarily three large ones and several smaller ones in their axils spring from one point in the stem, and make a series of rings at short intervals down it. The flowers spring in clusters one above the other, these floral rings being more or less dense, according to the specimen: in some an evident interval of plain stalk may be seen, while in others the clusters are closely set together, and form a continuous mass of colour. The flowers hang downward, and are of a colour that may be either described as purple with a good deal of crimson in it, or crimson with a dash of purple in it. The sepals are small and narrow, but are, nevertheless, from the pendulous habit of the blossoms, very conspicuous. The heather is a perennial.



WOOD SAGE.



WOOD-SAGE.

Teucrium scorodonia. Nat. Ord., Labiatæ.

WOOD-SAGE, or as it is often termed, the sage-leaved germander, delights in woody and hilly situations where the soil is dry and stony, and in such places it may very commonly be found throughout Great Britain and Ireland. It may frequently be met with, too, on stony hedge-banks that face towards the sun, and which often from the poorness of the soil supply little else of botanical interest. We are very familiar with the plant, and we may recall two typical situations in which we found it. One of these was near a quarry in the north, the rocky hillside broken into picturesque masses by the blasting operations, and all the undisturbed portions bearing a rich growth of oak and fir. With the exception of a little fern, the whole ground wherever a plant could fasten was thickly covered with the wood-sage, the greyish-green of the leaves giving a

peculiar bloom to the hillside, and contrasting finely with the rich colour of the rock and the brilliant tint of the oak foliage, as the sun shone through the leaves and turned them emerald. The second locality was within a short omnibus ride of the metropolis, a lane that we had known in its more picturesque days, and which probably now has been overwhelmed by the great onward march of the men of bricks and mortar. The sides of this lane were high and steep, the soil was poor and dry, and these banks abundantly bore the plant we have figured. The wood-sage is common enough almost everywhere, and we can only imagine that these two localities are more especially engraven on our memory because it was from these undoubtedly that our less pleasant memories of the wood-sage are derived. A decoction of the plant is held to be very tonic in its effects, and if the popular theory that a medicine must be good because it is nasty has any truth in it, the virtues of wood-sage must be considerable. The plant is, undoubtedly, an exceedingly bitter one, and some amateur doctors fall into the error of thinking that because some undoubted remedies are very bitter that therefore any bitter is in turn a remedy. At the same time it is only fair to say that, in the rustic pharmacopœia, the plant holds an honoured place which it would scarcely retain if it did not possess some value ; and it belongs to an order that is rich in plants of economic and medicinal service—sage, peppermint, marjoram, horehound—some of them, as the self-heal and the wound-wort, testifying in their very names to the esteem in which they were held. It has been suggested that this bitter principle would make it an excellent substitute for hops in brewing, and those who have tried it affirm that the beer clears sooner than when

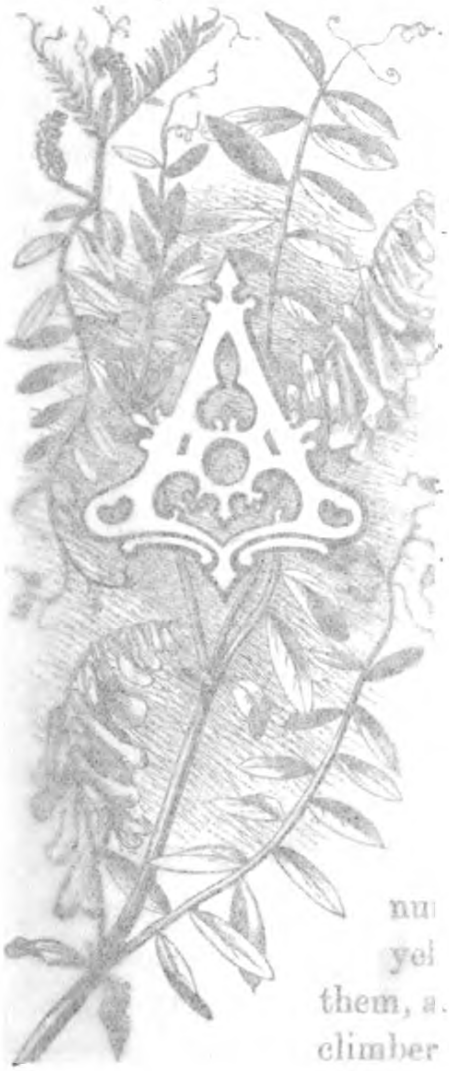
the more familar hops are employed. Beer-drinkers who cannot get the pure admixture of malt and hops would at least prefer wood-sage to *Coculus Indicus*, cardamom, liquorice, grains of paradise, quassia chips, and the various other sophistications that, unless rumour and analysis sadly err, are not unknown in certain unscrupulous sections of "the trade."

Botanically, the plant is the *Teucrium scorodonia*. Its generic name was bestowed by Linnæus, from a belief that it is identical with the plant that Dioscorides says was first used medicinally by an ancient King of Troy named Teucer. We cannot affirm that this is not so; but as Dioscorides was a Greek flourishing in the reign of Nero, it is open to us to believe that this was one of his flourishes, or at least, if our view of the subject be held too flippant, that the point is open to some little question. The specific name *scorodonia* is derived from the Greek word for garlic, and does not appear to be particularly appropriate.

The root-stock of the wood-sage is perennial and woody, creeping some distance underground and throwing up branches at intervals. The stems are upright, numerous, and ascend to a height of some two feet, though many specimens do not exceed a foot in height. They are quadrangular in section, and purplish-red in colour. The leaves are opposite to each other, and very much wrinkled in texture, like those of the sages; hence, therefore, its familiar names, wood-sage or sage-leaved germander. These leaves are on footstalks, and in form are of a somewhat oblong heart-shape, and their edges are coarsely toothed. Both sides of the leaf are green, but more or less covered with grey downy hairs, and the veining is very conspicuous on each surface. The flowers are a pale

yellow or straw-colour, sometimes a light greenish-yellow; they grow in pairs, all facing one way, and form lateral and terminal one-sided racemes. As the leaves grow in pairs and the lateral flowering stems spring from their axils, these also are in pairs. The terminal flowering stem is about as long again ordinarily as those that spring laterally below it. Each individual has, at the point where it springs from the general stem, a floral-leaf or bract, small and simple in character. The calyx is tubular, bulging or gibbous at the base; the upper tooth being large and conspicuous, and the four lower ones much smaller. The corolla is monopetalous and widely opened, its slender tube being about as long again as the calyx. The four stamens have yellow anthers, and very noticeable purple and hairy filaments. The plant flowers in July, August, and September.

TUFTED VETCH.



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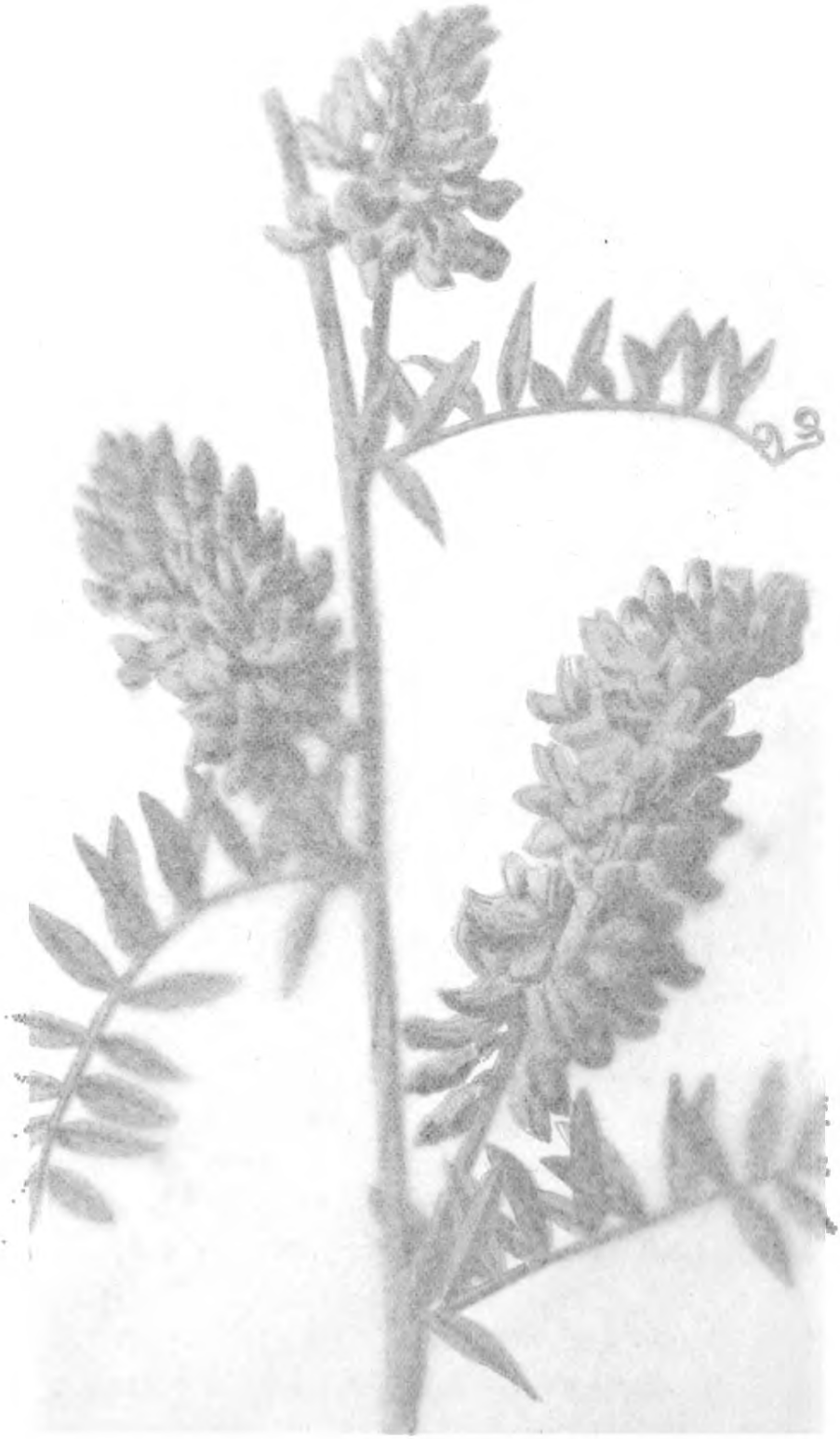
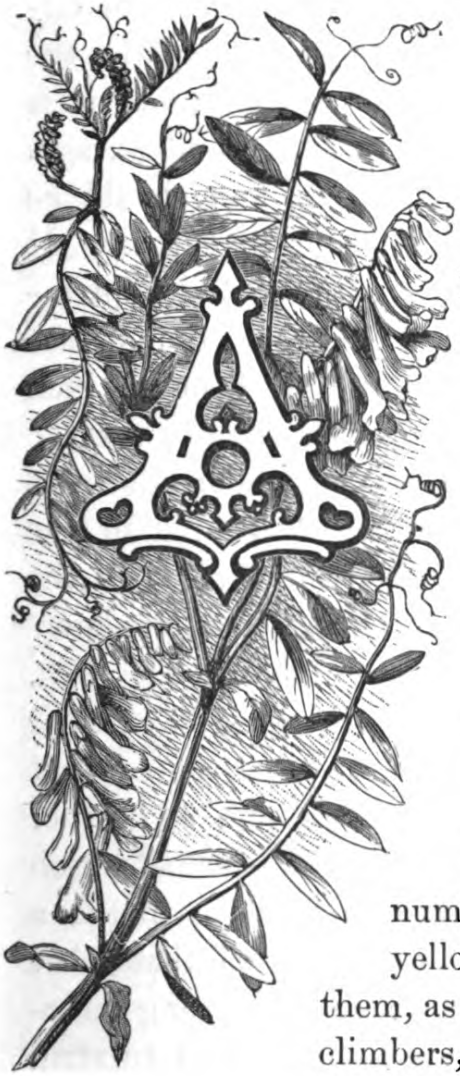




TUFTED VETCH.

Vicia Cracca. Nat. Ord., Leguminosæ.

AMONGST the different species of wild peas, or tares, or vetches, as they are variously termed, our present plant, the tufted vetch, is perhaps one of the most conspicuous, as the brilliant bluish-purple of its masses of clustering blossoms, and the height to which the plant often attains in the struggle for existence in the crowded hedgerow, are points that tend to bring it into prominence. The greater number of the tares or vetches are yellow in colour, and though some of them, as the meadow vetchling, are sturdy climbers, the majority are content with a lowlier place. The flowers of the tufted vetch are severally not so large as in some of the other kinds, but what is lost in the individual is gained in the mass, as collectively they form a dense head of blossom, and it is the aggregate effect in the hedgerow that really appeals to the eye.

The tufted vetch is a very variable plant, and we have been fortunate in procuring an exceptionally fine specimen

for illustration. Under unfavourable conditions, the bunches of blossom are smaller and less compact; but where circumstances are favourable and the support is adequate, the plant will grow to a height of five or six feet, and it is then that its beauties are displayed to their full advantage. It is a common plant almost everywhere, and should be looked for on bushes, in hedgerows, and in copses. It flowers during the months of July, August, and September, after which the pods appear; these are of the characteristic pea-like form, green in colour, and about an inch in length, each pod containing some seven or eight seeds.

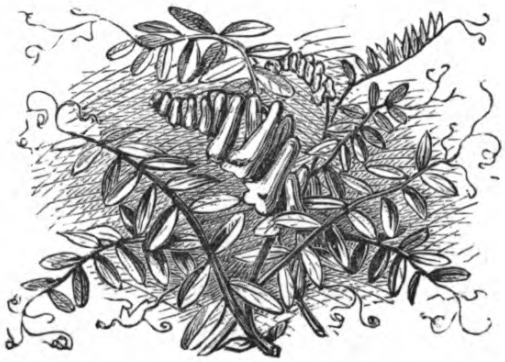
Curtis, in his "Flora Londinensis," published a little over a hundred years ago, is so far enamoured of the tufted vetch that he would introduce it, not indeed in the garden, where its beauties might be eclipsed by more showy plants, but in a locality far more suitable. He says, "gentlemen who wish to decorate the hedges of their plantations cannot select a more proper plant, as it is not apt, like the great bindweed, traveller's joy, and other strong growing plants, to suffocate the shrubs which support it." The tufted vetch is certainly too fragile a plant to do much harm, but we should imagine that what little influence it exercised would be in the wrong direction, and a practical woodman would be inclined to strip down all such extraneous growths. The other plants Curtis mentions are undoubted offenders, beautiful as they are in themselves. Immediately in front of us, as we write these lines, is a hedge with a most conspicuously weak and evident gap in it; but in summer this space will be filled by the foliage and blossoms of the beautiful traveller's joy, *Clematis vitalba*, its grace and fragrance being the more or less perfect

equivalent of the gap that during the winter takes its place. As the hedge is not ours, the summer beauty much more than compensates for the winter's blank, but our neighbour, the farmer, may probably hold another opinion. In the same way the honeysuckle, that looks so charming as it encircles the trees, plays sad havoc with the younger ones, for its long flexible branches bind with great power, and we have often seen young shoots deeply furrowed by them.

The author already mentioned, we see, commends the tufted vetch to the farmer as affording an excellent fodder for cattle; and, on turning to other old authorities, we find that he is not singular in his estimation of its value. It is said to be hardy, durable, nutritious, and productive; but its deficiency in weight as a crop will always make it inferior to lucerne, though the latter is affirmed to be actually less nutritious. The tufted vetch will never prosper without support, and this fact makes it unsuitable for a field-crop; the "purple tassels of the tangling vetch" will probably therefore continue to play their part as a graceful hedge tapestry, and in this fulfil their mission. Westmacott, writing in 1694 of this plant, says that "some are seen, though not usually, in most places of England, and benefit the Land, as other pulses, and are rather to be preferred for Fodder than any other use they can be put unto. Others are wild, and do no good, but spoil the corn they spring in, yet feed and advance Cattel well, saith one, that are almost starved, and are frequently found in Pastures and Meadows."

The root of the tufted vetch is perennial and creeping. The stalk, as we have pointed out, varies greatly in length, but three feet might be taken as a fair average; it is

angular and grooved, freely branching and somewhat brittle. The stipules are in pairs, and from their pointed apex, and a lateral projection on one side, are like half an arrow-head. The leaves are made up of several pairs of leaflets, and terminate in a branched tendril. The flowers, as our illustration clearly shows, grow in long racemes that spring from the axils of the leaves, alternately on one side or other of the stem. Most of the flowers point in the same general direction, and stand on short footstalks. The calyx has five teeth, the two upper ones very small; the next two being larger, and the lowest the most fully extended. The corolla is of the type we find in all the papilionaceous plants, and the stamens follow the ordinary rule of pea-flowers and are ten in number, nine being united together into one brotherhood, and the tenth being detached.



FLEABANE

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FLEABANE.

Pulicaria dysenterica. Nat. Ord., Compositæ.

THOUGH possibly not so attractive as many species, the golden stars of the fleabane enrich to the botanist the appearance of many a bit of poor land or moist waste, and contribute not a little to beautify spots that would be bare of blossom without them. This flower's favourite localities are wet pasture lands, the sides of ditches, and waste ground by roadsides, where good road-making has not come in and carried away the superfluous moisture. The chosen spots for such attractive plants as the lady's smock, the forget-me-not, the king-cup, have almost, or quite, lost these blossoms before the fleabane appears upon the scene: this comes at a time when there is little else to compete with it; August and September being the months in which it should be looked for. Though very generally distributed throughout England, it is one of the rarer plants of Scotland, while in Ireland it appears to be common in the south and gradually growing scarcer as

we go northward. Though its brilliant blossoms, and the profusion in which they are found where the circumstances are favourable, render the fleabane an attractive plant to those who have no particular interest in the land it enlivens by its golden rays, the farmer finds it no pleasing spectacle when it overruns large tracts of land, as it takes the place of what would be more profitable, gives the land a barren and uncultivated appearance, and rather convicts him of having been negligent in his drainage arrangements. Horses and cattle dislike it.

The root of the fleabane possesses in the eyes of the agriculturist two great drawbacks—it is perennial, and it creeps. Not only can it scarcely be dislodged from its first spot, but it declines to merely stay there, sending its creeping underground stems all around, and seizing on a larger area. From these creeping roots, stems at intervals arise, and attain to a height of from one to two feet. The stems branch a good deal, are round in section, tough and firm, solid, and, like the leaves, are more or less covered with a woolly substance. This latter varies a good deal in degree in different plants, some scarcely showing it, while others look quite hoary, and in many cases the stem is more clothed with it than the foliage. The leaves, as may be very clearly seen in our illustration, are placed alternately on the stems, and set rather closely together. They spread vigorously and boldly out, but clasp the stems almost round at their bases by their rounded lobes or auricles. The leaves themselves are of the form called by botanists oblong. Though the geometrician might object to the term, it is one well understood. The outline of the leaf is slightly notched, and the whole leaf is wavy, as may be clearly noticed in the three lower examples in our figure.

The under-surface is ordinarily more woolly than the upper and though the general effect of the foliage varies according to its greater or smaller degree of woolliness, it is at best a somewhat dull and greyish green.

The flowerheads of the fleabane are of a brilliant golden yellow, the florets in the centre or disc being somewhat darker in colour than those that are ranged around them. In some specimens these outer radiating parts are more numerous than in our illustration, and give a somewhat more compact and less ragged look to the flowerhead, but the form we have portrayed is equally characteristic of the plant, and more picturesque in itself than the other.

The fleabane was the *Inula dysenterica* of Linnæus, and it is by this name that most of the older writers—and some more recent ones, indeed—refer to it; but from details of structure into which we need not here go, a sufficient reason has been felt by Hooker and others to justify the creation of a new genus for this and one other species, and with them it is the *Pulicaria dysenterica*. The plant seems to have proved a stumbling-block to a good many who have attempted to find it a place in botanical classification. Bauhin, Gerard, and Matthiolus all call it *Conyza*, and we also find *Aster dysentericus* and *Herba dysenterica* as old names for it. As all these names carry some little history and meaning in them, we may with advantage look into their significance. *Inula* commemorates the heroine of the Trojan war, the plant having been at one time called *Helenium*, and fabled to have sprung from her tears. *Pulicaria* is from the Latin *Pulex*, the vivacious little monster that is commemorated in the first half of the English name, the powerful smell of the plant being

thought to be baneful to these small disturbers of the peace. *Conyza* is from the Greek word for dust or powder, and points again to its anti-pulicitic powers when strewn or dusted about. *Aster* signifies a star, and bears evident reference to its stellate flower-heads.

The specific title testifies to an old belief in its remedial efficacy, though this appears to have no well-founded claim. Linnæus, who bestowed the name, mentions, in his "Flora Sueccia," that he had been informed by a General Keit that the Russians in one of their expeditions against Persia were cured of dysentery by means of this plant. Two of our English plants bear the name of fleabane, but the second is ordinarily, for the sake of distinction, called the blue fleabane. It is the *Erigeron acris* of the botanist, and belongs to the same order as the subject of our present illustration: its flowerheads have a yellow centre, and are surrounded by purplish rays.

PURPLE LOOSE-STRIFE.

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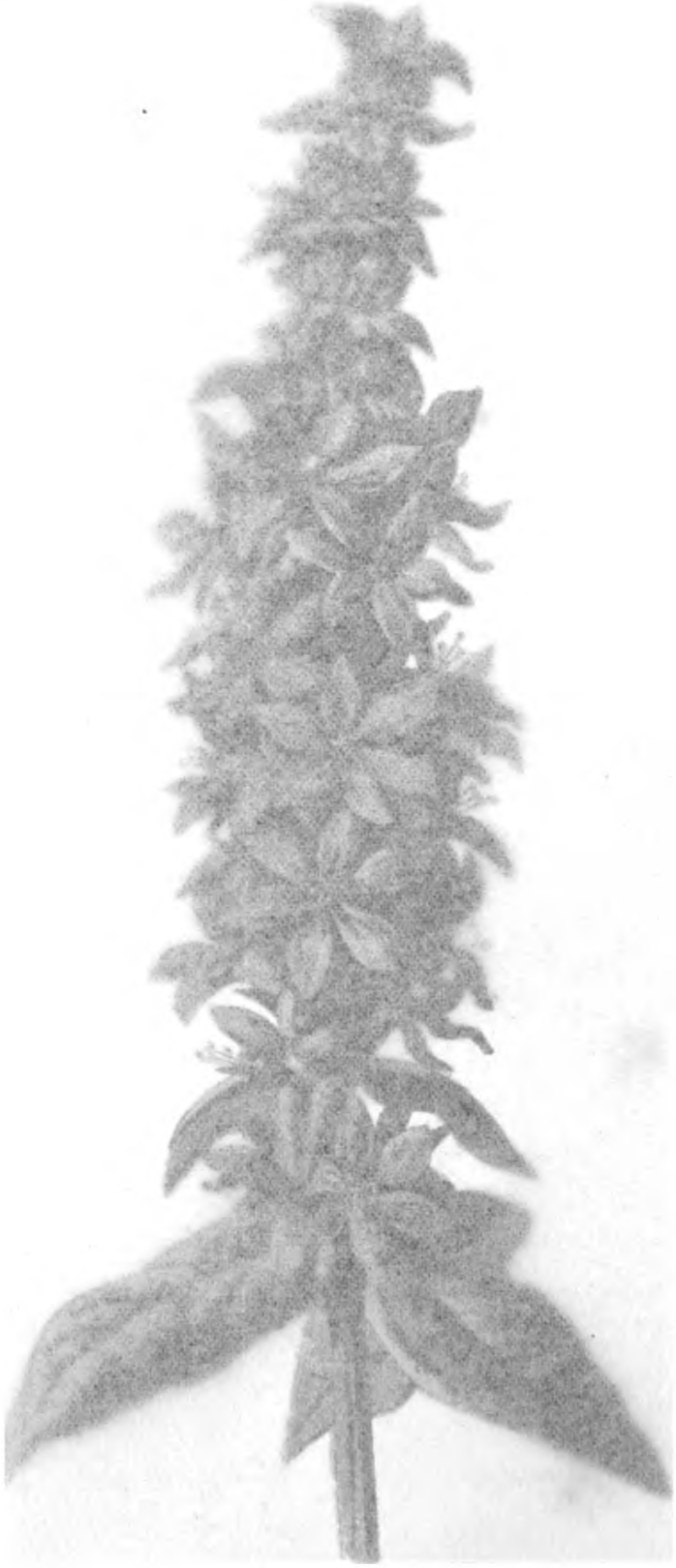

PURPLE LOOSE-STRIFE.

Lythrum Salicaria. Nat. Ord., Lythraceæ.

ALMOST every one who has any experience of the country will have noticed the beautiful purple spikes of flowers which the purple loose-strife so plentifully throws up during the latter part of summer, and which render it so conspicuous an ornament on the banks of rivers and ponds. We have often wondered that our landscape painters have not more extensively availed themselves of such characteristic wild growths as the present to give an added charm to their work, and furnish it with another proof of its truthfulness to nature. The water-lilies, both yellow and white, and the great reeds and bulrushes are often introduced, and the fine large leaves of the butterbur are given very effectively; but we can only recall a very few instances of the introduction of the graceful and brilliantly-coloured purple loose-strife into representations of the tangled mass of vegetation that fringes the stream. The necessarily small

space at our disposal, if our book is to become, as we hope it may, the companion of our readers in their country rambles, only enables us to do scant justice to the plant. The loose-strife attains to a height of some four feet, and throws up numerous spikes, most of these being at least as long again as the specimen with which the exigencies of our space have compelled us to be contented. Each plant may possibly show an average of some half-dozen of these "long purples" flowering simultaneously.

The root-stock of the purple loose-strife is perennial, so that when the plant has once established itself it may be looked for regularly year after year, as the localities the plant affects escape the action of the plough or the sharp sickle of the reaper. The root is thick and branched, and widely extends itself. The stems are thrown up to a height of three or four feet, and are more or less branched. Any side-branches that may spring from the central stem preserve its general direction. The general aspect may be described as more aspiring than bushy. The stems are ordinarily four-cornered, but at other times hexagonal, the difference depending upon the arrangement of the leaves. The angles of the stems are sharply defined, and rough to the touch. The lower branches always spring in pairs or threes, but the upper ones seem less bound by law. The leaves are ordinarily opposite, in which case the stem is square in section, but we often find the foliage, as in our illustration, springing in threes; when this is the case, the stem section is hexagonal. The leaves are stalkless, and their bases more or less clasp the stem. In form they are lanceolate, and their outline is smooth, like that of the privet or the box; they are ordinarily about three inches long. The

upper surfaces are of a clear fresh green, the lower somewhat greyer, from the slight downy hairs over them.

The spikes of flowers are terminal and cylindrical. In our illustration we have been obliged to choose one in an early stage of development, so as to show the whole of it, and the result is, the flowers and buds are rather densely packed. As the spike develops it elongates, and it is then seen to consist of rings or clusters of flowers, separated by a slight interval of stalk, each cluster consisting of some six or eight blossoms. The corolla is composed of six petals, and the tubular calyx, into which they are inserted, is divided into twelve segments, six long and six short. A dissection of the flower shows us the twelve stamens; at the bottom of the tube are six short ones, and rising between these are six others about as long again. The anthers of the small ones are yellow, and of the others purple.

In speaking of the plant it is always necessary to particularise the colour, or confusion will arise between this and the yellow loose-strife, a plant quite different botanically, and one which we figure later on. Both are equally common, both are found in the same localities, and both are called loose-strife, and there the resemblance ends. The reason why it is called loose-strife we can better give in describing the other species, as it was with that one that the name originated, and then got transferred without any special reason to the present plant. A certain conspicuous yellow plant, for a more or less satisfactory reason, received the name of yellow loose-strife; so it seemed reasonable to our forefathers that another conspicuous plant often found with it should be called the purple loose-strife. Our present plant is in Ireland the *Irebull caitin,*

and in Wales the *gwyarllys*, or sometimes the *Llys y milwr*.

The generic name *Lythrum* is from the Greek *lythron*, blood; a name that, it is supposed, was bestowed on it from the rich crimson of the flowers, but it certainly is not of the tint its name suggests, as there is a strong purplish tinge in the colour. De Haen suggests a medical use of the plant that is much more likely to have earned it its name. *Salicaria* is derived from the Latin *Salix*, a willow, and alludes to its willow-like leaves. It was by the older botanists classed among the willow-herbs; one, we see, calls it the *Salicaria vulgaris purpurea*, and another, in the lengthy fashion of those days, the *Salicaria foliis lanceolatis*. It was at one time held to be very valuable as an application to the eyes, strengthening them and preserving the sight.

IVY LEAVED TOADFLAX.

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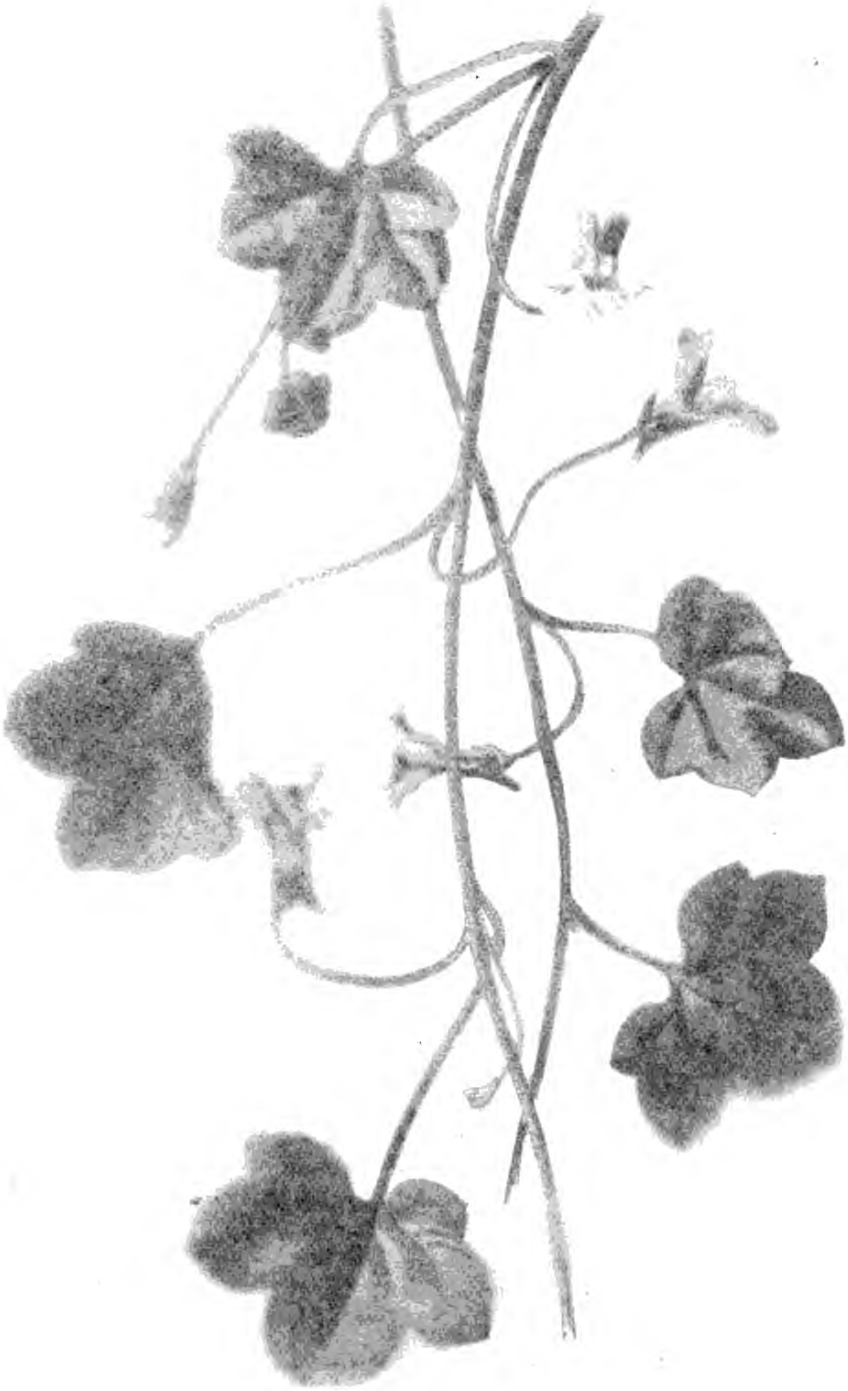


IVY-LEAVED TOAD-FLAX.

Linaria Cymbalaria. Nat. Ord., Scrophulariaceæ.

SIR WILLIAM HOOKER, in the "British Flora," prepared conjointly by Dr. Walker Arnott and himself, has marked the present plant doubtfully authentic as a British species, or rather, we may almost say, denies its claim altogether. In the preface we read, "The many plants that have been, or are daily becoming, naturalised amongst us, whether by the agency of man or of birds, are branded with an asterisk," and the ivy-leaved toadflax is one that is thus branded or distinguished in the body of the book. There is no doubt whatever that the plant has not been a Briton *ab initio,* whenever that date may have been; but as we find it mentioned by all our old writers, and find it moreover in profusion in a great many widely scattered localities throughout Britain and Ireland, it is fully entitled to a place in our series.

Though the plant is really a member of the flora of Southern Europe and the countries that border the great

Mediterranean basin, it has become naturalised over almost the whole of Europe, and has made itself thoroughly at home amongst ourselves. It seems to thrive best on rocks or old walls that are near the edges of streams, though the neighbourhood of water does not seem absolutely necessary. We have often seen it growing out of the mortar-joints of crumbling brickwork far from any stream; but the finest examples we can remember to have noticed were on the old walls that skirt the towing-path on so many points on the Thames above London, and in a similar situation bordering a canal at Bath. Wherever the plant is found at all it is to be found in profusion, large spaces of wall being filled by its graceful tapestry of foliage and blossom hanging from every available crevice. The plant is sometimes called by country folks the "mother of thousands." In Italy it is the "plant of the Madonna." In turning over a number of old studies we find one that we made some years ago of this plant, and see that the specimen from which our sketch was made was gathered from the walls of Ockham Church, Surrey, a church that has a good deal of thirteenth century work about it, and in its crumbling decay affords many a weather-worn gap between the stones. We mention this locality because it gives so good an illustration of the perfect way in which the plant has naturalised itself, for this church stands in a thoroughly rural district, and we may feel morally certain that no human hand planted this graceful herb upon its ancient walls. The plant is a perennial, and its flowering time extends from May to September.

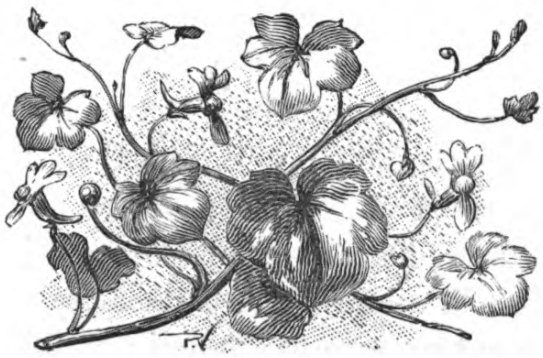
The ivy-leaved toadflax is so perfectly distinct from the other members of the genus *Linaria*, and, as we shall see presently, so utterly belies its generic name, that there

is no possibility of confusing it. We have already figured the common toadflax or *L. vulgaris*. How the present plant got introduced into Britain can now only be conjectured, but we know that during the Middle Ages many foreign plants were introduced into England on account of either their beauty or their medicinal value. In such books as that of Gerarde we read repeatedly of plants being brought from abroad for the herb-garden of the author by his friends. The plant was by the old herbalist credited with certain virtues, and from its situation by the waterside it was naturally assumed to be "cooling." In Southern Europe it is eaten as a salad, as it tastes very like cress, and it is, like our water-cress and other salad plants, held to be an anti-scorbutic. The plant has rather a strong smell, which is by some considered disagreeable.

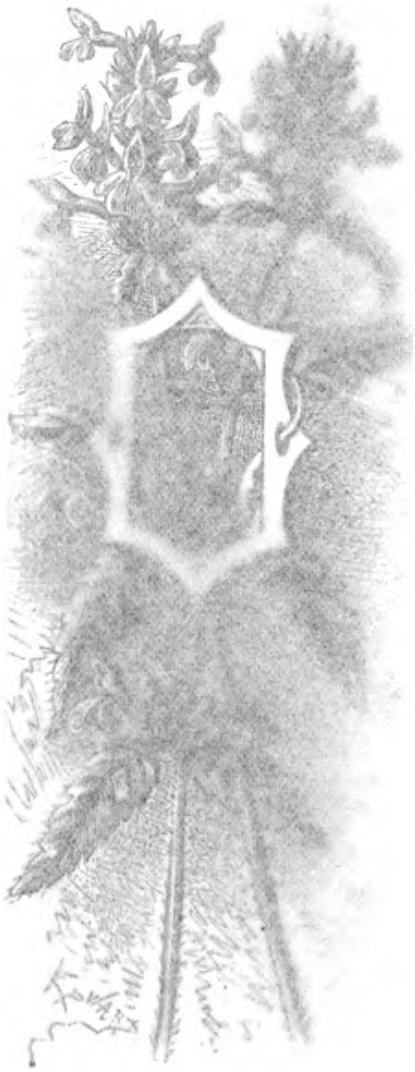
We now proceed to consider the plant a little more in detail; and, beginning with the root, we find how admirably its fibrous nature adapts it for searching out and retaining its hold of the cracks and crevices into which it inserts itself, and from which it can scarcely be eradicated. Its long, trailing stems often root, too, at their lower joints, and so give additional points of attachment. The stalks are numerous and very slender, hanging downwards from the point of attachment to the plant, and though apparently very fragile, are somewhat stringy and tough, and well able to bear the buffeting which their breezy situation often exposes them to. These stems are very long in proportion to their thickness, and, except in the youngest shoots, purplish in colour. The leaves are very ivy-like in form, and are cut up into five prominent lobes or divisions: they are somewhat thick or fleshy in texture, and smooth to the touch. The stems on which they are borne are long

and slender, and when the plant is plucked or stirred by the wind, we notice that the backs of the leaves are of a reddish purple colour; one of those in our illustration has sufficiently turned over to enable us to perceive this. The thick texture of the foliage causes its veining to be only very slightly visible. From the axils of the leaves spring the flower-stalks, about equal in length to the stalks that bear the leaves. The flowers are small, and of a delicate lilac, the palate being bright yellow, and each blossom, as in the other toadflaxes, ends in a spur.

Botanically, the plant is the *Linaria Cymbalaria*. The generic name is derived from the Latin *linum*, flax, as the leaves of many of the species are very flax-like in appearance, though the foliage of the present species is very dissimilar. Gerarde illustrates the plant, and makes it springing from brickwork; but those who arranged his blocks could not understand how a plant could grow downwards, so it stands erect. Parkinson, in 1640, calls it the *C. hederacea*, and says "it groweth naturally in many places of our land." His illustration, too, is turned the wrong way uppermost.



BETONY.



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BETONY.

Betonica officinalis. Nat. Ord., Labiatæ.

OUR plant is in some works called the wood betony, to distinguish it from another plant, the water betony. This latter, however, the *Scrophularia aquatica,* is only so called from the similarity in form of the leaves of the two plants; it has no real relationship to the subject of our illustration, which is for all practical purposes the betony pure and simple. It is in Wales the *Cribau St. Fraid.*

The betony is very abundantly met with throughout England, but appears to be by no means so common in Scotland. It should be searched for in woods and copses during June and July, and it may occasionally be met with in more open situations, as amongst the tangled growths sometimes found on heath and moorland. It was held in high repute in the Middle Ages, from its value corporally and spiritually, being largely cultivated in the herb gardens of the monasteries, and pieces of it were worn round the neck as a charm and protection against

the power of evil spirits. On this account it was often planted in churchyards; and the piece we have delineated, innocent of all occult influence as it looks, was picked from amongst the grassy mounds of a country churchyard. As the church is a very old one, and in the midst of a population of rustics who, to put the case mildly, are somewhat superstitious, we should hesitate to declare that our plant may not really be the descendant of some carefully-planted predecessor; and we certainly do not hesitate to say that the present plants are as potent as ever, and as efficacious as any that flowered there before them in the centuries that have passed since that quiet resting-place received the first of the many hundreds who now blend their kindred dust therein.

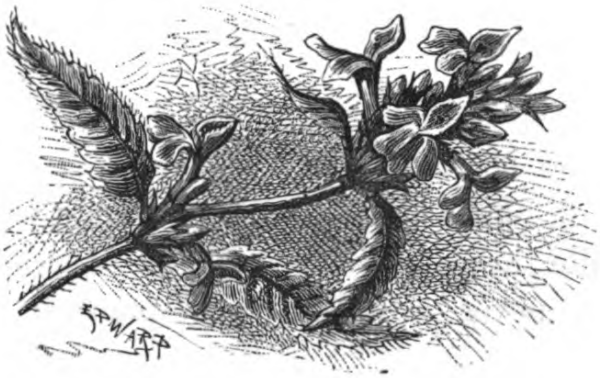
Antonius Musa, physician to the Emperor Augustus, is said to have written a long treatise devoted to the virtues of this plant alone. Culpepper, writing of the betony in the "English Physician" in the year 1652, quotes our classic author, though he Anglicises his name in a rather funny way. He concludes: "These are some of the many virtues Antony Muse, an expert physician—for it was not the practice of Octavius Cæsar to keep fools about him—apportions to betony: it is a very precious herb, that is certain, and most fitting to be kept in a man's house, both in syrup, conserve, oil, ointment, and plaister." Fortified with the knowledge that Dr. Musa had full faith in it, and that his Imperial Patron reposed a like faith in Dr. Musa, a man duly provided with a few handy preparations of betony, a bottle or two of syrup and oil, a pot of ointment, and a plaister or two ready for use, must in the Middle Ages have felt fairly forearmed. The Italians have such faith in it that it

has become a proverb with them, for they counsel a man in the words, "Sell your coat and buy betony;" though personally we think the effect would be more efficacious if he were to put on his coat and go a good long walk into the country, and gather his herb for himself. In the same way, when they desire to extol a person they say of him, "He has more virtues than betony." It is sufficiently evident that this would not be considered a compliment in a community that, on the whole, had lost faith in the plant. We have sometimes in our country walks come upon a man carrying a large bundle of the herb, some wandering collector accumulating the raw material for the herb-doctors who in London and many large towns have a lucrative practice among the poorer classes. We remember, too, seeing a French manuscript of about the end of the fourteenth century, and one of the illuminations was a certain saint discovering the virtues of the betony. An inscription indicated beneath that this was the subject; and we have to record of this old illuminator's handiwork that it was not a bit like the plant—that, in fact, he had got hold of the wrong thing. What, however, we now wish to prove is that this old illumination was one more indication of the belief of the Middle Ages in the efficacy of the betony; and this, we take it, it does, apart from the question of verisimilitude.

The leaves and flowers of the betony, like those of several others of the Labiates, have a certain herbaceous and roughish bitter taste, combined with a weak aromatic flavour, while the root is very acrid and nauseous; the latter is, however, never used in rustic practice now by the herbalists.

The derivation of the botanical name is uncertain. While some see in it a compound of two Celtic words signifying head and good, suggestive of cephalic qualities, others turn to a passage in Pliny—"The Vettones, a people of Spain, were the original discoverers of the plant known as the Vettonica"—and find the transition from this to Betonica a very easy one. The specific name refers to its officinal use.

Betony "helpeth that cannot digest their meate." It was also given in the jaundice, palsy, convulsions, "the goute," dropsy, pain in the head, "yea, although it turn to frenzie." Mixed with honey, it was given for coughs and colds, "shortenesse of breathe," and consumption. For "stitches and pains in the sides and back" there seems to have been nothing better. A decoction with wine eased toothache, and rendered harmless the bite of venomous serpent or rabid dog. Taken beforehand, it hindered drunkenness; taken afterwards, it cleared the head. A little powder of it refreshed those overwearied with labour, and with a little "hogges larde" was a specific for "biles" and wounds. Many other wonderful properties were ascribed to it, but what has been said will suffice to show the value in which it was held.



COMMON ROCK-ROSE.

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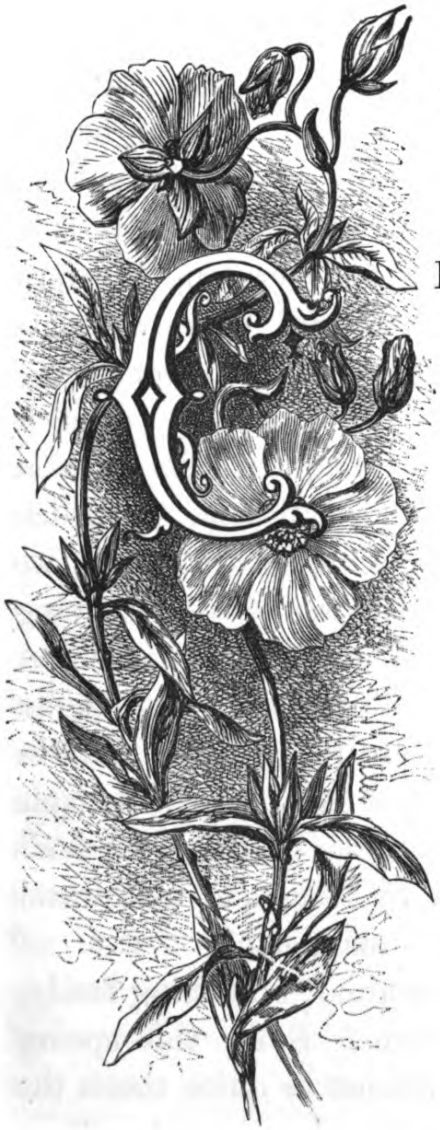

COMMON ROCK ROSE.

Helianthemum vulgare. Nat. Ord., Cistaceæ.

CHAUCER, in one of his poems, dwells lovingly on the bright little daisy unfolding its flowers to the vivifying rays of the sun, calling it the "Day's-eye;" and the subject of our present illustration presents us with another striking example of the great law that connects the well-being of the commonest flowers with the glorious sunlight. So markedly does the rock rose open its petals, and display its beauties to the genial light and warmth, that it was by many of the older writers called *par excellence* the sun-flower; and we see the same idea conveyed in the name that science, in the person of M. Tournefort, has bestowed on it, *Helianthemum,* a word compounded from the two Greek words signifying "sun" and "flower." It has, of course, no relationship with the sun-flower of the garden.

"The flower, enamoured of the sun,
At his departure hangs her head and weeps,
And shrouds her sweetness up, and keeps
Sad vigils, like a cloistered nun,
Till his reviving ray appears,
Waking her beauty as he dries her tears."

The rock rose may very frequently be met with, if only its natural habitat be sought out. It delights in high and dry pastures, and especially when the subsoil is chalky or gravelly, and may be seen in perfection on the great breezy chalk-downs of Southern and Western England, dotting the short elastic turf over with its fragile-looking blossoms. It will be found in flower during the summer and early autumn. So promptly does it close after being gathered, that though we brought it home time after time with other flowers, some of which lasted for days before we had leisure to sketch them, we were always foiled in our hopes, and it was only by keeping it in strong light that we at last managed to get a flower sketched in. The flowers in our illustration were begun and finished at once, before we ventured to even draw a stem, a bud, or a leaf. These last are more amenable to artistic requirements, and behave as one expects buds and leaves to do if fairly treated by being put into water as promptly as may reasonably be managed.

The root of the rock rose is perennial, branching freely, and of a somewhat woody nature. From this spring numerous flowering stalks, that almost or quite touch the ground for some little distance before they ascend. They are, in botanical language, procumbent. The lower part of these stems is smooth, the upper part being frequently hairy, and the colour is often more or less reddish: these points may all be very clearly seen in our figure. The

general growth is diffuse and branching, the whole plant being fragile-looking, though as a matter of fact it bears in safety gusts of wind on the open downs against which a man can scarcely stand. The flowering stems vary in height from about four to nine inches. The leaves of the rock rose, sun-flower, or dwarf cistus, are arranged on the stems in pairs. On a first glance at our illustration it would appear that this is hardly the case, as in some instances they seem to be single, and in others an agglomeration of several together. The leaves, however, in a great many plants—and this is one of them—grow irregular in arrangement as they approach the blossoms, and are often smaller and simpler in shape, until they pass at length into what the botanist calls floral leaves, or bracts. The smaller leaf-like bodies that cluster round the bases of the larger leaves are the stipules. The leaves of the rock rose are on very short footstalks, and are oblong-ovate in shape; the margins are often slightly rolled back and curved under. The upper side of the leaf is green, and either smooth or—more frequently—a little hairy, and the lower surface is ordinarily somewhat greyer in colour, from the fine down-like hairs with which it is covered. The stipules are prominent, often almost half the length of the leaf, erect, lanceolate in form, and clothed with hairs. The flowers are arranged in a very loose and open raceme, and the flower-stalks or pedicels are often bent more or less downwards, both before the opening of the bud and on the withering of the blossom; this gives a curious drooping effect that is very characteristic of the plant. The calyx is rather peculiar in its form, from the great irregularity of the parts. It is composed of five sepals, three being large and very pro-

minently ribbed, the space between the ribs being membraneous and semi-transparent, and the whole sepal very concave in form; and between these two others, very small and inconspicuous. The entire thing may be very well seen in the flower that has its back to us in our figure; and we may see again this compound of large and small parts clearly in the buds. The corolla consists of five broadly-spreading and bright-yellow petals, the outer edge being slightly notched, and the texture very suggestive of a soft and silky kind of tissue-paper. The stamens are very numerous, and form a rather compact-looking mass in the centre of the flower.

Those who have any rock-work or a dry sloping bank in their gardens will find the rock rose a very efficient decoration, though it will be necessary, as far as possible, to assimilate the conditions of the soil, with an open sunny aspect, to those enjoyed by the plant in its wild state. The plant varies in the colour of its blossoms more than many wild flowers do, some being almost lemon-colour, while in others the petals have a darker-yellow blotch at their base.

MONEY-WORT.

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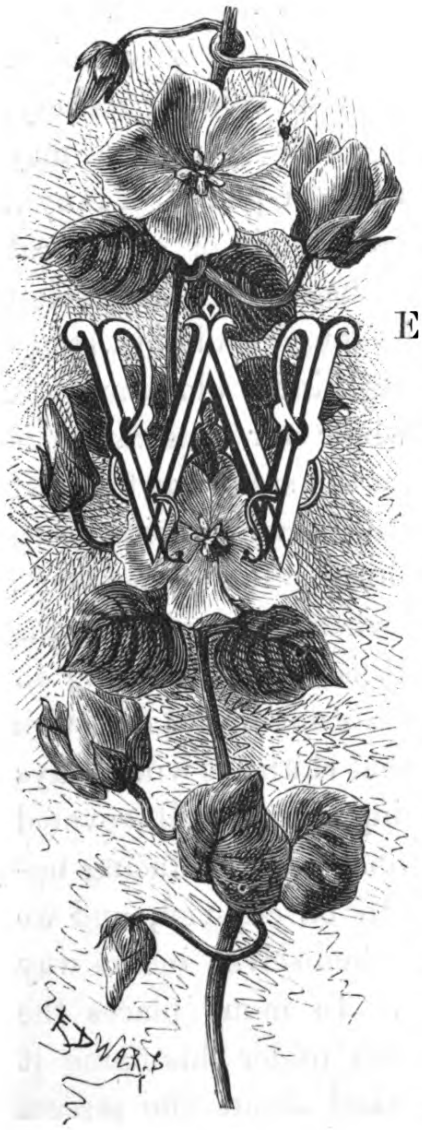


MONEYWORT.

Lysimachia Nummularia. Nat. Ord., Primulaceæ.

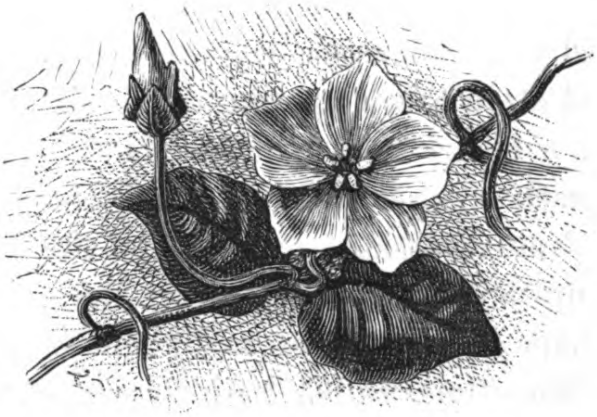
WE have already made acquaintance with the yellow loose-strife, or *L. vulgaris,* and the botanical name of the present species will at once show us that it is a near relative of that beautiful and graceful plant. The money-wort does not tower above the other plants that surround it in the way that its sister species does, but trails along the ground; yet it is by no means inconspicuous, for it often covers a large surface, and in a situation suitable to its well-being the turf is gay with its profusion of golden blossoms. The money-wort should be looked for in rather damp meadows, or near the edges of ditches and water-courses, and under hedges in moist situations. It is very common in most parts of England, but seems to be a comparatively rare plant both in Scotland and Ireland. In a damp situation no plant thrives better in a garden, or requires less trouble to be taken with it. It lasts a

long time in flower, and even when not in blossom its bright green leaves and the way in which it covers a large area with its trailing masses of foliage are amply sufficient to recommend it. It does best on a low bank or rockery, but those who have not the delight of a garden may cultivate it to great advantage as a pot-plant. Many a window-sill in the smoky and stifling air of our great towns is brightened, amidst the squalor and depressing dinginess, by the living green of its long pendulous stems and foliage, and the rich gold of its kindly blossoms. A friend who saw the drawing from which our illustration is taken was very much puzzled because the stem was thickest at the top, and yet when he turned the drawing upside down all the flowers then seemed to be pointing the wrong way; but his difficulties were at an end when we explained the trailing nature of the plant; and it is very interesting to notice how in all such cases, despite the downward direction of the stem, the leaves and flowers that clothe it will always aspire towards the light. A sloping bank well covered with the blossoms of the little moneywort all facing upwards to the sun is a constellation to be enjoyed, and we strongly advise our readers to put themselves in the way of enjoying it as soon as possible. In many places the plant is called the creeping Jenny, and under this name it is sold in Covent Garden and hawked about the streets of London. Far away from the coster's barrow or the salesman's stall slowly runs a river through the rich green meadows; those who would skirt its banks must not be too nervous about damp boots, for great hills rise on either side, and the valley is often more or less flooded. As we pursue our way the water-rat that we have startled plunges with a sudden dash into the stream and breaks

for a moment its calmly-flowing surface, and the kingfisher flashes by us a living gem. We are in a floral paradise, the fragrant meadow-sweet and the pink willow-leaf fringe the stream, and at their feet the turquoise-blue of the forget-me-not and the golden stars of the ragwort blend into perfect beauty. The pure white chalice of the water-lily is absent, but the yellow flowers and great leaves of the other species float on the gently-moving stream, and the leaves of the iris rise abruptly from its depth and slowly wave to and fro as they feel the pressure of the current. All around us, as we tread it, the ground is glowing with the stars of the moneywort, and here, far from the busy flower-market, or the flower-decked window-sill of some pale-faced weaver's lodging, we select from the wealth around us the subject of our illustration.

Commencing with the root of the moneywort, we find that it is perennial and very fibrous; these fibres are simple in character, long, and strike boldly downward—a provision no doubt to enable it to retain firm hold in the soft moist earth in which it is found. The stems are prostrate and very numerous, trailing away often to almost two feet, and often throwing out rootlets at intervals that in turn give a firmer hold for the plant. The leaves are opposite to each other in pairs all along the stalk, and all face in the same direction—outwards if the stem be trailing down, upwards if running along the ground. From the round shape of the leaves, and their growth in pairs, the plant is sometimes called herb-twopence or twopenny-grass. In one of the earliest herbals, that of Turner, A.D. 1548, we find this latter name given, as he says, from the leaves all "standyng together of ech syde of the stalke lyke pence;" and our familiar name moneywort, it

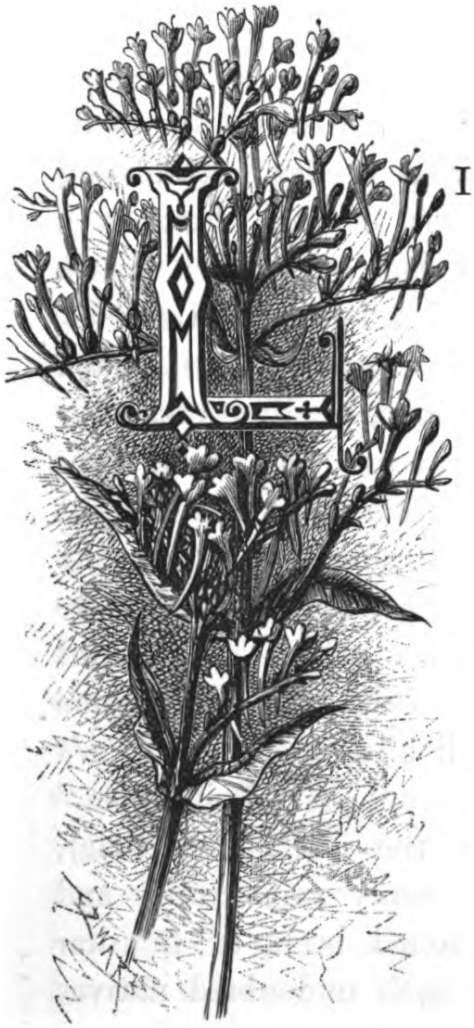
will at once be seen, is based on the same idea. The flower-stalks spring from the axils of the leaves, and are therefore, like the leaves themselves, in pairs: each bears one flower. The corolla is cup-shaped, and deeply divided into five somewhat pointed segments, or lobes. The calyx is cut down almost to its base into five broadly egg-shaped but pointed portions: this may be very well seen in the upper flower and in the bud in our illustration. The stamens, five in number, stand boldly up in the centre of the flower, the anthers being somewhat arrow-headed in shape. The seed-vessel rarely comes to perfection; it frequently happens that plants which increase much in other ways, as by underground stems, suckers, or runners, seldom produce ripe seeds. One may examine a great number of specimens of the moneywort without finding anything approaching to a ripening seed-vessel.



RED VALERIAN.

RED VALERIAN.

Centranthus ruber.
Nat. Ord., Valerianaceæ.



LIKE the ivy-leaved toad-flax, the present plant is not one of our indigenous species, but, like that again, it has got so far established at home with us that it fitly finds a place in our series. It resembles, too, the ivy-leaved toad-flax in another important particular: both are naturally plants of the countries bordering the Mediterranean Sea. It is probable that the red valerian was originally introduced on account of its beauty, as we find it mentioned by many of the older writers as a garden flower. Thus Gerarde, writing A.D. 1633, says, "It groweth plentifully in my garden, being a great ornament to the same;" and Parkinson, A.D. 1640, says, "In our gardens chiefly, for we know not the natural place." Edwards, in his "Flora Britannica," published in 1812, speaks of it as a garden flower, and says that it may readily be propagated by parting the roots and planting

them out in the autumn or spring season where they are to grow. It appears to be a plant that very readily spreads; we have seen large masses of the cliffs in the Isle of Wight crimsoned over with it in spots where no human hand ever would or could plant it, and it may also be found growing on old walls in various parts of the country.

It will be observed that the older writers we quote do not disprove the idea that even then it was naturalising itself amongst us. Gerarde speaks of the plant as a beautiful addition to his garden; but his garden was a botanical one, and included both wild and cultivated species, and nothing is more likely than that he would, if he saw such a plant growing on some old wall, at once gladly transport it to his garden. All lovers of nature are very much alike in sympathy after all, and as we remember the delight with which we transported a great milk-thistle from its home on the hedge-bank to our own ground, we fancy we entirely understand the feeling with which our quaint old Elizabethan worthy would sally forth and bring home his floral prizes. Our readers will also note Parkinson's word "chiefly;" and Edwards, in his "Flora Britannica" (or "Botanic Garden," to give the alternative title), gives hints on the cultivation of many rare exotics and foreigners, such as the Indian sacred bean, of familiar garden flowers like the lilac, and such undoubted natives as the oxlip, globe flower, green hellebore, yellow horned poppy, and flowering rush. Another illustration of the wide diffusion and complete naturalisation of the red valerian is found in the fact that it has a Welsh name, *Triaglog coch.* A plant that is so far known as to have a local name in the land of the Cymri has travelled far

from the stage where it was only known and duly labelled in the botanic garden.

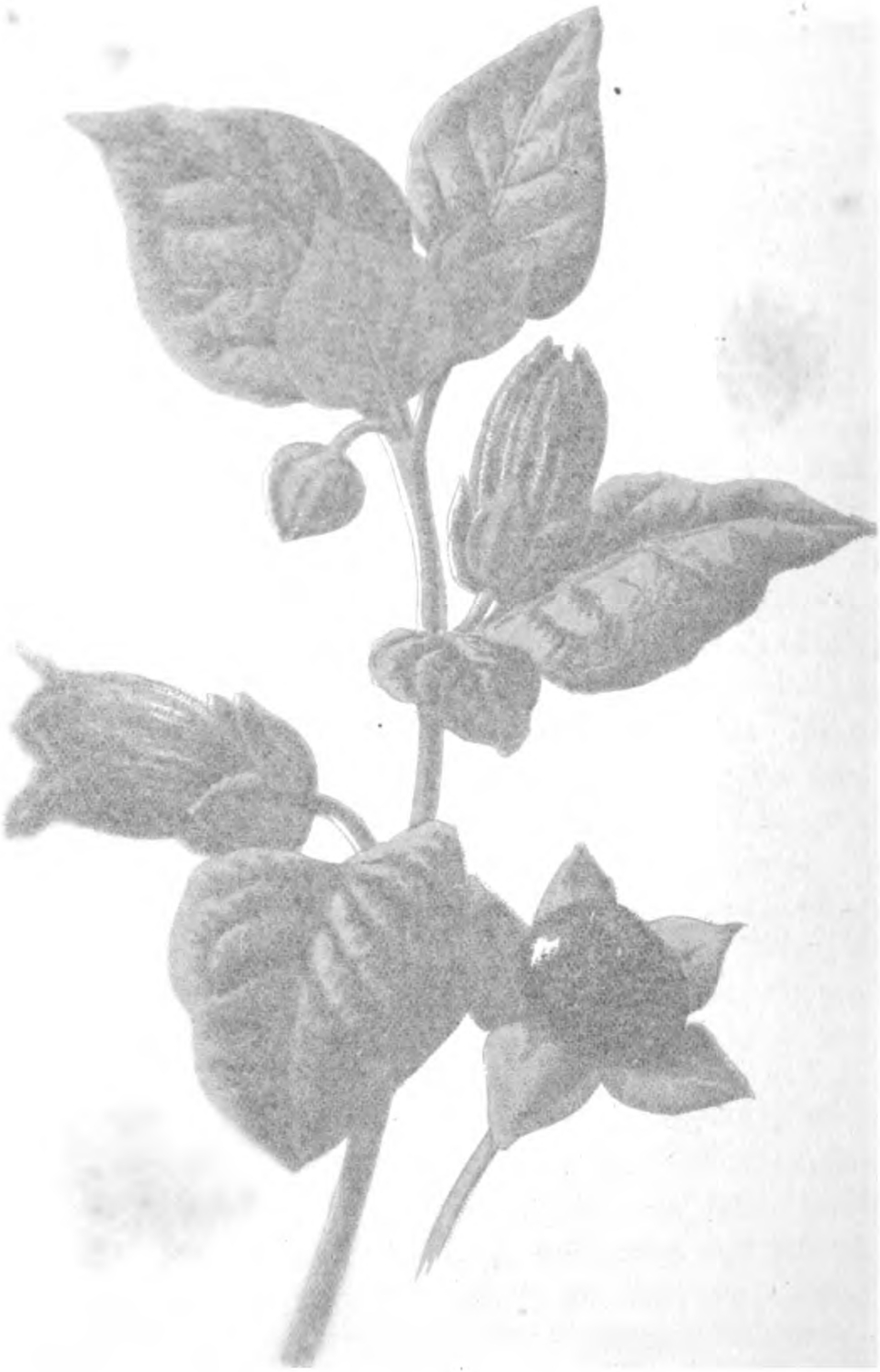
The rich mass of crimson blossom and the spurred character of the flower will always render its identification easy, but to these we may add some few other details of its growth. The root-stock is perennial, and very freely branching, enabling it to take a firm hold in the crevices of which it has once gained possession. The stems are stout, as befits a plant that grows on the cliffs that face the ocean gales, between one and two feet long, and very smooth in texture. The leaves are long and pointed, growing opposite to each other in pairs, and are either entirely without any cutting in of the outline or are very slightly toothed. The flowers are very numerous, and either of a rich crimson colour or much more rarely pure white; the spur is a very marked feature, and may very readily be identified in our illustration of the plant. The fruit that succeeds the blossoms is small and dry; the border of the surrounding calyx forms an elegant feathery rosette or pappus. Each flower only contains one stamen, a very unusual number. The red valerian may be found in flower during the whole of the summer and well into the autumn months, its period of blossoming being from about June to September, the period of course varying somewhat according to the locality, the warm and sheltered character of the southern face of the Isle of Wight naturally leading to an earlier flowering and a longer continuance of blossom than we should find in other localities less favoured.

Though we speak of the plant as a valerian, and Linnæus himself included it in that genus, it has since, for reasons into which we need not here go, been placed in the genus *Centranthus*, this term being derived from the two Greek

words signifying "spur" and "flower." As the true valerians have not got this spur to the corolla, the present species is by some writers called the spur-flowered valerian—an unhappy compromise, for if it has a spur it is not a valerian at all. The old familiar name, red valerian, will do very well, as it is quite sufficiently near the true valerians to make the name hold in popular parlance. The specific name refers to the colour, so that its botanical name is especially descriptive, the crimson spur-flower. The special virtues of the red valerian do not seem to be very marked, but a plant that Gerarde brackets with it "helpeth paines about the backe and hucklebone;" so that if any one feels premonitory symptoms it is quite open to him to experiment on himself, and we can only wish him every success.

DWALE, OR DEADLY NIGHTSHADE.

become really familiar, [illegible]
would not give his [illegible] sleep
with, or let them have [illegible] them
because it was too wet to [illegible] that we
should gladly see grow [illegible] garden, but we
should dread the responsibility [illegible] it there, for,



THE DEADLY NIGHTSHADE.

Atropa Belladonna. ***Nat. Ord., Solanaceæ.***

STRIKINGLY beautiful as this plant is when the lurid purple bells are succeeded by the long rows of densely black berries, it has, most deservedly, so bad a reputation that it is seldom allowed to grow. The plant naturally has abundant means of increase, and would no doubt be not only widely distributed, but really common, were it not for the constant warfare waged against it. Its character is so distinctive that any one once seeing it cannot fail to recognise it, and as it is well that it should be recognised we are glad to include it amongst our series, though it will never be allowed to become really familiar, for the same reason that a man would not give his children prussic acid to "play shop" with, or let them have a loaded revolver to amuse them because it was too wet to go out. It is a plant that we should gladly see growing in our own garden, but we should dread the responsibility of putting it there, for,

if our younger children came to harm through its temptations, we should expect a jury to return a verdict of constructive homicide. The berries are luscious-looking and sweet to the taste, and have therefore frequently proved the cause of fatal accidents, children especially being attracted by them; and thus it is that Gerarde's advice is so generally complied with:—"If you will follow my counsell, deale not with the same in any case, and banish it from your gardens, being a plant so furious and deadly. Banish, therefore, these pernitious plants from all places neare to your houses where children do resort, which do oftentimes long and lust after things most vile and filthy, and much more a berrie of a bright shining black colour and of such great beautie."

The deadly nightshade should be sought after amongst old ruins and rough stony wastes in the South of England. It has occurred in more northerly localities, but is there probably the remains of a former cultivation of the plant, as, in spite of the great danger attending its use, it was employed medicinally in the Middle Ages. It grows very freely in many of the old chalk-pits in Kent. Gerarde found it in abundance at Highgate, in the north of London; but that particular locality has long since fallen into the hands of the builders. Several of the older writers speak of it as a common plant in the environs of the metropolis.

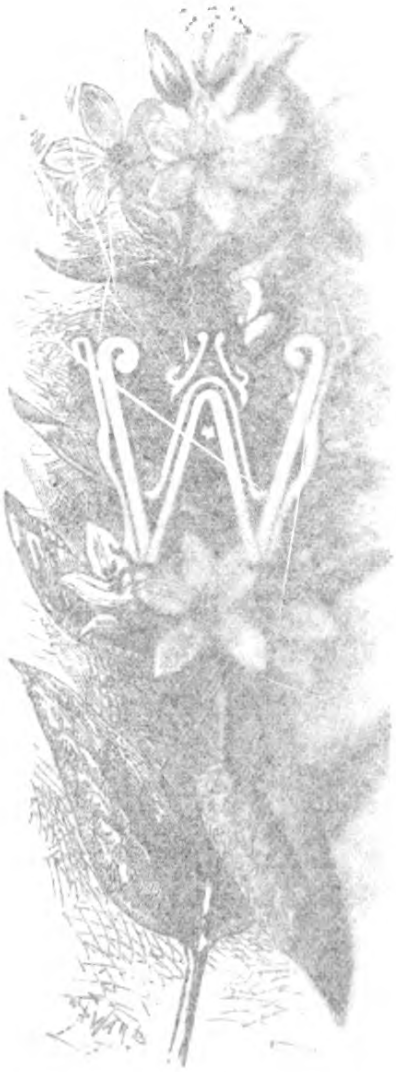
The root of the deadly nightshade is perennial, its stock very large, branched, and freely creeping. The stalks that spring from it are numerous, the thickness of one's thumb or so at their base, and reaching to a height of some three or four feet. They are longer, however, than they look, as they have a way of spreading outwards, and their upper extremities are almost horizontal for some distance. This

peculiar mode of growth renders the long lines of shining berries that fringe them very conspicuous to any one standing near enough to look down upon the plant. Parkinson says that the plant grows sometimes to the height of a man. This is a very indefinite measurement certainly, but we never ourselves saw the plant over four feet in height. The stems are round in section, branch at intervals, are often somewhat downy, and in open situations will be found to be of a dull purple tint. The leaves of the deadly nightshade are on short stalks, are of a pointed egg-shape, and have no notching or toothing of their margins. The lower leaves of the plant are considerably larger than the upper, and in all of them the veining is prominently marked. The stem leaves grow in pairs, but exhibit one marked peculiarity that would in itself serve to identify the plant, as these pairs always consist of one large and one much smaller leaf. Though the leaves are in pairs the flower-stalks that rise from their axils are always single, and each stalk only supports one blossom. This feature may be very well seen in our illustration. Sometimes a flower-stalk is given off at the forking of the stems. The flower-bearing stalks are always short, generally curved, rather thick-looking, and viscid to the touch. The flowers are bell-shaped, often rather drooping in direction, without odour, of a dingy or lurid reddish purple colour, somewhat viscid, externally glossy in surface, and marked with rather prominent veinings. The mouth of the bell is spreading, and cut into five equal segments. The calyx is slightly angular, and deeply divided into five segments; these are slightly unequal in size, and, like the stems, have a sticky feeling when touched. The stamens, from their length and the light colour of the anthers, are easily seen

on looking down into the flower. The anthers are recurved on the filaments that support them; two of these filaments are rather shorter than the other three. The seed vessel is a large and glossy berry, almost round, but greater in width than height, and when ripe of an intense black. On cutting it across with a sharp knife it is seen to consist of two cavities, and each of these is filled with numerous brown seeds.

The names of the plant are all suggestive of its powerful qualities. In the one we have hitherto used the dark shadow of death and the rest of the grave are not obscurely hinted at. Another name for it is the "dwale." The root of this is possibly the Danish word signifying torpor; or it has been suggested that it is derived from the Anglo-Saxon *dwal,* foolish, in allusion to the stupefying and maddening powers of the poison; or again, that we are to find its meaning in the French *deuil,* mourning. In Germany the plant is the "tollkraut" —*toll,* frantic; *kraut,* herb. In France it is the "morelle mortelle," and in Buckinghamshire the local name is somewhat similar—"devil's cherries." The generic name *Atropa* was bestowed by Linnæus, and refers to Atropos, one of the three Fates of classic mythology.

YELLOW LOOSE-STRIFE.



surrounds it. [illegible] both are
of the water-side [illegible] even if
the soil be so [illegible] drive
in its new quarters [illegible] so
fortunate as to [illegible]
their grounds, or a [illegible] would find a

STR. FE

YELLOW LOOSE-STRIFE.

Lysimachia vulgaris. Nat. Ord., Primulaceæ.

WE have already, a few pages back, made the acquaintance of a plant of very similar name, the purple loose-strife, or *Lythrum salicaria*, but we may here repeat that, except in the habitat in which both are found and the verbal similitude, there are no points in common in the two plants: they are widely separated botanically. The yellow loose-strife is found growing in moist hedgerows and by the sides of streams and water-courses; and the height to which it attains and the brilliant yellow of its flowers tend to make it conspicuous amongst the herbage, rank and lush as that ordinarily is, that surrounds it. Like the purple loose-strife, fond as both are of the water-side, it may be transferred to the garden if the soil be somewhat moist, and it will grow and thrive in its new quarters. Those of our readers who are so fortunate as to have a stream running by or through their grounds, or a piece of water therein, would find a

judicious commingling of the yellow and purple loose-strife along the edge a most ornamental and enjoyable addition to the water-side flora, if they have not already spontaneously appeared.

The root of the yellow loose-strife is creeping and perennial, so that once fairly established it would hold its ground. The stem is erect, branched, and some three feet or so in height; the upper part is often a little hairy or downy, and the lower part, as in most water-plants, quite smooth. The leaves as they approach the flowers become somewhat irregular in arrangement, but the main bulk of the leaves grow either in pairs or in threes. Even in the small piece we are able to figure in our illustration it will be seen that the normal arrangement is beginning to assert itself, the two lowest leaves springing from an almost identical level. It is not always easy to explain why the leaves in some of the plants are in pairs, while others are in threes, as there often seems no special vigour of growth, or lack of it, to account for it. Plants may even sometimes be found in which the leaves are in fours, but this is much less common. Whatever arrangement we find in any given plant, that arrangement holds throughout: we do not find in the same plant some of the leaves in pairs and others in threes. When the leaves are in pairs the stem is quadrangular, and the angles increase as the leaves increase in number, in the same way that we have seen they do in the purple loose-strife. The leaves are without stems, in shape like a very pointed egg, without any cutting or notching at their edges, conspicuously veined, and destitute of hairs. The inflorescence is paniculate, forming a more or less dense head of golden flowers. These masses

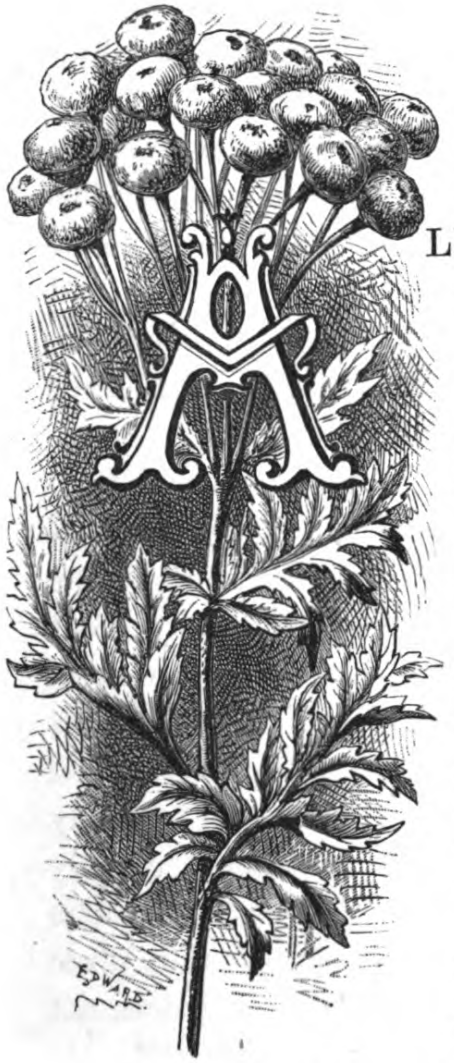
of blossom are at the ends of the shoots, and therefore crown the plants and form a conspicuous terminal, as few of the lower lateral branches develop flowers. The flower-stalks are somewhat viscid or sticky to the touch. The calyx is deeply divided into five segments, and these, as our illustration very clearly shows, are edged and tipped with red. The corolla is monopetalous, or all in one piece, though it is deeply cut into five very distinct-looking segments, and the stamens, too, are five in number, of unequal length, and united for some considerable distance into a tube. The style is not very noticeable during flowering, as it is about the same length as the stamens, but after flowering is over it elongates. The fruit is a globular capsule, and contains numerous seeds; these are very small, as compared to the size of the plant. The yellow loose-strife flowers during the months of July and August

In Wales our plant is the *Trcwynyn cyffredin.* Unlike many of our plants, it does not seem to have been known under various names in different parts of the country, but is, wherever we meet with it, the yellow loose-strife. The ordinary rustic does not trouble himself about names at all, while the herbalist or gatherer of simples found an old belief or legend attached to the name handed down, and this was sufficient to keep it from being changed arbitrarily. The botanical name of the yellow loose-strife is *Lysimachia vulgaris.* In all these old points of plant-lore what "Plinie saieth" was always received by the mediæval botanists with the greatest respect; and in the present case Pliny is our authority for the statement that the name *Lysimachia* was given to it in memory of a certain king—or perhaps it would be more

correct to say an uncertain king—Lysimachus, who first used it to his own great advantage, and then introduced it to his people. Even in Pliny's time, however, a second theory was advanced amongst those, probably, who felt dubious as to the existence of such a monarch: these unbelievers affirmed that the name was compounded from the Greek words signifying dissolving strife, and this interpretation we still see literally adhered to in the common English name. It was held that a plant of it put beneath the yokes of the oxen at plough made them quiet; and in the same way restive horses could be subdued.

On turning to the "Theatrum Botanicum" of Parkinson, we find that though Pliny is reverently quoted, our author does not altogether suspend his right of private judgment. He speaks of the plant as reputed "to take away strife or debate betweene beasts, not onely those that are yoked together, but even those that are wild also, by making them tame and quiet, which as they say this herbe will doe, if it be either put about their yokes or their necks, which how true I leave to them shall try, and find it soe."

TANSY.



TANSY.

Tanacetum vulgare. Nat. Ord., Compositæ.

ALL our readers will probably at once recognise the subject of our present illustration, for the tansy is one of our most generally distributed plants, being met with all over the country. It will be found springing up on the broad strip of waste land that so often borders our country roads, or it may often be seen at the edges of fields. The height of the tansy, varying from eighteen inches to a yard, tends to make it conspicuous, and the bright golden flower-heads that crown the plant at once attract the eye. The flowers are almost at the summit, not running down the sides of the stem, and they should be looked for at the end of July, during August, and in the beginning of September. It is one of the attractive flowers of the waste lands.

Our present name tansy and the French *tanaisie* are both corruptions of the mediæval Latin name Athanasia, which was itself derived from the Greek words *a*, not, and *thanatos*, death, *i.e.* immortality. This plant was held in

such esteem by the monks and mediæval herbalists that when they came across the passage in Lucian where Jupiter, speaking to Mercury of Ganymede, says, "Take him hence, and when he has tasted immortality let him return to us," they at once concluded that the tansy was the plant intended, and it became the Athanasia. Unfortunately, however, with all these old names, one has no sooner fairly accepted a definition than another at once springs up to upset it, and other writers, as Gerarde and Parkinson, tell us that the tansy is so called "because the yellow floures gathered in due time dye not of a long time after."

The tansy was largely employed in the mediæval herb garden, both as a medicine and for culinary purposes; and we have heard, though we have never really brought the matter to the test of practical experience, that any meat rubbed over with it during the warm weather is safe from the attacks of the flies, the essential oil which it contains giving it a strong odour, which we presume is objectionable to these small plagues of the housekeeper. Cooking probably removes this, or the meat might be considered equally objectionable when brought to table. Boerhaave declares that "this balsamic plant may well supply the place of nutmegs and cinnamon, for I believe that Asia does not supply a plant of greater fragrance than the tansy." Its leaves are even now, by some old-fashioned cooks, used in omelettes, and it used formerly to be much eaten with other foods during Lent as a representative bitter herb. Culpepper, writing in 1652, waxes indignant on this quasi-religious use of the plant. "Now, forsooth, tansies must be eaten only on Palm and Easter Sundays and their neighbour days," and he foresees "that want of commonly

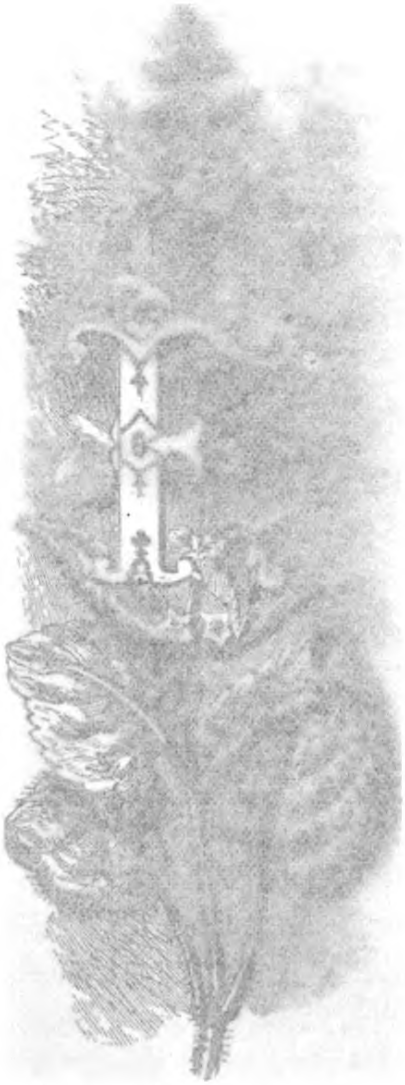
eating this herb in spring makes people sickly in summer, and that makes need for the physician." As he was not what we should now call a regular practitioner, but was, on the contrary, at most evident feud with the medical profession, he insinuates that none were more glad than the physicians when the Church ordered the tansy to be eaten only on certain days.

The way old Culpepper describes, or rather fails to describe, many of the common plants is very original, and possesses many evident advantages to the author. Thus of the present plant he says, "Tansy is so well known that it needeth no description." His guidance, too, on the subject of stinging nettles is very quaint—"They are so well known that they need no description: they may be found by feeling in the darkest night." Woodbine, again, is "a plant so common that every one that hath eyes knows it, and he that hath none cannot read a description if I should write it." Of rye, too, we read: "This is so well known in all the counties of this land, and especially to country people, who feed much upon it, that if I did describe it they would presently say I might have spared that labour." There is a slight dash of impertinence towards his readers in this way of treating the subject; but what a saving of time and space is effected! Written in this style, our "Familiar Wild Flowers" might indeed have been pocket volumes, for a sheet of note-paper would have held all the necessary manuscript for the printer. We could then begin and conclude our present article something in this style:—"Any man who can walk has seen the tansy, and a lame man could not even if he would; so no more of tansy."

The tansy is a perennial. Its root is somewhat large

and creeping, "casting itself here and there." The leaves are deep cut into numerous parallel segments, "infinitely iagged and nicked and curled withall like vnto a plume of feathers," as Gerarde describes them, or "made up of many small leaves set directly one against another, and spreade abroade like wings, the which be also iagged and snipte like small feathers," to quote Dodoens. The flower-heads are numerous and semi-globular, "yellow floures like small round buttons or like the middle of the floure of Cammomill, but greater and of stronger savour." These being gathered in their prime, will hold the fresh colour a long season.

HEDGE STACHYS.



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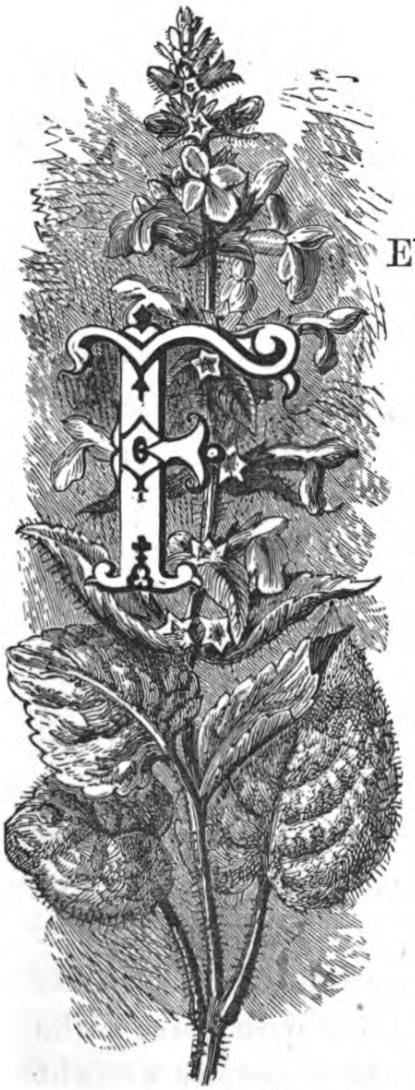


HEDGE STACHYS.

Stachys sylvatica. Nat. Ord., Labiatæ.

FEW country journeys in search of wild flowers will fail to supply us with examples of the hedge stachys, for it occurs abundantly almost everywhere, though its somewhat sombre blossoms do not court attention. When carefully examined, however, the motling and variegation of colour seen in them well repays investigation. The hedge stachys should be looked for in June, July, and August, and almost any shady hedge-bank or copse-side will yield us examples of it. It seems to prefer situations that are a little shaded from the direct rays of the sun, the shelter and the damp being both favourable to it. The plant would possibly be a greater favourite if it had not quite so strong an odour, for though some persons do not dislike it, many object to it, and more especially when the stem or leaves have got at all bruised. This powerful smell, added to the rather dull colour of its head of flowers, ordinarily banishes it from the rustic nosegay; and those who only gather the more attractive

blossoms are very likely to completely overlook the purple spike of the stachys. At the same time, these purple flower-heads, sombre as they are, have a quiet beauty of their own, and serve to light up many a shady recess in the cover-side. All cannot be equally attractive and prominent, and the stachys fills its lowly place as well in its degree as any of its more brilliantly-attired brethren.

It seems to have been a matter of some difficulty for our plant to settle down into its true botanical position and relationship. Haller classed it as a *Cardiaca,* and Ray and several other botanists put it in the genus *Galeopsis,* or the hemp-nettles. The genus in which it is now placed derives its name from the Greek word for a spike or ear of corn, a name given from the general upright and spicate character of the inflorescence of the plants in the genus. The specific name clearly indicates the sylvan shades in which the plant should be sought; another species is the *S. palustris,* or marsh stachys, and a third the *S. arvensis,* or stachys of the fields.

The root-stock of the hedge stachys is perennial, and throws off numerous creeping scions. The stem is upright, and rises to a height of some two or three feet. Like most of the labiates, it is quadrangular, but its interior, instead of being hollow, is filled with pith. The stem branches a good deal, though the generally upright character of the plant is preserved, and it is in most specimens very hairy, and often more or less red in colour. The branches are very similar in character to the main stalk, and issue from it in pairs, placed opposite to each other. The general effect of the whole plant is coarse and hairy. The leaves are clothed with hairs, both on their upper and under surfaces. The form of the foliage

is very characteristically heart-shaped: each leaf is supported on a stem about equal in length to it, the outlines are deeply notched, and the leaves are thrown off from the stems in pairs, each pair being at right angles to the pairs above and below it. The flowers grow in rings upon the stem, each ring being separated from the other by an intervening space of stem, and the whole forming a long terminal spike. The number of flowers in each ring is variable, but half a dozen would be about the normal state of things, and below each ring are its floral leaves. The flowers are of the ordinary labiate type, such as we find in the red dead-nettle, ground-ivy, bugle, and other flowers of the order that we have figured in our series. The lower lip of the flower is entire, beautifully variegated with white upon the crimson-purple ground, and having its sides folded back. The upper lip is also entire, and very convex, slightly viscid to the touch. The stamens, four in number, will be found beneath the protecting hood made by the upper part of the flower. Two of the filaments are rather larger than the others, and the anthers are in the opening flower of a dull violet colour, afterwards changing to black; the pollen upon them is almost pure white. The calyx has ten prominent ribs, is somewhat bell-shaped, terminates in five spreading teeth, of which the upper one slightly exceeds the others in length, is rough to the touch, and is of a dull reddish-purple colour. The seeds that succeed each flower are four in number. The strong odour of the plant seems to render it generally unpopular, and few animals, if any, touch it.

The plant is sometimes called the hedge wound-wort, but merely to distinguish it from the true wound-wort, or *Stachys Germanica,* a plant that occasionally occurs in

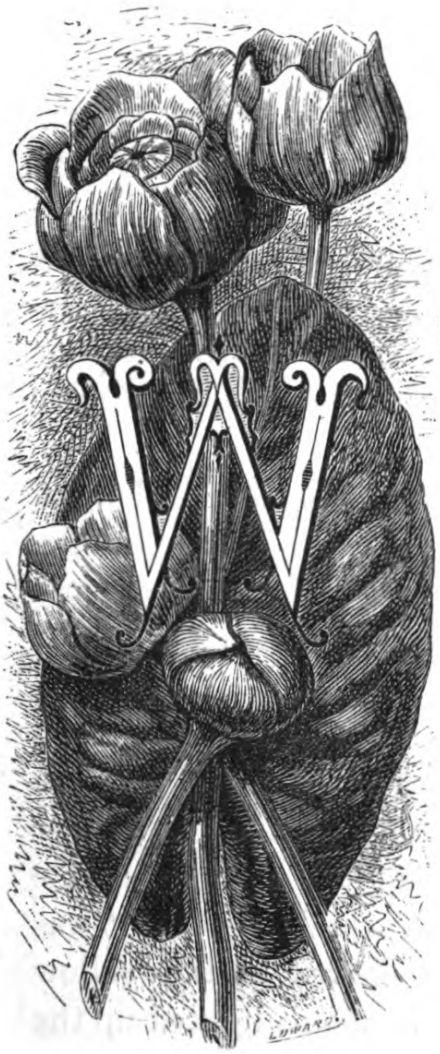
England, and more particularly on limestone, but is by no means common. Its leaves have a dense covering of silky hair, and were at one time, in rustic surgery, employed in the place of lint for dressing wounds. The plant is a very common one on the Continent, and our native herbalists doubtless desired, if possible, to find similar virtues in an allied and more common British plant; and we are told many ways of applying the hedge stachys in the healing arts. One authority tells us that this plant, "stamped with vinegar and applied in manner of a pultis, taketh away wens and hard swellings, and inflammations of the kernels under the eares and iawes;" and it would appear to affect the mind no less powerfully than the body, for we are told that the distilled water of the flowers "is vsed to make the heart merry, to make a good colour in the face, and to make the vitall spirits more fresh and liuely." It is "singular commended" by many other old writers, but into their precepts and practice in the matter our limited space altogether forbids us to go.

YELLOW WATER LILY.

of suffrage [illegible]
to crowd so [illegible]
space that our [illegible]

The most big [illegible] and we can hardly imagine [illegible] more than ourselves [illegible] and delicacy of the wi[illegible]

OW WATERLILY



YELLOW WATER-LILY.

Nuphar lutea. Nat. Ord., Nymphaceæ.

WHEN it was known by our friends and others that we were engaged upon this series of wild flowers, various tastes came very prominently forward. One hoped that we would early include the beautiful blue "corn-flower," while another was enamoured of the brilliant crimson of the pæony, and hoped that that would shortly make its appearance, though as a matter of fact this is only found on an island called Steep Holm, near the mouth of the Severn. The plant that commanded the greatest number of suffrages was the white lily, but we have not the heart to crowd so glorious a thing into the somewhat limited space that our illustrations give us.

The most bigoted admirer of the present plant—and we can hardly imagine any one who enjoys its charms more than ourselves—must perforce admit that the grace and delicacy of the white water-lily are even more attractive;

but when this formidable rival is out of the way, the golden *Nuphar* reigns supreme in the midst of her graceful surroundings.

The yellow water-lily is very commonly distributed throughout Britain. It begins to flower as the haymakers are in the meadows, and continues in blossom all through the summer. It should be looked for in lakes or slowly-running streams, and it may be found, too, in canals, the locking arrangements giving just the conditions both the white and yellow water-lilies like, either swiftly-moving waters or stagnation being equally unfavourable to their well-being.

As we were, on a certain occasion, plodding along a country road, knapsack on back, we came to a little bridge, and found that a small stream ran beneath the roadway, and we well remember what a picture at once met our delighted eyes. Instead of the straight white road and its high and dusty hedges on either hand, we looked up stream, and saw the clear and gently-moving river running between high grassy banks. These were clothed with ash and other trees that met overhead and soon shut out our view of the streamlet's course, but as far as we could track it it was profusely covered with the broad leaves of the yellow water-lily, and scores of the golden blossoms lighted up the verdant shade made by the overhanging trees. The particular flowers we have figured in our sketch came from a still more interesting locality. Our readers must picture to themselves a stream only navigable by one's almost lying down full length in the boat to escape the far-reaching branches of the trees that fringe its banks; in places so deep that the pole finds no bottom—and we can then but drift, for rowing is out of the question in this tangled mass

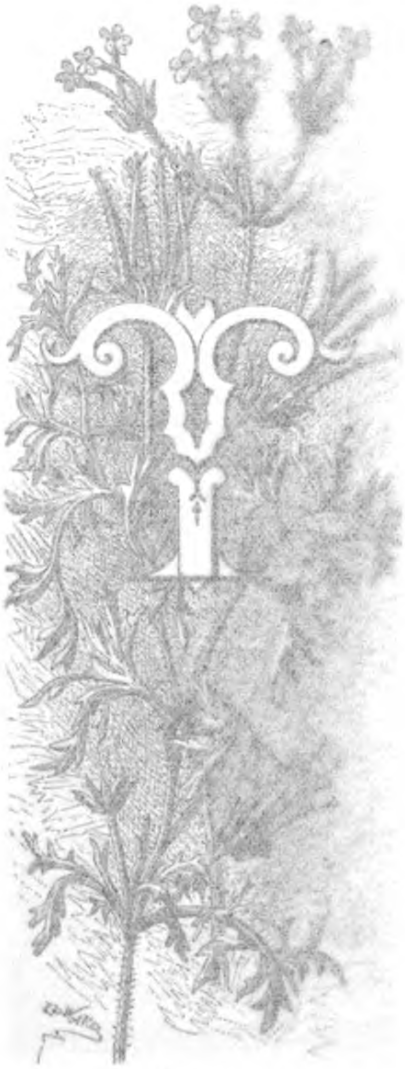
of vegetation—and in others so shallow that we are in momentary expectation of grounding. Presently we emerge from this verdant tunnel, and find that both the stream and the view have opened out. On our right is a broad belt of luscious-looking meadow dotted over with cattle lazily quiescent in the July sunshine, while others have come to the shallow edge of the stream and stand knee-deep in its cooling flow. In the distance, beyond the far-reaching meadow is a long belt of plantation, and above this and far beyond it is a line of blue hills. On our left the banks are higher, and as soon as they have risen above the line of bulrushes and reeds are clothed with fern and crowned with a wood of fir, the dark red trunks and heavy masses of foliage seeming almost black against the summer sky. At intervals we catch sight of an old priory, little more now than a mere mass of flint wall; but its high grey gable attracts the eye, and as we force our way up a narrow side-stream that fed the still-existing fishponds of the old monks we find ourselves all at once in a sort of lake-like expansion, and the water bears on its tranquil bosom countless lily-flowers, both yellow and white. It was from thence the flowers of our illustration were taken. Many have been our rambles in that solemn fir-wood, many an hour have we spent amongst the ruins of that old abbey, and doubtless in our case old associations have gone far to beautify the scene, but we are persuaded that few who could accompany us thither would think our appreciation excessive.

The leaves of the yellow lily are somewhat heart-shaped, and lie flat on the surface of the water. Many of them are considerably larger than the one we have shown in our sketch. The flowers do not rest on the water, as in the case

of the white lily, but are raised by their stems some two or three inches above it. The petals are convex and give the flower a very globular look. The large rayed stigma in the centre of the flower is very conspicuous, and around it stand numerous stamens. The scent of the blossoms is rich and aromatic. In country places the plant is called *can-dock* and *brandy-bottle*—its broad leaves suggesting to the not very exacting rural mind the idea of the dock, while the can is the flagon-shaped seed-vessel. Some persons profess to detect a slight brandy-like odour in the flower, and this, added to the can or flagon-like form, will explain the second name. In Wales it is the "Lili melyn y dwr," and in Ireland the "Cohinih Auhun."

The order to which our water-lilies belong contains many beautiful and interesting species; the famous lotus of the Nile and the perhaps equally renowned Victoria regia of the Amazon are conspicuous examples. Some are white, others a delicate sulphur yellow, azure blue, or glowing crimson; but few exceed in beauty the silver chalice of our own white water-lily.

SHEPHERDS NEEDLE



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SHEPHERD'S NEEDLE.

Scandix Pecten. Nat. Ord., Umbelliferæ.

THE subject of our present illustration is one of the characteristic flowers of the corn-field, though, as it lacks the brilliancy of the scarlet poppy, the intense blue of the corn-flower, or the widely-spreading golden rays of the marigold, it is by no means a conspicuous feature in the flora of the harvest-field. It is abundantly met with in most parts of England and Ireland and in the southern districts of Scotland, and though in an especial degree found in corn-fields, is not exclusively confined to them, but may at times be found in other crops or on waste land. Though it is but a small plant, the abundance with which it occurs makes it at times injurious to the crop, and it may be regarded as one of the farmer's pests, as no use for it has ever been discovered. The long beaks to the seed-vessels are a very curious feature, and the novice in botanical studies might almost be excused for taking it to be a species of crane's-bill.

The shepherd's needle is an annual, and flowers during June, July, and August, the seeds ripening with the corn, though we may often find some plants coming into blossom in a field when others are showing the seed-vessels.

The root of the shepherd's needle is slender and elongated, whitish in colour, and throwing off a few thin and long lateral fibres. The stalks rise, one or more from the same root, to a height of from four inches to about a foot. They branch and spread a good deal, and are more or less covered with hairs. Unlike many of the family, they do not thicken very perceptibly at the joints. The lower parts of the stalks are often entirely crimsonish-purple, or more or less striped with lines of that colour. The leaves of the shepherd's needle, like those of the carrot, hemlock, fennel, and many others of the umbel-bearing order, are deeply cut up into five segments. At the base of their stalks they form a sheath, which partially encloses the stem from whence they spring. The shape of the foliage may be better understood by a glance at our illustration than by any attempt to describe it, and more especially as in a work of this kind we must either eschew botanical technicalities or else avail ourselves of them at the cost of afterwards going into lengthy explanations of their significance. The general effect of the foliage is a bluish or greyish-green, very deeply divided and intricate-looking mass.

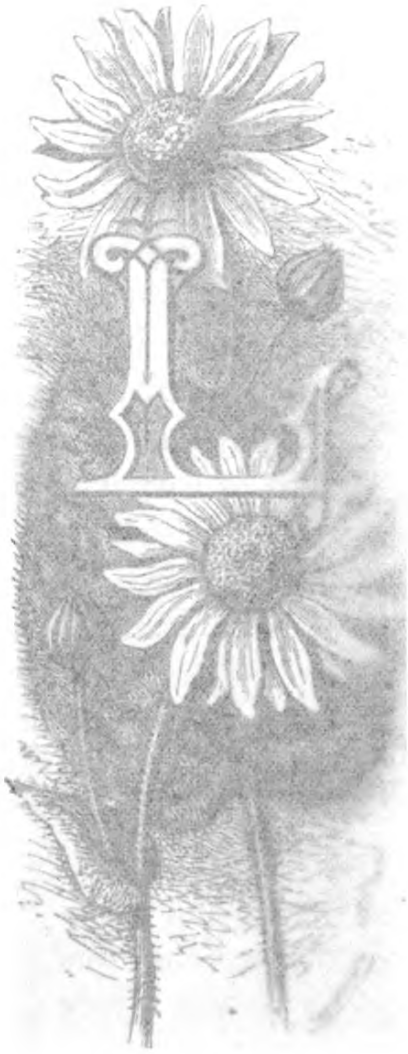
Flowers are said to grow in an umbel when all their stalks spring from one point, and it often happens that these lesser stalks again branch, and have each of them a bunch of flowers at their extremity. When each stalk, as in the cherry or in the flowering rush we have

already figured, bears only one flower, the umbel is said to be simple, but when the other arrangement is seen the umbel is termed compound. The umbel of the shepherd's needle is usually only composed of two diverging stems, though we sometimes find three: one example of each of these is seen in our figure, the upper one having three rays and the lower two. The small umbels that surmount these usually bear about half-a-dozen flowers each. Where the rays of an umbel spring we ordinarily get a ring of leaves or bracts, and this is called botanically an involucrum; and when the umbel branches again we get a second ring, and this is termed an involucel. This may sound alarmingly technical to some of our readers, but we are obliged to go thus far because we could not else point out an interesting feature in the plant. In the shepherd's needle the involucrum is wanting, though some of the upper umbels, as in our figure, spring from the axil of the sheath of the upper leaves, while the involucel is very large. It may be seen immediately below the flowers. It is much larger in proportion than we find it in most other plants, and the interesting points to notice are its size, the fact that the general involucre is altogether wanting, and the smallness of the number of the rays that go to make up the umbel. A comparison with almost any other umbel-bearing plant will at once illustrate and enforce these points. The order includes such well-known plants as the celery, parsley, carraway, fennel, parsnip, carrot, and hemlock, together with many others. The length of the beaks of the seed-vessels, and the large and bifid leafy bracts of the involucel, at once distinguish the shepherd's needle from all the other plants of the order, though a strong family likeness runs through them all, and

renders it a difficult family for the novice to deal with. The seed-leaves of the present plant are very long on their first appearance above ground.

The generic name, *Scandix*, is derived from the Greek word for some plant of this order, but we cannot now determine which particular plant was intended by those who first bestowed the name. According to Dodonœus, writing in 1578, "Scandix eaten is good and wholesome, and in times past hath beene a common herbe amongst the Greekes, but of small estimation and value, and taken but onely for a wild wurt or herbe. Aristophanes in times past, by occasion of this herbe, taunted Euripides, saying that his mother was not a seller of wurtes or good potherbes, but onely of Scandix, as Plinie writeth." Pecten is the Latin word for a comb, and many of the old writers call the plant Pecten Veneris, or the Comb of Venus. It is also called Beggar's needle and Crow needle, the long beaks, "muche like to smal packe needelles," evidently suggesting these names.

LEOPARD'S BANE.



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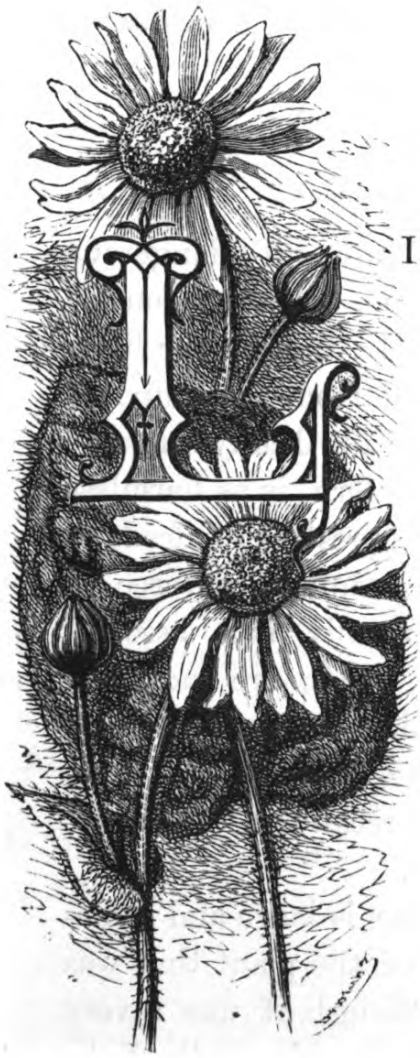
LEOPARD'S BANE



LEOPARD'S-BANE.

Doronicum Pardalianches. Nat. Ord., Compositæ.

LIKE the ivy-leaved toadflax and many other species that could be named, the present plant is not a true native of England, but it has so far thriven in its new home as to have thoroughly established itself a place in our flora. The leopard's-bane is a plant of the forests and mountain pastures of central Europe, but it has long been cultivated as an adornment of the cottage garden, and as a valuable medicinal plant in the herb garden of the mediæval herbalists. From thence it has spread as an outcast or by means of its seeds, and may now be met with sparingly in many districts in England and the south of Scotland, growing often in wild and craggy spots, where there can be no doubt of its wild and self-sown nature.

The leopard's-bane may claim, too, a certain literary interest, as its occurrence in the gardens of the curious and the herb plots of the faculty made it sufficiently well-known to cause

allusions to it in our older writers. The only instance we shall here quote is a still more interesting one, as it may be taken as an indication of the early assertion of the plant to a place in our native flora. Jonson, in his "Masque of Queenes," says :—

> "I have been plucking (plants among)
> Hemlock, henbane, adder's tongue,
> Nightshade, moonwort, libbard's-bane."

Hemlock, henbane, and nightshade are all dangerous poisons, and so, too, is the leopard's-bane. Adder's-tongue sounds as though it should be formidable, though the little fern that bears that name is so called from the shapo of the spike of fructification, and not from any deadly quality; while moonwort, another graceful little fern, is as harmless as the last, though its name may be suggestive of deeds of darkness. What we, however, here want to enforce is that the leopard's-bane comes naturally into association with five other plants, all of which are most undoubtedly found freely growing wild. Jonson's spelling of the name is in accordance with the usage of the time, and many of our readers will no doubt recall the "libbard" in Shakespeare's works and elsewhere.

The root-stock of the leopard's-bane is large and somewhat creeping, and it was this part of the plant that was more especially valued in medicine, though it was a very dangerous thing to deal with, and the speedy death of the patient was the result of incautious use. There is great reason to believe that Conrad Gesner, the *monstrum eruditionis,* as Boerhaave called him, prematurely closed his career in experimenting with this plant. The lower leaves of the leopard's-bane are large, rough in texture, and heart-shaped, each being borne on a long stem. We

have represented one of these leaves in our illustration behind the flower. Had we had room to represent the whole of the leaf-stalk and its attachment to the stem, it would have been seen that it embraced it by a broad dilation at its base. The upper leaves, as our figure also shows, are simple in character, small, and without stalks, the bases of them partially embracing the stems. The main stems are between two and three feet high, very slightly clothed with leaves, erect in general direction, and very slightly branching, if at all. The flower-heads are large and attractive-looking, conspicuous both from their size and their brilliant colour. The rays that surround the central disk are numerous and rather long in proportion to their breadth when compared with the corresponding part in many other composite flower-heads. The plant is a perennial, and its blossoms should be looked for in May, June, and July. The general effect of the plant is that of a large mass of rich green leaves near the ground, and some few rather weak-looking stems bearing the flower-heads rising from their midst. We can well remember the impression its brilliant foliage and blossoms caused when we first saw the plant.

The generic name is open to considerable question. Some would tell us that it is compounded of two Greek words signifying *gift* and *victory*, because it gave men the power of destroying wild beasts; while others say that it is a corruption of the Arabic name, *doronigi*, of the plant. The name was bestowed on the genus by Linnæus. The Eastern nations introduced many valuable medicinal plants into Europe, and the writings of the Arab physicians were held in high repute, so that the Arabic origin of the name is not really so far-fetched as may at first sight

appear. The specific name is derived from two Greek words, signifying leopard and to destroy, as the juice of the plant was formerly used, when mixed with raw flesh, to poison wild beasts. We see the same principle in the naming of a plant having very poisonous berries which are used to destroy in the same way hyænas and other wild creatures: the plant is the *Hyænanche globosa*. The English name carries out the same idea, though fortunately for us we have imported the plant and its name, while the carnivorous plagues on which it might have been exercised are left behind. The name is similar in character to wolf's-bane, flea-bane, and several others. Dodonœus calls it panther-bane, and says that "it is very hurtful to man's nature, and killeth out of hand. The report goeth that if this herbe or the roote thereof be layd by the scorpion that he shall lose his force and be astonied, until such time as he shall happen agayne to touche the leaves of white elebor, by vertue whereof he commeth to him selfe agayne." In a foot-note he gives an amusing woodcut of two scorpions "astonied," and falling different ways.

FIELD THISTLE.

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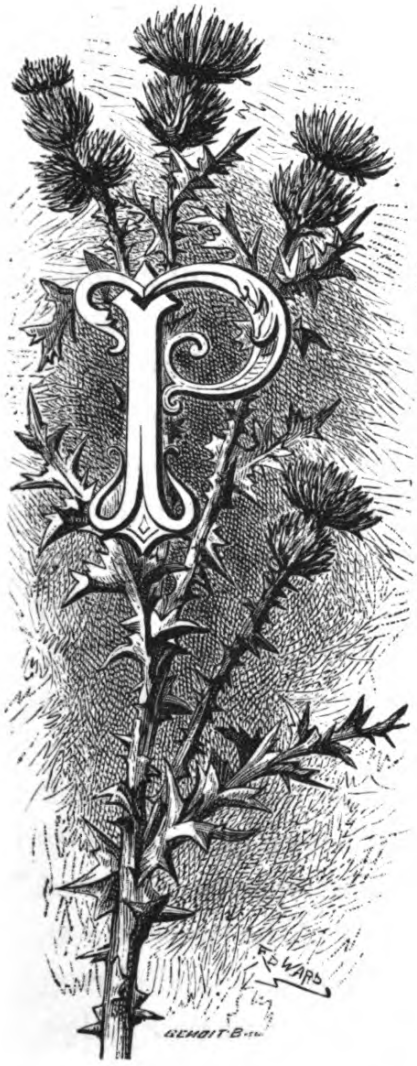

THE FIELD THISTLE.

Carduus acanthoides. Nat. Or' Compositæ.

PROBABLY most of our readers flatter themselves that they know a thistle when they see it; but it is our duty to break in on so complacent a feeling, with the assurance that the word thistle stands for a numerous body of plants. We have already figured the musk thistle or nodding thistle (*C. nutans*), and the spear-plume thistle (*C. lanceolatus*), and in addition to the present species (*C. acanthoides*) we propose to figure two other common kinds.

The field thistle may be looked for by waysides and on waste lands. It also springs up in the farmer's fields; but it possesses one comparatively good feature, troublesome as it is, for, unlike the other species of thistle, it is an annual, and so far more readily eradicated. Like the other thistles, it sends its seeds flying far and wide on the breeze, and there can scarcely be a more hopeless sight for a careful farmer

than the thousands of seeds that settle down on his land, wafted by the winds from the neighbouring common, the railway embankment, or the fields of some more careless cultivator of the soil. War should be ruthlessly declared by the farmer on every thistle long before its ripened seeds are dispersed all over the country side. The dispersion of the seeds is an admirable and most interesting provision of nature for the propagation of the species, but were we agriculturalists we should regard the hoe or the reaping-hook as an admirable counter-provision. The particular thistle now before us is perhaps somewhat less abundant than some of the others, but this is only a comparative lack, for it is very freely to be met with almost everywhere over England and Ireland, though in Scotland it becomes less common. It is a curious fact that, though the thistle is the national emblem of Scotland, most of our ordinary English thistles, things that we find in almost every hedge-bank, and on every piece of waste soil, become much less common when we have crossed the border.

The painted lady butterfly (*Cynthia cardui*), a very generally distributed and gaily-coloured species, begins its career as a caterpillar on a thistle. The species favoured are the nodding thistle, the spear-plume, and the present one, the field thistle. The spiny caterpillar will be found during June and July. It is brown in colour, and has two yellow lines on its back, and one along each side. The perfect insect is somewhat uncertain in appearance, being some years very abundant, and in others comparatively rare. It is one of our larger species; the general ground-colour of the wings is orange-red, with various spots and mottlings of black, and at the tip of the front wings the black is enlivened by one large and four small white spots. The

under-surface is ashy-grey, lined and mottled with various delicate tints. This fine butterfly may be looked for at the end of July, and during August and September. It then hybernates, sheltered from the winter cold in the deep recesses of some barn or other cover, and reappears when the bright spring days come round. During the month of July the creature is in the chrysalis stage, and may be found suspended from the food-plants of the caterpillar. We have wandered thus far into somewhat of a digression because we have often seen this beautiful butterfly sunning itself with outstretched wings on the thistle-heads, and our readers may very probably see it as well, and will be glad to know something of its life history.

The field thistle is one of the taller species, from three to four feet high being a fair average. The stem branches freely, but as a whole preserves its erect character, as the lateral shoots do not diverge far. The leaves are narrow, cut up into numerous lobes, and very prickly. The stem is thickly clothed with those portions of the leaf that run for some distance down it, a kind of leaf-growth that is botanically termed decurrent. It is a very marked feature amongst the thistles, and we may see it again in the comfrey, and some other plants. The flower-heads are not very large, the ball-like mass from which they spring is thickly clothed with numerous and narrow spines, and the heads are often somewhat drooping. Like all the thistles, the flower may sometimes be found white instead of crimson.

Two distinct varieties of this thistle may be found: in one the flower-buds are somewhat larger than those we have figured, and they stand singly on long stalks, while the leaves are narrow, and almost free from woolliness or hairy

covering; in the other variety—the one we have illustrated—the flower-heads are smaller and clustered three or four together on short stalks, while the leaves are clothed beneath with a woolly or cotton-like covering. This latter variety has been by some botanists dignified with independent specific rank, and called *C. crispus;* but the two forms run so into each other, and exhibit so many intermediate stages, that it is impossible to recognise any real specific characters.

The meaning of the generic name *Carduus* we have already explained in our comments on the other species. The second name, *acanthoides*, is Greek in its origin, and signifies that the plant is like the acanthus, the resemblance being in the forms of the foliage. The acanthus leaf will be familiar to many of our readers from the great use made of it in Greek and Roman architecture, and in our modern reproductions of their Corinthian and composite capitals. Most undoubted thistle-flowers and foliage appear in a good deal of Gothic work. Examples may be seen at Evreux, Sens, and many other places abroad, and no less good illustrations at home in the fourteenth century-work in our own cathedrals. The field thistle is sometimes called the welted thistle. In Wales it is the *Ysgallen grych*.

FRITILLARY

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FRITILLARY.

Fritillaria meleagris. Nat. Ord., Liliaceæ.

THE fritillary is an exceedingly local plant, so that one may be noticing flowers for years and yet never have entered a district in which the subject of our illustration is found. Where it occurs, however, it is ordinarily in profusion, and comes up year after year. The fritillary springs up in moist meadows and pasture-land, and more rarely in the open glades of woods. It is found in various parts of England, but chiefly in the south and east; we do not hear of its occurring in either Scotland or Ireland. It flowers during the month of April, and only lasts for a short time. Curtis, in his "Flora Londinensis," mentions it as one of the plants found in the vicinity of the metropolis, giving as localities the meadows between Mortlake and Kew in the west, and similar situations round Enfield to the north of London, and again, to the south-east, in a wood at Bromley, in Kent. Blackstone, an earlier writer, incidentally mentions that it had been observed for

over sixty years growing plentifully near Roslip Common, in Middlesex; and Cullum, a contemporary, speaks of its growing in similar abundance around Bury St. Edmunds. It is also reported from several localities in Surrey and Sussex, and in one of the scientific periodicals we find a writer stating, "Found by me abundantly on an island in the Tame, near Tamworth, Staffordshire; and by a friend, in still greater profusion, in the damp meadows at Oxford, on the banks of the Isis." We hear of it in this way in various directions, and as whenever it occurs it is always recorded as being in abundance and covering a large area of ground, it may, we think, rightfully be included in our series, a point being perhaps additionally strained in its favour on account of its quaint singularity. One of our old authors, in speaking of it, says, "Of the facultie of these pleasant floures there is nothing set doune in the antient or later Writers, but are greatly esteemed for the beautifying of our gardens and the bosoms of the beautifull." A plant that has no "vertues" is itself a great singularity, and when almost everything was turned to some more or less practical use, based on some more or less recondite reasoning, we wonder greatly that this plant, which is also called snake's-head, was not an antidote for the biting of venomous serpents or some such perils and mischances. The name snake's-head does not strike one as being especially appropriate on an inspection of our illustration; but any one who has seen the plant before the blossoms are expanded will at once notice the resemblance between a snake's head and the bud of the plant, its form and colour being alike very suggestive of it.

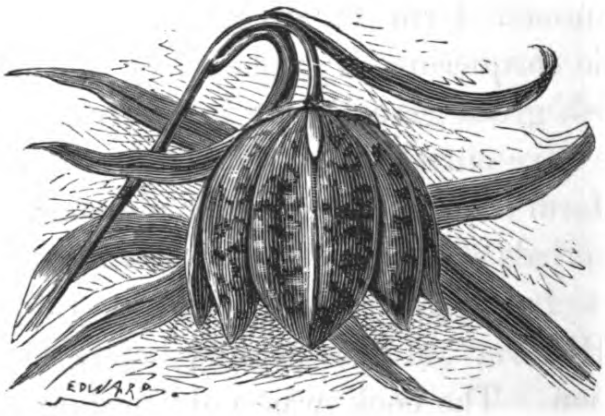
The root of the fritillary is bulbous in character. It is about as large as a hazel-nut, solid, white, roundish, and

enclosed as in a case by the withered and wrinkled bulb of the preceding year. It is a particularly easy plant to grow in one's own garden, only we must warn all who would attempt it that bulbs have many enemies, and it is very possible that mice or some other small foes may prepare a disappointment. The stalk of the fritillary is about a foot in height, upright, often purplish in colour, and bearing some three or four leaves arranged in an alternate manner along it, and terminating in a flower. The leaves partly embrace the stem, and are, as our illustration shows, long and slender. The single flower that each stem bears is of a graceful bell form, pendulous, composed of six equal segments, and at the base of each will be found inside a hollow space or nectary: this on the outside gives the curious raised and angular look that we see on the flower near its attachment to the stem. The flower is subject to a very considerable variation in colour, but the one we have figured is a very fairly typical specimen. The curious square chequerings will at once be noticed. Wherever it is met with one may expect to find one or two specimens having white flowers, as this is a particularly common form of variation. More rarely the characteristic chequering is replaced by purplish blotches on a yellowish green ground; it has a livid and uncanny effect. We have ourselves seen both these variations, but the typical form is the most quaintly pleasing.

The old herbals often have very elaborate and allegorical woodcuts as frontispieces, and that of the "Rariorum Plantarum Historia" of Clusius, now before us as we write, is no exception. The book was published at Antwerp in the year 1601. We have Adam on one side, in the simplicity of costume of Eden's earliest days, and on the

other Solomon, with crown and royal robes and sceptre, bearing in his hands a book. Adam is claimed by the mediæval herbalists as not only a tiller of the ground but a student of botanical science, while Solomon, we all remember, wrote a treatise that dealt with plants, from the lordly cedar to the lowly hyssop of the wall. Above Adam, in a pot, is a Turk's-cap lily, and by his side is the fritillary, while Solomon has associated with him the cyclamen and the crown imperial.

The name *Fritillaria* is from the Latin *fritillus*, a dice-box, the chequered arrangement of the colours of the flower suggesting the board used in an old game. "It was called of the Greekes and Latines *Flos meleagris*, as a difference from a kinde of birde called also *Meleagris*, whose feathers be speckled lyke unto these floures, but not with violet speckes, but with white and blacke spots, lyke to the feathers of the Turkis or Ginny hen." This bird is the *Numidia meleagris*, or Guinea-fowl. The plant is sometimes called erroneously the wild tulip—another species altogether.



FIELD MUSTARD

HEDGE-MUSTARD.

Sisymbrium officinale. Nat. Ord., Cruciferæ.

UNATTRACTIVE as the hedge-mustard must be considered when we compare it with some of the other plants of our series—the sweet-briar, the broom, or the yellow water-lily—its extreme abundance gives it by right a place amongst the most familiar of our familiar wild flowers. By almost every roadside, and on almost every piece of waste ground, we may reasonably expect to find the hedge-mustard, though its name is so far a misnomer that the plant rarely exchanges these bare and dry localities for a place in the fresh verdure of the hedgerow. The plant is an annual, and flowers during June, July, and August. The hedge-mustard is an excellent illustration of the great diversity of appearance which plants may assume at different periods of their growth. Any one unfamiliar with it, and viewing it first when it was just coming into flower, and then again when its flowering branches had elongated, would scarcely

believe that he had seen two stages in the growth of the self-same plant. In our illustration, the flowering state has not long been entered on. Could we have represented that same piece in another month, we should have found the lateral branches thrown boldly out, almost horizontal in direction, but curved upwards at their free extremities and attaining a length of some nine or ten inches. The great number of very thin and widely-spreading flowering stems is a feature that will greatly assist those to whom the plant is unknown in identifying it. The central stem is from one to two feet high, very upright, round in general section, but often more or less furrowed, and, like the lateral stems, very rigid both in appearance and in fact. Any one endeavouring to gather a piece will realise far better for himself than any words of ours can describe how wiry and tough the plant is. The leaves vary greatly according to their position on the plant: the upper ones are long and narrow, deeply cut into lateral segments, or in some cases only notched. These leaves, as may be clearly seen in our illustration, stand boldly out from the stems, and often curve downwards towards the ground. The lower leaves are very much larger and very prominently lobed, the terminal lobe being often conspicuously larger than the others, oblong in the leaves about midway up the stem, and very rounded in the lowest of all. "Rough or hard rugged leaves very much cut in or torne on the edges into many parts, some bigger and some lesser, of a durtie greene colour:"—Parkinson's description of the colour of the foliage is very happy, for partly from the dust of the roadside, and partly from the dull greyish green of the leaves themselves, the general aspect of the foliage as we see the plant growing at the foot of some wall or paling, or

on a roadside rubbish-heap, is certainly "durtie." All the leaves are coarse and rough to the touch, as they are on each side clothed with small hairs; they are arranged in an alternate manner on the stem. The flowers of the hedge-mustard are small and a rather pale yellow, clear and pure in colour, but wanting the golden richness and strength of the celandine or the loosestrife. They blossom "by degrees, so that, continuing long in flower, the stalks will have small round coddes at the bottome, growing upright and close to the stalke, while the toppe flowers yet show themselves," a feature that is clearly seen in our figure, the central stem having at its summit a mass of buds that will be a long time developing into flowers, while the pods, or "coddes," are already beginning to form at the lower part of the stem. The close way, too, in which they stand by the stalk—a point noticed by our old writer—is another very characteristic feature of the growth of the plant. The cruciferous arrangement of the four petals will be observed. As in the great majority of the cruciferæ, the stamens are six in number, two being rather shorter than the others. The pods are small and tapering, downy, and on very short stalks. When they open for the dispersion of the ripened seeds, they do not split all down the sides as in the more familiar example of a pea-pod; but the seeds are on a central membraneous portion, and the outer flaps split away from this at each side, beginning from the bottom, and are finally only adherent at the summit. The seeds are of a dingy yellow colour, "sharp and strong" to the taste.

The generic name, *Sisymbrium,* was bestowed by the ancients upon several plants, and as its literal meaning is "with food," it has been conjectured by more modern

writers that it should most appropriately be applied to plants of the present order, and Linnæus bestowed it on the genus to which our present plant belongs. Those who have been in the habit of taking a little mustard with their beef will see some connection of ideas; but the true mustard is derived from another plant, as we need scarcely remind our readers. The plant has been cultivated as a pot-herb, but its tough stringiness would surely tell against it, and we imagine it would stand little chance in the popular taste against a dish of green peas or asparagus. Birds are very fond of its seeds, and sheep and goats eat it, while cows, pigs, and horses decline to have anything to do with it if they can help it. The specific name refers to the bygone officinal value of the plant in rural practice. Gerarde calls the plant the bank-cress, and in Wales it is the Arfog meddygawl. In the semi-botanical, semi-astrological treatises of the middle ages, the hot and fiery nature of the plant pointed to the evident dominion of Mars over it.

YELLOW RATTLE.

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A. HATLE

THE YELLOW RATTLE.

Rhinanthus Crista-galli. Nat. Ord., Scrophulariacæ.

THE yellow rattle of England—the *Cribell melyn* of Wales and the *Bodan chloigin* of Ireland — "groweth in drie medowes and pastures, and is to them a great annoiance." The reason of this annoyance does not seem to have been understood until quite recently, as it has only lately been observed that the plant is a parasite, attaching itself to the roots of the grass and other herbage surrounding it by means of small suckers. The broomrape and the dodder are other common examples of parasitic plants. The broomrapes are equally curious, and plant themselves, according to the species, on broom, furze, thyme, knapweed, milfoil, and other plants; but as we propose to figure one of the common species, we reserve our fuller comments until then.

Botanical writers until comparatively recently affirmed

that we had three species of yellow rattle in Britain, basing specific differences on the size of the flowers, the comparative width of the leaves, and other minor points; but further observation has proved that these characteristics are by no means constant, and that plants showing all the necessary gradations of form required to link one reputed species with another may be readily found. Such great modern authorities as Hooker and Bentham agree in considering that all these supposed species should be re-united, and deemed one.

The yellow rattle is an annual, and ordinarily begins flowering early in June. It generally falls before the mower's scythe, as it is a plant of the meadows and pastures. Linnæus tells us that the Swedes considered that when the plant had done flowering, and was ripening its seeds, was the fit time to begin mowing and gathering in the hay crop; but with us the grass is cut earlier, while the plant is still in flower. It is ordinarily a sign of indifferent pasture, and tends to make matters worse, for it comes, in the first place, because the herbage is poor, while the herbage is the poorer for its coming. Martyn introduces the plant in his "Flora Rustica," a volume supposed to be devoted to the plants useful to the agriculturalist, but finds it very difficult to say a good word for it. He says that "horses, sheep, and goats are said to eat it, and kine to refuse it. Others affirm that cattle in general at liberty refuse it, but that they will eat it when fresh, but reject it when dry among hay." This, it will be seen, is at best but dubious, and a plant that under some circumstances is refused, and in others rejected, would not appear to have any great value; we may, therefore, very legitimately join in the general denunciation of the plant, handsome as it is.

The yellow rattle grows to the height of about a foot, the

stalk being erect, and either simple or very slightly branched, square in section, smooth in surface, and more or less spotted with purple. The leaves are opposite to each other, each pair being at right angles to those immediately above and below it, and often separated from them by a considerable space of bare stalk. The leaves are sessile or stalkless, heart-shaped at base, in form somewhat like a wedge. The veins are conspicuous, and the edges of the leaves are deeply notched or serrated, and often slightly turning. The floral leaves are broader in proportion to their length than those lower on the stem, and the flowers spring from the axils of these upper or bracteal leaves. The flowers are on very short foot-stalks. The calyx, even in the early stages of the flowering, is large and conspicuous, very inflated, and flattened so that its side view is much larger than its edge view, terminating in four equal teeth, and contracting at the mouth, a rare pale green in colour. The corolla is in one piece, or monopetalous. The upper part, or lip, is very convex; the lower lip divided into three segments, the middle or lowest one being also the largest. The upper lip ordinarily has a purple spot or blotch upon it. The stamens rest closely under the upper lip, two of them being on shorter filaments than the other two. The anthers are curious, as they are covered with little bristly hairs. The seed-vessel is a capsule, orbicular, but flattened in one direction. It contains several rather large and flat seeds. These seeds when ripe rattle in the dry capsule, and give the plant its familiar name of yellow rattle. Culpepper and some other old writers call the plant the rattle-grass, and amongst the names given as current in Gerarde's time we find the penny-grass—grass being in olden times a sort of generic title for almost all sorts of

low-growing herbage. The pennies were the capsules, flattened, and yet fairly circular in outline; the resemblance to money is not very great certainly, but in the "good old times" men do not appear to have been very exacting on such points. The generic name, *Rhinanthus*, is derived from the two Greek words signifying nose and flower, the projecting beak of the upper portion of the corolla being the part that suggested the name, and it is only fair to say that in some other plants in the genus the resemblance is more pronounced. The specific name, *Crista-galli*, means the crest or comb of a cock, because, according to Pliny, it has numerous leaves, resembling a cock's comb. Others prefer to see in the notched calyx a resemblance which they deny to the serrated leaves. In France it is the *Crête-de-coq*. Parkinson, writing in 1640, calls it the yellow rattle or coxcombe, and distinctly says that the deeply-dented edges of the leaves "resemble therein the crest or combe of a cocke;" and yet farther on he says that some call it gallinacea, "because the floweres, as some think, stand like a cocke's combe at the toppes of the stalkes."

HEDGE CALAMINT.

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HEDGE-CALAMINT.

Calamintha clinopodium. Nat. Ord., Labiatæ.

MANY of our readers will no doubt be aware that in the earlier days of botanical science sundry artificial systems of plant classification were devised, but that these have all now passed away, and what are known as natural systems succeeded them. We speak of both the artificial and the natural in the plural, as each great principle received various modifications from different hands. The best-known example of an artificial system is that of Linnæus, a system based on the number and position of the stamens and pistil. By this method all plants were divided into classes, according to the number of their stamens, and these subdivided into orders based on the pistils. This was so far an advance, that any one finding a plant with six stamens, for example, referred it at once to the class hexandria, and if it had two pistils it belonged to the order digynia; by this means the ground to be hunted over

before the name was ascertained was greatly narrowed. The great objection to the system is that plants of the most different natures are classed together simply from their possessing the same number of stamens or pistils; thus, the valerian and the iris are placed together, though in every other respect they differ widely. Linnæus himself only regarded his arrangement as a temporary one, and before his death arranged all the known plants of his day in what may be termed a natural manner. Jussieu, De Candolle, and Lindley have all worked in this direction, and it is on their labours chiefly that modern botanical science is founded. The natural system is the grouping together of plants that have the greatest degree of similarity in their various parts, properties, and qualities, and by its aid the nature of an imperfectly known plant may often be judged by that of another and more familiar species with which it is evidently allied.

The labiate order, to which the hedge-calamint belongs, is one of the most clearly defined, all the very numerous plants that belong to it being very similar in their general growth. In all of them the calyx is tubular, and the corolla is monopetalous, or all in one piece—one could not pick it to pieces as we can a buttercup flower. The stamens are four in number, and the stigma has two lobes. The leaves always grow opposite to each other in pairs, and the stems are seen to be square when cut across. Many of the species of the order abound in an essential oil, and have a strong odour when bruised. We find them largely employed by the perfumer, the regular practitioner, or the rustic herbalist. Sage, mint, peppermint, thyme, marjoram, horehound, betony, wound-wort, ground-ivy, and self-heal are all characteristic examples of the order.

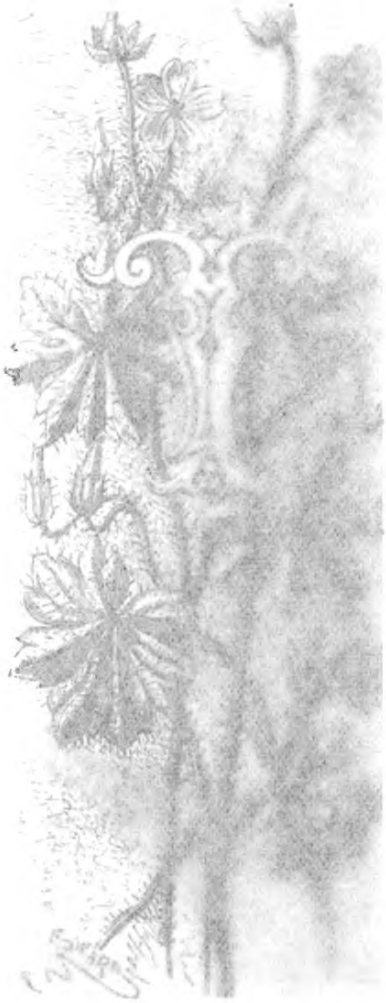
This strong similarity makes the order a difficult one for the novice to deal with when he has only a verbal description of any particular plant before him; but by the aid of our coloured illustration our readers should find less difficulty in identifying the hedge-calamint when they come across it. There is one curious little peculiarity in the calyx of this species of calamint that may be mentioned as an aid. It is always ribbed with thirteen longitudinal ridges, while in the ground-ivy these are fifteen in number, and most of the labiates have either ten or five of these projecting ribs. The root of the hedge-calamint is perennial. The stems are rather weak-looking, though erect; they rise to a height of a foot or eighteen inches, and are thickly covered with soft hairs. The leaves are on short stalks, only slightly toothed at their edges (when we compare them with such a labiate as the white dead nettle, a plant we have already figured), soft to the touch, and, like the stems, clothed with soft hair. In fact the whole plant, except the root and blossom, has this soft grey covering. The flowers are a pinkish purple, and arranged in rings round the stalk at the points where the leaves are thrown off. These rings as the flowering season advances become a dense mass of blossom, but in our illustration we have selected the plant at an earlier period, as we are thus able to show the shapes of individual flowers more clearly.

The hedge-calamint flowers during July, August, and September, and may be looked for in the hedgerow, and on the borders of woods and copses, especially if the situation be somewhat elevated, and the ground dry. It is common in England and Scotland, but appears to be rare in Ireland, the greater humidity of the air there having probably something to do with this.

The generic name is derived from two Greek words, signifying good and merit—its goodness consisting in the ancient belief in its power to drive away serpents and the dreaded basilisk; while the specific name, *Clinopodium*, means bed-foot—"the tufts of the plant are like the knobs at the feet of a bed," an old writer tells us.

The basilisk was in mediæval times a fabled monster—the king of the serpents, and in calamint lore the sense of the word basil seems hopelessly obscure, the general medicinal value of the plant and its special efficacy in basilisk destruction being more or less mixed together, and the name is emphasised in one or the other direction according to the idiosyncrasy of the writer. If a basilisk only set his eyes on a man it caused his death. We see this idea in Shakespeare's Henry VI.: "Come, basilisk, and kill the innocent gazer with thy sight;" and Beaumont and Fletcher, too, in their "Woman-hater," speak of "the basilisk's death-doing eye." Under these circumstances the knowledge of the properties of herb-basil was a decided advantage. The only way, we are gravely told, to kill these monsters was to put a mirror in their haunts, as the actual sight of its own horror was no less fatal to itself than to mankind.

DOVE'S FOOT CRANE'S-BILL.



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DOVE'S FOOT CRANE'S-BILL.

Geranium molle. Nat. Ord., Geraniaceæ.

THE dove's foot crane's-bill is one of our numerous species of wild geraniums. Of these we have already figured the meadow crane's-bill, or *G. pratense,* a plant with very large bluish-purple flowers; the shining crane's-bill, *G. lucidum;* and the herb Robert, or *G. Robertianum.* All the twelve species indigenous to Britain agree in one point—namely, their beauty and attractiveness. The blood geranium, or *G. sanguineum,* despite its unattractive name, is a very fine species. It derives its title from its large and deep crimson flowers. Though found in many parts of England, it is not by any means a common plant, though it bears transplanting and cultivation well, and may much more frequently be found in the garden than in a wild state. It is found on high ground in dry woods and on limestone rocks, flowering freely in the most inaccessible places during the month of

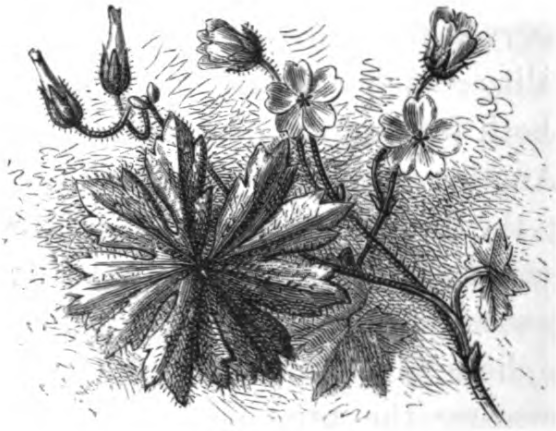
July. The wood geranium, *G. sylvaticum*, grows from one to three feet high, the stems forking freely, and bearing a mass of purple blossoms at their extremities. The leaves are of the richly cut type presented to us in the meadow crane's-bill. It is a plant of the north, and should be searched for in woods in Scotland and the northern parts of England and Ireland. The only other species to which we need here allude is the long-stalked crane's-bill, or *G. columbinum*, an annual plant, having very slender stems and very deeply-cut foliage. It is found on dry banks and waste ground, and chiefly where the soil is limestone or gravel.

Returning, however, to our dove's foot crane's-bill, the *Troed y golomen* of the Welshmen, we now proceed to go somewhat more fully into detail. The root of the plant calls for no further comment than that, like the root of most annuals, it is very simple in character. As to the general structure of the plant, the stems are weak and spreading, and vary in length from a few inches to a foot. They branch a good deal, are very hairy, and often, especially near their bases, show a good deal of red colour, a crimson as rich and pure as that of the blossoms. The root-leaves are very numerous, and grow on long and hairy foot-stalks; in fact, both the stalks and leaves are covered with soft hair. These lower leaves are almost circular in general outline, but they are deeply cut into lobes or segments, while the leaves of the stem are arranged alternately, and as they ascend become smaller, are divided into fewer segments, and what segments there are are much narrower and more pointed. A glance at the lowest and highest leaves in our figure will at once clearly illustrate our meaning. The flower-stalks are long, and spring from the axils of the leaves. They are forked, and

each bears two flowers. These subordinate flower-stalks have a few small brown scales at the point where they leave the general flower-stalk, and are only about a quarter its length. The calyx is composed of five sepals, and the corolla of five petals, heart-shaped, and a purplish red in colour. With one exception, all our crane's-bills have their flowers springing in pairs from the flower-stalks, a feature that may readily be seen in all the examples of the genus that we have figured. The stamens are ten in number, and the anthers that surmount them are a pale and lilac blue in tint. The dove's foot crane's-bill is one of our commonest species, and may be found in flower from May to August. It should be looked for in dry pastures and on high sloping banks. Where it grows by itself the stems are often almost horizontal, but when it is amongst other plants they are drawn up.

Those of our readers who really want to learn more about our familiar wild flowers will do well not merely to read of them in this or other books, and so derive their impressions through the eyes of others, but to search for them themselves, to gather them, and in these days of art schools to sketch them. Then, again, they may be dried, and thus preserved for years, care being taken to record the date and locality; such a collection rapidly becomes most interesting, both for its own sake and from the associations it recalls. Another good plan is to make notes for oneself about them; the knowledge we have acquired for ourselves has a freshness that the same facts read up out of books can never possess. As a specimen of the sort of thing we mean, we here give our own rough notes made when we were preparing the present drawing. "Leaves dull, very little shine on them, and as the plant often grows

by the roadsides, its deep veins and hairy leaves often catch a deal of dust, making it look greyer than ever. The large root-leaves most conspicuous, clusters of them all showing in plan almost as circles. Flowers very fugacious; had to bring three pickings home to do this by, and then learnt by experience that they should be done instantly, as they closed almost directly, never reopened, and some fell off. Leaves, too, very delicate, soon curl up, but unfold again after being some little time in water. Directly after flowering the sepals fall well back, but close tightly up again and get a good deal larger as the fruit developes. Flowers rarely ever more than half expanded. Sketched May 24, but observed the plants about ten days earlier. Leaves all covered with downy hair, but much shorter than that on the stems. Great many leaves all spring from radical point, and in the midst of them a few flowering stems; radical leafstalks about five inches, flowering stalks about nine inches, but all very unaspiring and humble-looking." A mere list of the names of the various species would not be very interesting, nor could we hope to give much idea of them from any verbal description.



CREEPING THISTLE.

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FIG. 4 DORA THISTLE

THE CREEPING THISTLE.

Cnicus arvensis. *Nat. Ord., Compositæ.*

FEW of our readers who have not had occasion to look into the matter would imagine our native thistles to be so numerous a body as they are, there being a strong family likeness amongst them, though many of the species may readily be distinguished. We have already figured the musk-thistle, the spear-plume, and one or two others, and the present species is an equally common one. As thistles increase not only by means of their flying seeds, but also by the aid of their creeping roots, they are one of the pests of the agriculturist, and farmers cannot too distinctly have their attention called to their pernicious effects, and to the nature of their growth. No species of thistle should be allowed by the farmer to ripen its seeds; all should be rigorously cut down before these are ready for dispersion, though the mere cutting down of the plant seems of little value, as it,

if anything, appears to stimulate the underground stem to fresh endeavours. In pulling this thistle up we may succeed in drawing out, after a good pull, a long and slender root, and may duly congratulate ourselves; but on a closer examination we shall find that it has broken off, after all, in the ground, and our labour is therefore vain, for the root goes down a great depth, and then branches horizontally in the ground. Any part that is left in the soil retains its vitality, and we soon find the plant reappearing above ground. Curtis, in his "Flora Londinensis," records an experiment illustrating this so well that we are glad to reproduce it, especially as our old author is but rarely met with :—"On April 1st, 1778, I planted in a garden a piece of the root of this thistle, about the size of a goose-quill, and two inches long, with a small head of leaves cut off from the main root just as it was springing out of the ground; by the 2nd of the November following this small root had thrown out shoots, several of which had extended themselves to the distance of eight feet, some had even thrown up leaves five feet from the original root; most of the shoots which had thus far extended themselves were about six inches underground, others had penetrated to the depth of two feet and a half; the whole together when dug up and washed from the earth weighed four pounds. In the spring of 1779, contrary to my expectation, this thistle again made its appearance on and about the place where the small piece was originally planted. There were between fifty and sixty young heads, which must have sprung from the roots which had eluded the gardener's search, though he was particularly careful in extracting them." The creeping thistle is known in Wales as the *Ysgallen gyffredin yr ar*, and Curtis calls it the cursed

thistle. Well may an old writer break out into the exclamation, "Thistles are a large generation," and we cannot but echo his words, as we find yet another species cropping up in our series.

"Thistles are a large Generation, distinguished by different prenomens and manner of Vegetation, or growth and figure. A sow thistle is called Sonchus; the white Cotton Thistle is Acanthium; the soft Thistle Cirsium; the Globe Thistle is Carduus Globosus; the Fuller's Thistle, or Cloathier's Thistle, or Teazle, is called Carduus Fullonum; Star Thistle is Carduus Stellatus; the Chameleon Thistle; these are the chief, which have many related to them, being of little use as yet, especially in physick, because the chiefest sorts mentioned in our Dispensatories, and that I shall chiefly insist on, are three, as followeth:—Carline Thistle, called Carlia or Carolina, by Charlemain the first Emperor, whose Army was by this Root delivered and preserved from the plague. I forgot to mention before the remarkable Thistle called Marsh Thistle, which grows as tall as a Man." The foregoing quotation is from the "Historia Vegetabilium Sacra," or Scripture Herbal, of William Westmacott, "of the Brough of Newcastle-under-Line, in the County of Stafford, physician." The book was published in 1694, "at the King's Arms, next St. Dunstan's Church, in Fleet Street," within a quarter of a mile of the spot whence the present volume issues. Thistles find a place in this book from their association with thorns in the curse pronounced on the ground after the Fall in Eden.

The creeping thistle is very abundant by road-sides. Parkinson calls it the *Carduus vulgatissimus viarum*, while Ray terms it the common way-thistle. Another favourite

locality for it is in corn-fields, and we remember to have seen a piece of ground that was ostensibly a corn-field so thickly covered with this thistle that the real crop sank into the second place, not a square yard anywhere all over the field being without its one or more—and generally more—thistle plants. Such husbandry, or rather lack of husbandry, as this is a curse to the whole country-side. The flowers of the creeping thistle are rather a pale purple colour, and have the rich musky fragrance of most of the race. Like all the other species, the flower-heads often vary from purple to pure white, a point that our readers should note, or they may imagine that they have discovered a new species, and be proportionally elated or bothered, when it may very possibly be only one of the very common white-flowering variations from the ordinary types. We have already in our comments on a preceding species referred to the fact that the larva or caterpillar of the beautiful painted lady butterfly, the *Cynthia cardui* of the entomologist, feeds on various species of thistle, and we now need only add that the present plant is one of those selected.

MELANCHOLY THISTLE.

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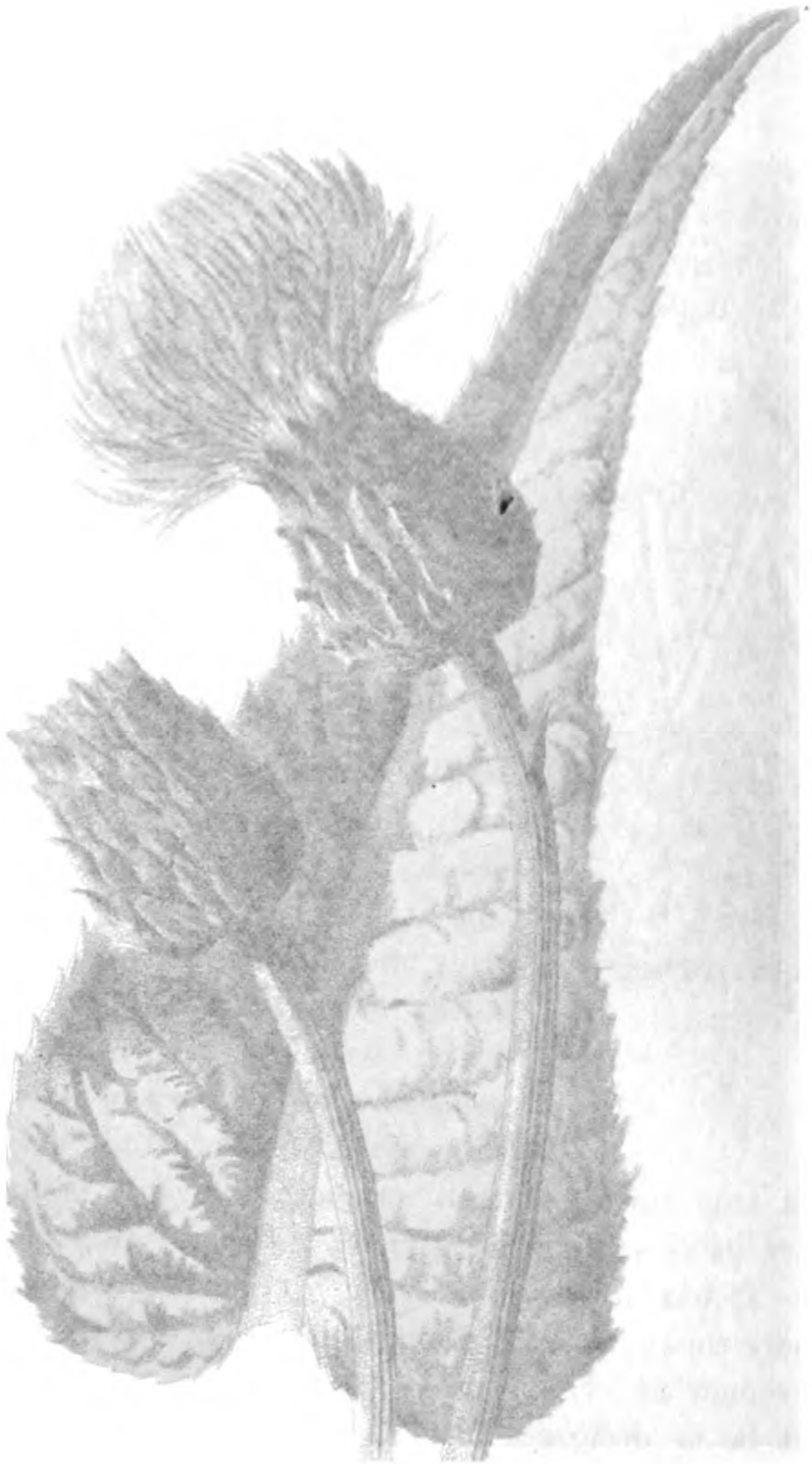


THE MELANCHOLY THISTLE.

Cnicus heterophyllus. Nat. Ord., Compositæ.

WE are so accustomed to the idea that a thistle must necessarily be fully armed with sharp and piercing spines, and altogether deserving of the motto of the Order of the Thistle, *Nemo me impune lacessit*—which may be freely translated as, "Nobody meddles with me without regretting it," or as the Scots more freely and tersely have it, "Ye daurna meddle wi' me"—that a thistle without this armature seems a thing contrary to nature. The subject of our plate is nevertheless a true thistle, though, as may be readily seen, it altogether lacks so essential a characteristic of its fellow-thistles. It has always appeared to us that its name, the melancholy thistle, is open to misconception, for it seems to cast somewhat of a slur on the plant, implying that it would be as disagreeably poignant as the others if it could, and that it regrets with unavailing grief that it is wanting in the power of making itself unpleasant. This is

not, however, the origin of the name, as the plant is so called from a belief in its virtue as a cure for melancholy. There would appear to have been a lack of the usual faith in these remedies in the present case; for Parkinson, in his Herbal, in speaking of the plant, says, "There are no other properties found out or knowne whereunto any of these thistles may be applyed than such which Dioscorides setteth downe, taken from Andreas, who brought in many figments and untruthes to bee used in physicke, that the roote thereof being bound into the veine in the legge or other parts of the body swollen with melancholy blood, doth quickly helpe and heale it." All who have ever studied our older literature will scarcely have failed to be struck with the frequent mention of "the melancholy" in the good old times of merrie England. In the Herbal to which we have just referred we find forty-one plants mentioned as "good against melancholy, and to purge it," while three plants suffice to "breede melancholy," so rarely does it seem to have been necessary to curb inveterate and irrepressible good spirits and mediæval Mark-Tapleyism.

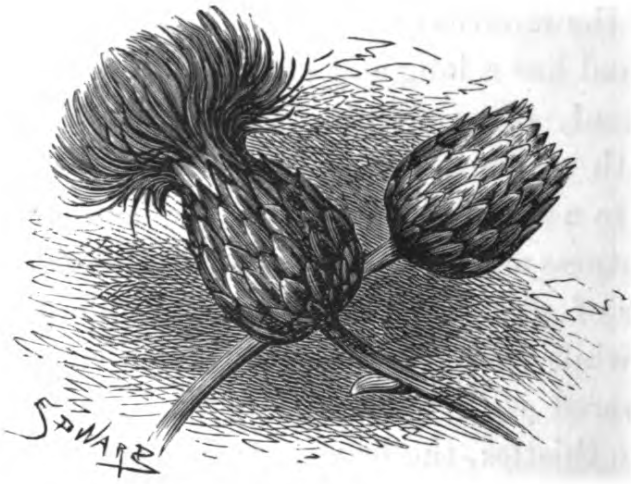
Much scholarship has been expended over the question of the species of thistle adopted as the national emblem of Scotland; but the form is too conventional to enable us now to assign any species in particular as the type. The first real heraldic use of the plant to which we find any reference would appear to be in the inventory of the property of James III. made at his death in 1458, where a hanging embroidered "with thrissils" is mentioned; and as this same drapery has the unicorn, an undoubted emblem of Scotland, introduced, we may fairly assume that the thistles, too, carry a symbolic significance. It was

undoubtedly a national badge in 1503, as in that year Dunbar wrote a poetic allegory entitled, "The Thrissill and the Rois," on the union of James IV. and the Princess Margaret of England. The expressive motto was not added till 1579, when we find it surrounding the thistle that occupies the centre of the coinage of James VI. About the middle of the fifteenth century, in the dawning light of the Reformation, the Town Council of Edinburgh substituted the thistle on their banner for their old patron saint, St. Giles. The melancholy thistle, our present species, was one of the personal badges of the ill-fated House of Stuart. They at other times bore the cotton thistle (*Onopordum Acanthium*).

The melancholy thistle is a plant of the North. It is abundantly met with in moist mountain pastures in Scotland and Northern England, but comes no farther south than the northern counties of Wales. It flowers throughout the months of July and August. The plant is a perennial, and has a long and creeping root. The stems are tall and stout, often deeply furrowed, and more or less covered with a white and cotton-like down. The whole plant rises to a height of some three or more feet, and has a certain lightness and grace that render it decidedly attractive to the lover of plants. The leaves clasp the stem at their bases, and while dark-green above, have their under-surfaces thickly covered with white and down-like hairs. Unlike most of the thistles, the leaves are not continued down the stem at all, and they are very much simpler in form than the ordinary type of thistle-foliage. The edges of the leaves have small bristle-like teeth. The flower-heads are borne singly on long stalks; and the bracts that form the involucre, the cup-like form whence the blossoms spring,

are closely oppressed, but quite destitute of the hard prickly extremities so characteristic of the other kinds of thistle.

In an old botanico-astrological book we find that the plant is considered to be under Capricorn, and therefore beneath the influence of both Saturn and Mars, one, it is held, ridding melancholy by sympathy, and the other by antipathy, though we should have thought that in the latter case the Jovian influence would have been invoked. The author prescribes a decoction of the thistle in wine, adding that it makes a man as merry as a cricket. How far this effect may be produced by the wine, and how far by the thistle, is possibly an open question. Solomon prescribes a very similar remedy, only without the thistle.



LILY OF THE VALLEY

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LILY OF THE VALLEY.

Convallaria Majalis. Nat. Ord., Liliaceæ.

MOST of our readers probably will be much more familiar with the lily of the valley as a garden flower than as a wild plant; but it is a true native, nevertheless, and may in many places be found in abundance. Our readers will bear in mind that it is a plant of the woods, so that it is only there or in sheltered coppices that there is any reasonable hope of finding it.

We may here, however, advantageously point out that the foliage and general effect of the broad-leaved garlic is very similar to that of the lily of the valley, and as both are found in the same situations at the same period of the year, more than one of our friends have been grievously disappointed by confounding the two. This perhaps is somewhat hard on the garlic, for if our readers will take the trouble to turn to the illustration of it in our

first volume, they will readily agree with us that its pure white clustering starry blossoms are very beautiful in themselves, and have a full claim to be admired for what they are, not scouted for what they fail to be. Londoners will read with interest that in the time of Ray the lily of the valley grew abundantly on Hampstead Heath. In St. Leonard's Forest, near Horsham, in Sussex, where we have seen it in great abundance, the local legend tells us that the patron saint of the district—St. Leonard—waged a mortal combat for many hours with a great and terrible dragon. Though in the end victorious, the saintly dragon-slayer by no means escaped scatheless, and these large masses of snowy blossoms, scattered over the forest, sprang from his blood, shed during that dread encounter. Any one who, in this sceptical age, has doubts, can go and see the flowers for himself.

The lily of the valley is very common in some of our English counties, very local or altogether wanting in others, while in Ireland and Scotland it would appear to be scarcely indigenous. It is sometimes called the May lily, many of the old names of plants, as the pasque-flower, Lent lily, St. John's wort, and numerous others, having reference to the date of flowering. It is in France the *Muguet de mai*, in Germany the *Maiblume*. Its specific name, *Majalis*, or *Maialis*, signifies "that which belongs to May;" hence the old astrological books place the plant under the dominion of Mercury, for Maia, the daughter of Atlas, was the mother of Mercury or Hermes. It is also called convall-lily and lily-constancy by the old herbalists, and in some parts of the country its local name is ladder-to-heaven. Its spotless purity of colour and lowly humility were probably the cause of the bestowal of the last name, a name that has no

doubt descended from mediæval days. The old monkish herbalists often based their nomenclature on associations of a religious character, and united their plant-names with the legends of the saints, or the services of the Church's calendar.

> "To the curious eye
> A little monitor presents her page
> Of choice instruction, with her snowy bells—
> The lily of the vale. She not affects
> The public walk, nor gaze of noonday sun;
> She to no state or dignity aspires,
> But silent and alone puts on her suit,
> And sheds her lasting perfume, but for which
> We had not known there was a thing so sweet
> Hid in the gloomy shade." *

As an ornamental plant few of our species have a greater claim to a place in the garden, for few others can boast of so delicate a beauty, so rich a fragrance. It is most easy of cultivation, requiring only to be placed in a shaded corner.

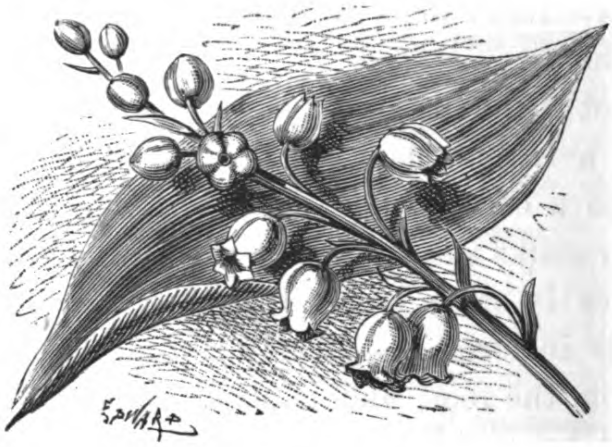
The generic name, *Convallaria,* is from the Latin word for a valley, and is bestowed in obvious reference to the sheltered woodland dells in which the convall-lily finds a congenial home.

The root of the lily of the valley is fibrous and perennial, extending a little below the surface of the ground, and reaching to a considerable distance. The leaves grow in pairs, their stalks sheathing one within the other. One of these leaves is often larger than the other, and both are very simple in form, and deeply ribbed. The flower-stalk springs from the root, and is about equal in length to the leaves. It bears a loose raceme of drooping, bell-shaped flowers of a pure white; hence, in Beaumont and Fletcher's

* Hurdis.

sonnet on the Spring, we find them referred to as "lilies, whiter than the snow."

In the wild state its blossoms are rarely succeeded by the fruit, but it produces it readily under cultivation. This fruit is a rather large berry, something in size between a fine black-currant and a small cherry, and of a brilliant red. "They write that the water of the flowers of Lyllie conuall, distilled with good strong wine, and drunken in the quantitie of a sponefull, restoreth speech to them that are fallen into the apoplexie, and that it is good for them that have the paulsie and gout. The same water, as they say, does strengthen the memorie, and restoreth it again to his naturall vigor when through sickness it is diminished." Another old writer tells us to take the flowers and put them in a glass, and place it in an ant-hill. At the end of a month "you shall find a liquor that appeaseth the paine and grief of the gout, being outwardly applied, which is commended to be most excellent."



NETTLE-LEAVED BELL-FLOWER

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NETTLE-LEAVED BELL-FLOWER.

Campanula Trachelium. Nat. Ord., Campanulaceæ.

WE can well remember the delight we ourselves felt on first coming across this beautiful flower, and those of our readers who are familiar with it will fully share our feelings. It appears to be more freely met with in the northern districts of Britain than in the south, though it is pretty commonly distributed throughout the country. The nettle-leaved bell-flower should be looked for in woods, though we have often seen it in sheltered hedgerows, and especially those overhung with trees. Its general habitat is very similar to that of another charming plant, the foxglove, and the large size and rich colour of its blossoms tend to make it very conspicuous. Any one who has at all studied the matter will have been struck by the comparative rarity of blue or purple flowers in our flora, yellow, white,

and pink being the prevailing colours; and it is no doubt partly on this account that we, even involuntarily, admire the more the soft turquoise-blue of the forget-me-not, the deeper blue of the germander speedwell, or the rich empurpled azure of the wild hyacinth.

One old name of the flower is the Canterbury-bell. It is difficult to see why the name of this particular place should be so identified with the plant. On turning to Prior's most valuable work on "The Popular Names of British Plants," we find that he says, "So named by Gerarde, from growing very plentifully in the low woods about Canterbury." On turning to the old herbalist's pages to verify this, it does not in any way appear that Gerarde himself bestowed the name. He simply states that the plant "growes very plentifully in the low woods and hedge-rowes of Kent, about Canterbury, Sittingbourne, Gravesend, Southfleet, and Greenehyth;" but he also records it as occurring at Greenwich, and "in most of the pastures about Watford and Bushey, fifteene miles from London." All these localities are in the districts that a man like Gerarde, a resident in the metropolis, might be expected to know well.

To make matters more involved, Gerarde, without any valid reason, calls another species of campanula the Coventry-bell. He seems to have seen these "pleasant bel-floures" growing freely at Coventry and Canterbury respectively, and as the natives gave them the local names, he adopted them without fully considering that plants there abundant might be at least as common in fifty other localities. We have seen the Canterbury-bell in profusion in Yorkshire, and about Kendal the plant is so abundant that it is worth the while of the poorer people to collect the young shoots, and

use them as a pot-herb. It has been suggested that at a time when so many of our plants received semi-religious titles, the Canterbury-bell may have been associated with the sainted Thomas à Becket, as thousands of pilgrims flocked yearly to his shrine in the cathedral, and a plant so abundant in the district would be very familiar to them, and would afterwards, whenever and wherever else seen, serve as a memorial flower. Many of the old monkish names are now dying out, but we may just point out, without staying to point out the wherefore, that the bulbous crowfoot was dedicated to St. Anthony, the ragwort to St. James, the hypericum to St. John, the cowslip to St. Peter, while other plants were associated with Saints Barbara, Barnabas, Patrick, Christopher, and many others.

The nettle-leaved bell-flower is a rather variable species, but it will always be readily identified by its foliage and its "rough sharp-pointed leaves, cut about the edges like the teeth of a sawe, and so like the leaues of nettles, that it is hard to know the one from the other, but by touching them." The upper leaves are small, somewhat long in proportion to their breadth, and upon very short foot-stalks, while the lower ones are broad and large, heart-shaped, and having long stems. The flower-stalks are few in number, and spring from the axils of the upper leaves. The corolla is campanulate or bell-shaped, hence the scientific generic name; and the resemblance is so far good that blue-bell, or bell-flower, is the popular name for all the species. The five stiff-looking segments of the calyx, and the five large anthers in the centre, are other prominent features. The plant is a perennial, and flowers during July, August, and September. It attains to a height of some two or three feet,

the stem being erect, rather stiff-looking, and the whole plant more or less clothed with hairs.

Besides the names we have given, the plant is sometimes called the great throat-wort, more possibly from the shape of its flowers suggesting its remedial application than from any inherent medicinal value, though the old authors do not fail to point out its service in "all paines and swellings thereof, being excellent good against the inflammation of the throte, and all manner of cankers and ulcerations of the mouth." As the throat had to be "gargarized" with a decoction of this plant and "allom," we may perhaps assume that the greater part of the virtue lay in the astringency of the latter. Sir Walter Scott, in his poem of "Rokeby," mentions "the throat-wort with its azure bells."

CORN CROWFOOT

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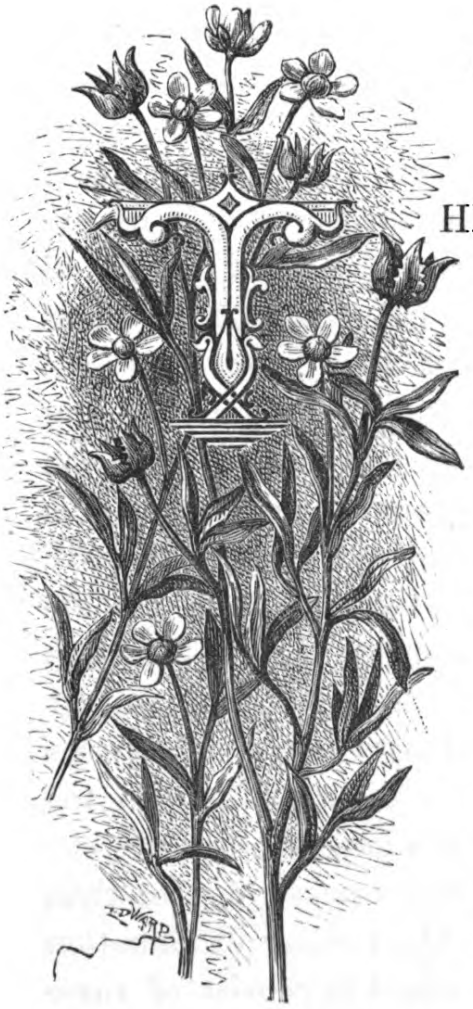

CORN CROWFOOT.

Ranunculus arvensis. Nat. Ord., Ranunculaceæ.

THE corn crowfoot, like the scarlet poppy or the corn marygold, is one of the flowers that are to be specially searched for in corn-fields, though, like the flowers we have named, it may occasionally be found growing up amongst other crops. Hence one old writer terms it "the crowfoot of the ploughed fields," and another "the crowfoot of the fallowed field"; and its specific name *arvensis* and the old herbal name *Ranunculus arvorum* each point in the same direction and carry the same significance. Unlike many of our English plants, it seems to have no alternative names, but is always and everywhere the corn crowfoot, with the exception of the very local name of hedgehog, a name derived from the prickly ball of seeds. Our readers will on inspection of our illustration feel with us no doubt that the name is not by any means a bad one, and shows

a little more observation and sense than many of the names bestowed by country folk on the plants around them.

The corn crowfoot is an annual; it flowers during May, June, and July, and its seeds ripen soon after. It is one of those plants that, from the length of their flowering duration, may be found in all stages simultaneously; the opening bud, the fully-expanded flower, and the ripened seed may all be seen at the same time. The roots of the corn crowfoot are simple and fibrous, so that the plant could easily be eradicated; but the shattered seed readily vegetates, and the next season sees the plant in as full possession of the ground as ever. The stems of the plant are in general direction upright, a foot or so in height, and rather freely branching or forking. Before flowering the branches are somewhat nodding, but become rigid and erect afterwards. The general colour of the stems is a pale green, but near the joints they are often empurpled. The whole plant is smooth in texture. The leaves are mostly alternate in arrangement on the stems, though some of the upper ones are opposite; the upper leaves are on short stalks, the lower ones on longer ones. The forms of the leaves, too, vary according to their position on the plant, for while all are deeply cut into narrow segments, the upper ones show this in a still more marked degree than those near the base of the plant. On a closer examination of any of the leaves, they will be found to consist of three plainly-marked divisions, and these again are each more or less cut up into finer strap-like parts. Except for the colour, the general effect of the foliage is not unlike some of our common species of sea-weed. The leaves have not the rich clear green tint we ordinarily associate with vegetation, but are dull in colour, "resembling," as Gerarde

says, "the leaves of sampire, but nothing so greene, but rather of an overworne colour." This last adjective, though quaint, is a peculiarly happy and descriptive one, and very aptly describes the dull and somewhat faded-looking colour of the foliage. The flowers of the corn crowfoot are of rather a pale yellow; they have neither the rich golden hue nor the large size of the blossoms of most of its brother crowfoots or buttercups. By the way, we may here remark that in all the old herbals the plural of crowfoot is crowfeet. The corolla consists of five ovate petals, glossy on their inner surfaces, and rather conspicuously veined on the outer. The spreading calyx, made up of five sepals, is whitish yellow —in fact, in almost all the ranunculuses we find it a sort of faint colour echo of the corolla, instead of the decided green tint that we expect to see in most flowers. The stamens are comparatively few in number. The large and flattened carpels that form the fruit of the plant are a very curious and interesting feature, the prickles with which they are covered on each side tending to render them noticeable. In the small-flowered ranunculus, *R. parviflorus*, the carpels are covered with small tubercles, but the feature is by no means so conspicuous as in the present plant. In our remarks on preceding species of the genus we have explained the significance of the generic name, a significance far more appropriate in the case of many of the other crowfoots than in the present instance, as our plant is no lover of the damp low-lying meadow-lands, or the ditches and streams that are the home of most of the other members of the genus. The specific name is from the Latin word *arvum*, a ploughed field, and exactly describes the habitat of the plant. All these plants are called crowfoot from a fancied resemblance between a bird's foot and the form of the foliage.

The mediæval writers received in full faith much that the still earlier authorities asserted, hence their writing is a good deal taken up with endeavours to identify the plants enumerated by such authors as Pliny and Dioscorides, and described by them not so much from a botanical point of view as a medicinal. The ancient writers ascribed the most wonderful healing powers to the various plants, and it became therefore a matter of no small importance to duly discriminate and identify them in order that full benefit might be taken of the wealth of remedial virtue thus revealed. As Pliny has a *pes galli* and Dioscorides a *pes corvi*, we may easily see how such names obtained a footing with our early writers.

The corn crowfoot is the most potent of a potent genus. Three ounces of its juice given to a dog killed it in four minutes, and though animals as a rule instinctively avoid the plant, sheep have been killed through eating it. Fortunately it is not a plant of the pastures, and as it grows chiefly amidst the corn and amongst crops where cattle have no business to be, its deleterious qualities do no harm.

RED MEADOW-CLOVER.

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RED MEADOW CLOVER.

Trifolium pratense. Nat. Ord., Leguminosæ.

EW of our plants probably will be a more familiar wild flower to our readers than the one here figured, for it springs up abundantly by almost every road-side, and thrives in every meadow. It may be looked for—if indeed such an expression be admissible in the case of a plant that needs no searching after—from May until September. Its specific name, *pratense,* refers to its home in the meadows and pasture-lands; and in France, too, it is the *tréfle des prés.* Its Welsh name is *Meillionen goch.* The common name, trefoil, and the generic name, *Trifolium,* each testify to the same habit of growth—the combination of three leaflets into one leaf. There are from fifteen to twenty species of trefoil to be found in this country, of which half are

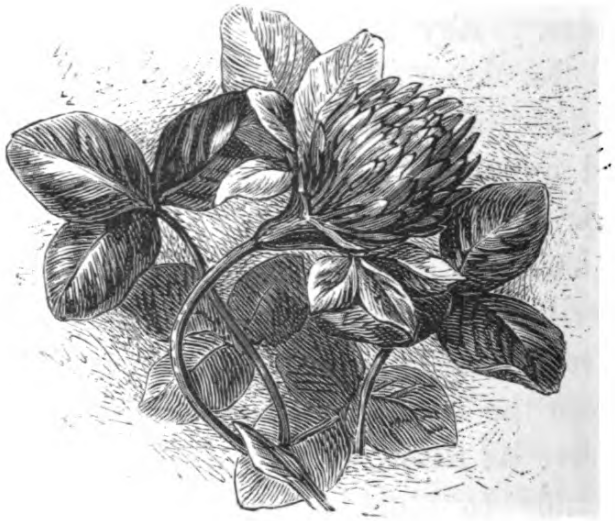
pasture plants. Shakespeare gives the word as "triffoly," and other old writers have "trifolie," and other slight deviations from the root-word. In some old herbals it is the "triafoliola." The other familiar name, clover, has two distinct derivations accorded to it, and either is so far interesting that one can only regret that a second should arise to throw a shade of doubt upon the first. "How happy could I be with either, were t'other dear charmer away," to quote a well-known line from perhaps a less well-known source, the "Beggar's Opera "of John Gay. The plant was by the Anglo-Saxons called "cloeferwort," on account of its deeply-cleft leaves; and as the Anglo-Saxon words, though they vary to "cloefer" and "cloefra," still keep closely in sound and sense to the one we have first quoted, we may be well content to see in these the origin of our modern word. Prior, on the other hand, in his excellent work on the popular names of British plants, finds a significance in the Latin word *clava*, a cudgel or club, though in what respect the plant resembles a club he does not mention. Granting, however, this foundation, which he supports by a reference to the "clava trinodis," or three-knotted club of Hercules, he indicates the curious fact that our "clubs" in playing-cards are trefoils in form. Those who find themselves still open to a third theory, may perhaps accept the fact that the plant, often called Dutch clover, is largely cultivated among us, and that the seed is chiefly imported from Holland, in which country the plant is called *klaver*. The red clover was first introduced into notice as a fodder plant by Sir Richard Western, our ambassador to the Low Countries, in the year 1645, but it seems to have been long received with but little favour; thus, in turning to Martyn's "Flora Rustica," published in 1792, we find the following

passage:—"It has been long under culture in Flanders and other countries, and has at length surmounted inveterate prejudice in most parts of these kingdoms. Though it was strongly recommended, and shown experimentally to be excellent in the sixteenth century, yet at the end of the seventeenth it was asked what could be the reason why the great advantage got in Staffordshire and Worcestershire by sowing of clover, can scarce prevail with any in Cheshire and Lancashire to sow an handful upon the same kind of land." The red clover is by some agricultural writers called "marl grass." It thrives upon almost any kind of soil, but best upon clay and loam. It is often sown with corn in spring, and allowed to grow on after the cereal is reaped, and may very profitably occupy the ground alone the following year. Twenty pounds of seed an acre will yield about ten tons of green food, or two to three tons of excellent hay. As a green crop it needs to be sparingly employed, as stock will almost too readily consume it, to their subsequent injury, and its succulent nature necessitates careful drying before stacking as hay, or it will heat and presently ignite. Ray and some of our earlier botanists distinguished the clover of cultivation as a different species from that of the road-side; but there is no inherent distinction; and any slight difference of appearance or extra luxuriance springs from the results of culture, such as the careful selection of seed, richer soil, and such like influences. By some old writers the plant is called "meadow honeysuckle," not from its resemblance to the well-known plant of that name, but from the same reason that caused the true honeysuckle to receive its name, as any of our readers who will take the trouble to pluck a flower off either plant and taste it will readily perceive. Country children often pick

the flower-heads for the purpose of thus extracting the sweetness from them; and in the district where we write the white dead nettle too is called a "honey-suck."

Culpeper, in his "Herbal," speaks of the meadow clover as "so well known, especially by the name of honeysuckles, that I need not describe it." A clover field in full blossom is not only a beautiful sight, while filling the balmy air of summer with the fragrance of its countless blossoms, but it is a scene of unwearying industry and rapturous enjoyment, as the bees by thousands are rifling its sweets, and the butterflies, more numerous there than anywhere else, sip the nectar from the tubular flowers. Many a "clouded yellow" in our younger days have we ardently pursued as it danced over the purple sea of blossom.

"The leaues boiled with a little barrowes grease, and vsed as a pultis, take away hot swellings and inflammation. Pliny writeth, and setteth it downe for certaine, that the leaues hereof do tremble, and stand right up against the comming of a storme or tempest."



COLTSFOOT

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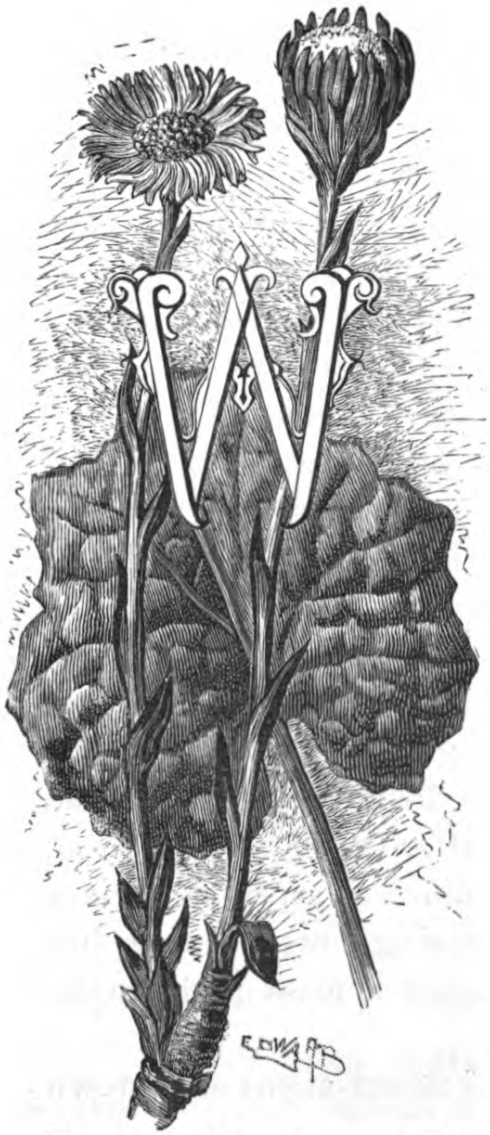

COLTSFOOT.

Tussilago Farfara. Nat. Ord., Compositæ.

WHEREVER we find a moist clayey soil, there ordinarily the coltsfoot is only too abundant. It betokens stiff poor ground, and proves itself a very troublesome adjunct to it, as it spreads freely, and can scarcely ever be eradicated when it has once taken possession. Its roots are very long, and, to quote an old writer, "very fat." They are about the thickness of a finger really, creeping freely underground, and as the root-stock is perennial, they propagate themselves freely far and wide. The most vigorous attempts to dispossess them seem of little avail, as the long-spreading fibres break in the ground, and any small portion left behind seems sufficient to reinstate the plant in a short time in all its former luxuriance. At the same time, we hesitate to assert that its influence is wholly bad, for,

nuisance as it may prove itself to the agriculturist, the poor ground in which it grows is perhaps quite as responsible for poor success in the crops as any malign influence of coltsfoot; and where, as in hedgerows and railway embankments, the ground is not under cultivation, its presence is a decided gain, as it spots with its golden stars and clothes with its verdure many a piece of ground that would else look poor and bare. To this, its picturesque aspect, must be added its medicinal service, which is by no means insignificant; and these together should remove it from the category of noxious weeds. The leaves are large and of a curiously angular form, that may be familiarly described as heart-shaped in general outline, but bitten into all round, so as to produce a series of sharp points separated by concave curves. The under surface is thickly covered with a white woolly or downy substance, and a little of the same sort of thing often appears on the upper side, but is easily removable when the hand is passed over it. The greater the amount, the greyer of course the effect of the foliage. The leaves do not ordinarily appear at all until after the flowering season, so that the plant presents a very different aspect at various times of the year, being in the spring flower-bearing but leafless, and throughout the summer a mass of flowerless foliage.

In the early spring numerous flower-stems are thrown up; each rises directly from the ground, and bears on its summit a single flower. These tufts of flowering stems are about six or eight inches high, erect, bear numerous small scales, and are more or less covered with a loose cottony down. When the flowers close, the stem bends downwards, throwing the decaying blossom into a pendant

position, but as the seeds ripen it stiffens again, and re-assumes the erect position, bearing on its summit the globular head of seed, very similar to that of the dandelion, hawkweed, groundsell, and other members of the order. The dispersion of this by the wind aids in the distribution of the plant over the district, though the creeping root-stalks are the most potent agencies in maintaining and increasing it. Both the florets of the disk, the central portion, and the surrounding rays are bright yellow. It is one of the first flowers of the spring, and may be looked for in March and April. We remember seeing some time ago an article in a botanical paper on the production and distribution of seeds, in which a root of the coltsfoot was referred to as having come under observation. The flowers it threw up were all counted, and then the seeds it finally bore duly estimated, and the number, we remember, was 22,500. The struggle for existence is severe, or we might almost expect, after studying such alarming statistics, to find all Britain carpeted with coltsfoot. The plant is so very dissimilar in appearance at different periods that both Gerarde and Parkinson give two illustrations: one being entitled "Tussilago florens, Coltsfoot in floure," and the other "Tussilaginis folia, the leaves of Coltsfoot," or, "Tussilago herba sine flore." "Fole-foot hath many white and long creeping roots, from which rise up naked stalkes about a spanne long, bearing at the top yellow floures, which change into down, and are carried away with the winde; when the stalk and seed is perished, there appeare springing out of the earth many broad leaves, green above, and next the ground of a white, hoarie, or grayish colour. Seldom, or never, shall you find leaves and floures at once, but the floures are past before

the leaves come out of the ground; as may appeare by the first picture, which setteth forth the naked stalkes and floures, and by the second, which portraiteth the leaves onely." Pliny and many of the older botanists thought that the coltsfoot was without flowers, an error that is scarcely excusable, for, notwithstanding the fact that the flowers appear in a general way before the leaves, small leaves often begin to make their appearance before the flowering season is over. Though these diminutive leaves bear no proportion to the size they afterwards attain, they are similar in character and appearance. The custom of smoking the leaves of the plant is of very ancient date. Pliny directs the dried leaves and roots of coltsfoot to be burnt, and the smoke drawn into the mouth through a reed and swallowed, as a remedy for an obstinate cough, the patient sipping a little wine between each inhalation. To derive the full benefit from it, it had to be burnt on cypress charcoal. The leaves were formerly much gathered in rustic districts for the manufacture of "British tobacco," and when mixed with yarrow and rose-leaves were said to be good for asthma. A candied preparation was also made with sugar, for the relief of colds.

DEVIL'S-BIT SCABIOUS.

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DEVIL'S-BIT SCABIOUS

DEVIL'S-BIT SCABIOUS.

Scabiosa succisa. Nat. Ord., Dipsacaceæ.

THE devil's-bit scabious is one of the common plants of our meadows and pastures, and as it comes at a time when there are few other blossoms to distract our attention from it, it can scarcely fail to be noticed. Most of the other meadow flowers appear and pass away at an earlier period of the year; the delicate yellow cowslips, the golden buttercups and dandelions, the great ox-eye daisies, have all come and gone before the rich purple globes of blossom of the scabious, or the lighter purple bells of the harebell make their appearance. The peculiarly deep colour of the flowers of the present species of scabious is in itself a feature that attracts attention, as we have few other blossoms of that strength of tint. There is a second common species of scabious, also to be found amongst our illustrations, that has larger flowers, and these are of a delicate

lilac colour. Both species flower in the autumn, and will be found in very similar situations, though the devil's-bit, as far as our experience goes, will ordinarily be found in the open meadow-ground, or on the breezy upland, while the other species is more a plant of the hedgerows.

The root of the species now illustrated is, when fully grown, nearly the thickness of one's finger, and ends in so abrupt a way as almost to suggest the idea that it had been snapped or bitten off, a peculiarity that has given it a place in monkish legend, as we shall presently see. From this short and thick root-stock proceed many long white fibrous roots. In the first year of the plant's existence, the root is very like a diminutive carrot or radish in shape. It then becomes woody and dies away, the upper part excepted; as it decays and falls away, the gnawed or broken look results. The portion left throws out numerous lateral roots, and these compensate for the portion that has perished. The stalks are from a foot to a foot and a half high, nearly or quite upright, and very slightly branching. They are often more or less clothed with rough hairs, giving them a somewhat downy surface. The leaves vary in form, according to their position on the plant, but all are clothed with coarse hairs, and have a rough feeling to the touch. The leaves at the base of the plant are oval or rounded, running a little way down the short stems on which they are borne. They are what is botanically termed entire—or, in other words, their outline is a simple continuous line, without any of the notching or toothing that is so familiar a feature to us in many kinds of foliage. The upper leaves are few in number, without stalks, much longer in proportion to their breadth, and often sparingly toothed or lobed. They grow in pairs on the stem, and have their bases

adherent together. The heads of flowers are almost globular; they are borne on long stalks that rise from the axils of the upper leaves. On a closer examination it will be found that these flower-heads are composed of numerous florets, all very much the same size, the outer and lower ones being perhaps a little larger, but not by any means in so marked a degree as we find in the inflorescence of many flowers built up of a mass of florets. The corolla is all in one piece, like a convolvulus, but divided into four segments or lobes, three being about equal in size, but the fourth, the upper one, a little larger. The four stamens with which each flower is provided are a very conspicuous feature, the anthers being large, and borne upon filaments that are almost as long again as the corolla. The plant is a perennial, and flowers during July, August, September, and October.

To entomologists the plant will have a certain interest, as being the food of the larvæ of some few of our butterflies and moths; of these we need here only mention two. The first of these is the larva of the beautiful Fritillary butterfly, known to the men of science as *Melitæa Artemis*. The perfect insect is a rich orange-red, spotted and chequered with black, and the caterpillar or larva is black, with a lateral band of white spots. It is found on the scabious and plantain during April. The second species is the moth known as *Eupithecia satyrata*. The larva will be found on scabious during June. It is a whitish-grey in colour, a row of rather dull-red triangular spots being its only adornment.

The plant derives its common name from an old belief that "the divell," to quote an old writer, "for the envie that he beareth to mankind, bit it off at the root, because it would else be good for many uses." This legend seems to have been very widely spread abroad, for the plant bears only

this one name, and that, too, not only in England, but on the Continent. With the monks it was the *Morsus diaboli*, while in Germany it is the *Teufels abbiss*, and in France the *Morsure du diable*. The Satanic motive influencing the destruction is accounted for in two different directions, that are rather contradictory. In the "Ortus Sanitatis" Oribasius says that "with this root the devil practised such power that the Mother of God, out of compassion for man, took from him the means to do so with it any more, and in the great vexation that he had that the power was gone from him he bit it off, so that it grows no more to this day." Here it will be seen that the plant was accredited with evil powers; but another version ascribes an entirely different origin to the diabolic malevolence. Gerarde, no believer in the story evidently, says that "old fantasticke charmers report that the divell did bite it for enuie, because it is an herbe that hath so many good vertues, and so beneficiall to mankinde." Parkinson quotes the legend in the same way, but adds, "which is so grosse and senselesse a relation that I merveile at the former times' stupidity to receive as true such a fiction."

PENNYWORT.

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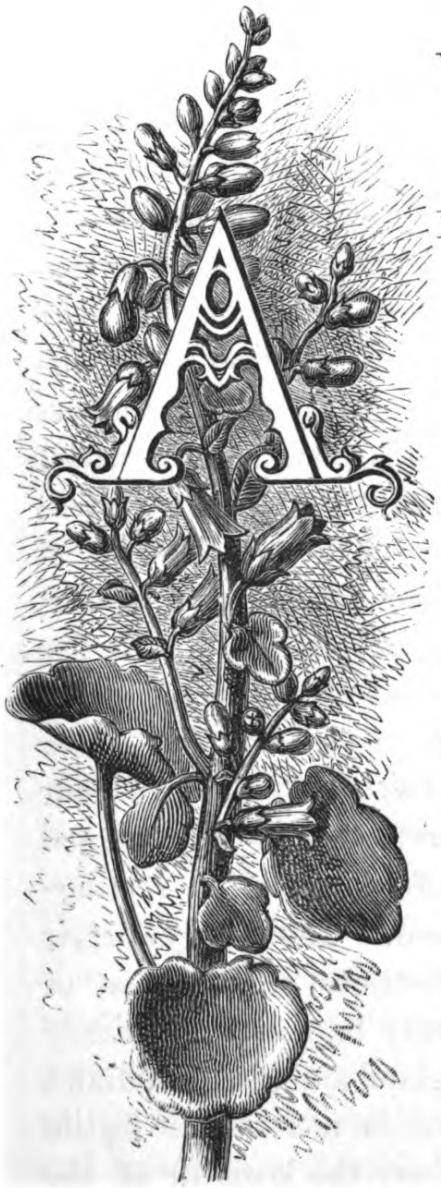


WALL PENNYWORT.

Cotyledon Umbilicus. Nat. Ord., Crassulaceæ.

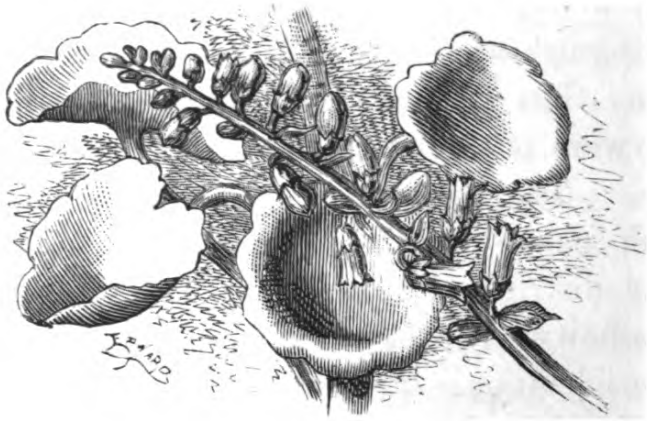
ALL lovers of plants will doubtless recall many a pleasant ramble in spots that to the uninitiated appeared hopelessly unlikely to yield any floral results. It is precisely in such spots that we must search for not a few plants that, commonly enough found in these localities, may be searched for elsewhere in vain. Amidst the rough shingle of the sea-shore or the desolate sand-hills that fringe its margin we find the brilliant yellow horned poppy, the crimson-blossomed thrift, the beautiful stars of the sea-aster, or the quaint foliage of the sea-holly. The marshy and boggy waste in like manner has its special flora—the golden flowers of the asphodel, the pale purple bells of the ivy-leaved campanula, and the pale pink blossoms of the delicate bog pimpernel form a trio not easily surpassed

in beauty. Our present plant, the pennywort, we find on another of the "happy hunting grounds" of the botanist—old walls and roofs. Wherever in our rural walks we come across an old brick wall or stone fence, we may generally expect to find some one or two things at least, the waving fronds of the hart's-tongue fern or some of the more delicate wall-growing ferns, as the black spleenwort or the wall-rue, the mass of golden yellow stars or succulent leaves of the stonecrop, a name in itself suggestive; the fragrant blossoms of the plant pre-eminently called the wallflower, the delicate foliage and blossoms of the cymbalaria or ivy-leafed toad-flax, or perchance the curious plant we have here illustrated. The wall pennywort is not so freely distributed as many of our plants, though in many localities it is abundantly met with. Those of our readers whose idea of a wall is derived from a town experience, will hardly realise how so formal and perpendicular a mass of brickwork could afford much spoil to the lover of plants, nor indeed can it; but those who are familiar with the fences, half natural rock, half built of rough hewn stone, adherent by the roughest cementing or by their own sheer weight, that are so picturesque a feature in some of our country districts, will readily understand how their rugged tops and numerous interstices afford many a resting-place for the plants that grace them. The pennywort is chiefly found in the high-lying districts in the west of England and Scotland, though it may be not uncommonly seen along the southern coast of England and in the midland and eastern counties. Its true home is not in the fertile flats of the east of England, but where the keen air of the mountain side can fan it and the rocky masses give it a congenial resting-place.

The order to which the pennywort belongs, the *Crassulaceæ*, has not many British representatives. On its more especially technical botanical characteristics it would be altogether foreign to our present purpose to enlarge, but one conspicuous feature we may mention, the thick fleshy leaves of all the species included in it. Of this feature the present plant affords a good illustration, and this may be seen again in the foliage of the common house-leek, the orpine or live-long, and the stone-crop. This succulence enables the plants to thrive in localities where most plants would wither and dry up, and thus causes them to retain their vitality unimpaired for a long period.

The common English name of the plant is clearly derived from the shape of the leaves, their rounded outline being to some extent suggestive possibly of money. The older writers were very great at finding these resemblances, and it is not always easy to feel the same satisfaction in them that they appear to have done. This particular idea has been a good deal worked, and a certain amount of ambiguity may arise unless we are careful to really distinguish species that have in name at least much in common: thus we have the pennycress, the pennygrass, the moneywort or herb-twopence, the marsh pennywort, and others. The moneywort we have already figured. The marsh pennywort is a small bog plant, and is abundantly distributed throughout Britain, but has no botanical affinity with the plant more especially under our present consideration. Pennygrass is an old name for the yellow rattle, the subject of another of our illustrations, and was bestowed upon it from the form of its ripening seed-vessels. The wall pennywort is by some old writers called navelwort and kidneywort.

But little description of our plant will be needed, as our illustration indicates the more salient points. The leaves, it will be seen, are like those of the Indian cress of the gardens (the plant ordinarily called the nasturtium in seedsmen's catalogues), as the stalk is often united to them near the centre of their under surface. This type is termed botanically peltate or shield-like. The leaves mostly spring direct from the root; their thick and fleshy texture prevents the veining becoming as conspicuous as in most other plants, and each leaf is slightly concave, having a more or less deeply-marked depression in the centre. This feature suggests the generic name Cotyledon, a term derived from the Greek word for cup. The flowering stems are from six inches to a foot high, and bear a long raceme of pendulous flowers. The calyx is small and five-cleft, the corolla bell-shaped and having five small teeth at what we may term the rim of the bell. The plant is a perennial, and flowers during June, July, and August.



SMALL KNAPWEED.

SMALL KNAPWEED.

Centaurea nigra. *Nat. Ord.*, *Compositæ.*

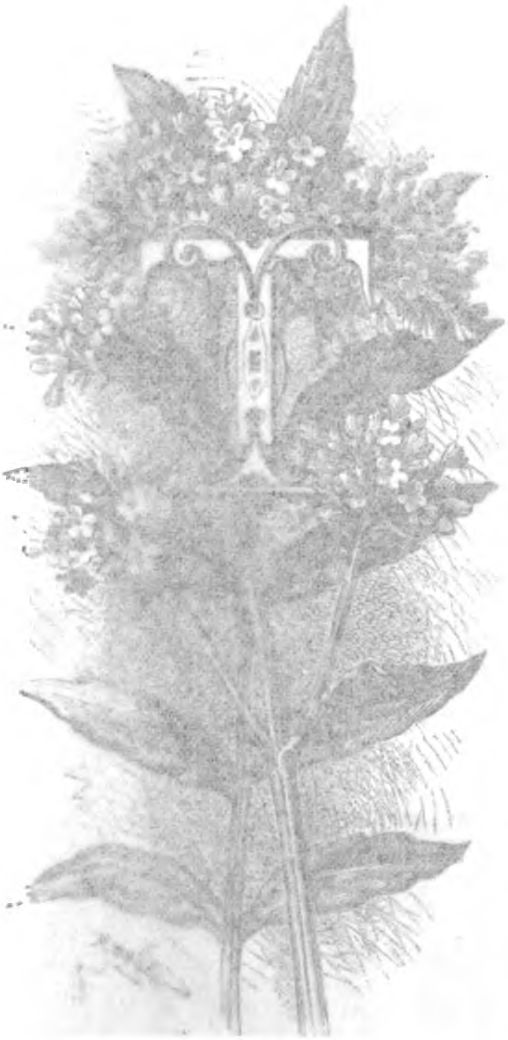
WHILE the small knapweed has not the showy attractiveness of the greater knapweed, or *Centaurea Scabiosa* (a plant we also include in our series), it is one of our most familiar wild flowers, and must certainly not be overlooked by us. It thrives excellently in pastures, and its crimson heads of blossom may be seen springing from the midst of the surrounding verdure on almost every hedge-bank. The plant is a perennial, and may be found in flower from early in June until well in September. It has much of the general appearance of the thistle, but the formidable spines so characteristic of the thistles are absent. Though its crimson heads attract us as they spring up in the meadows, the farmer is conscious of an altogether different feeling, for the small knapweed is a harsh and wiry plant—as all who have ever tried to gather a piece can bear us full witness—and it is seldom touched by

horses or cattle, either when growing, or when dried in the hay. It is, moreover, a difficult plant to extirpate, and its tough stems blunt the mower's scythe as well as give him extra trouble in mowing, by the resistance they offer to the onward swing before which the grass falls resistless. Martyn, in his "Flora rustica," speaks of it emphatically, we see, as "a bad weed among grass." It increases very freely by means of its roots. The stems of the small knapweed are erect in general direction, but freely branched. They attain a height of from one to two feet, or sometimes in hedge-banks even more than this. There is often a slight downy substance on the stems, while the stems themselves, and especially the lower portions of them, are not unfrequently tinged a purplish-red. The lateral branches spring in an alternate arrangement from the central stems. These lateral stems have a curious way of increasing in bulk and thickness as they approach the flower-heads. The leaves are rather rough and harsh to the touch, and of a somewhat dull green, and many of them have a slightly cottony under-surface. The leaves vary in form, according to their position on the plant, the upper leaves being of the form called lanceolate, or like a lance-head in shape; these are almost, or entirely, without any unevenness of outline, and those that are nearest the flower-heads are generally much smaller than the others. As the eye runs down the plant, we find the margins of the leaves growing more notched. The lower leaves are much longer and broader, too, in proportion to their length, than the upper, and their outlines are often deeply serrated or lobed. The involucres, whence the florets spring, are globular and dense, thickly clothed with overlapping scales that are much fringed at their margins. These scales are very

dark in colour. The florets are of a rich crimson tint, and either all fertile and similar in character, or sometimes found with an outer row of larger and neuter florets, as we see in the greater knapweed, *C. Scabiosa*, or the corn bluebottle, *C. Cyanus*. As we figure both these latter in our series, a comparison between them and our present illustration, that of the un-rayed lesser knapweed, can readily be made. The aspect of the plant under these two conditions is so different, that many of the older botanists have made two distinct species, the form we figure being the *C. nigra*, and the type having the outer ring of larger rays being the *C. nigrescens*. It is now, however, satisfactorily ascertained that the two forms are merely modifications of the same thing, and the present form being considerably the commoner is accepted as the type form, and the other as a variety of it. Ray, in his "Historia plantarum," a folio of which the first edition was published in the year 1686, affirms that the variety is no less frequently met with than the common sort in the west of England, and tells us that some flower-heads were even brought to him, in which not only the outer ring but the whole head, was composed of neutral florets. This latter peculiarity is very exceptional, and, in spite of Ray's assertion to the contrary, we must still believe, judging from our own observation over the country, east, west, north, and south, that the rayed variety is almost always a rarity compared with the typical form—the form we illustrate. We sometimes find plants in which the leaves are a good deal more cut than in the ordinary examples, and, like almost all crimson or purple flowers, we may, though very rarely, find the plant varying with white florets. Martyn quotes many provincial names,

as, knap-weed, knop-weed, knob-weed, horse-knops, hard-head, hard-irons, horse-knot, and matfellon; and to these may be added others, as, bottle-weed, bull-weed, churl's-head, and logger-head. Many of these names clearly at once refer to the hard, knob-like heads of the flowers, knap and knop being evidently corruptions, provincialisms, and old English equivalents for the word knob—in fact, knop may be found in this sense in the Bible. Hard-head arrives by another road at the same significance. The words horse-knops and horse-knot carry in their second syllables a meaning we are already familiar with, and the first half of the words is an illustration of the use of animal names to express various depreciatory qualifications. Thus the use of the prefix dog almost always implies worthlessness, and that of horse frequently carries with it a sense of coarseness, as horse-mushroom, horse-radish, horse-thyme, and horse-mint; other examples may readily be found.

VALERIAN



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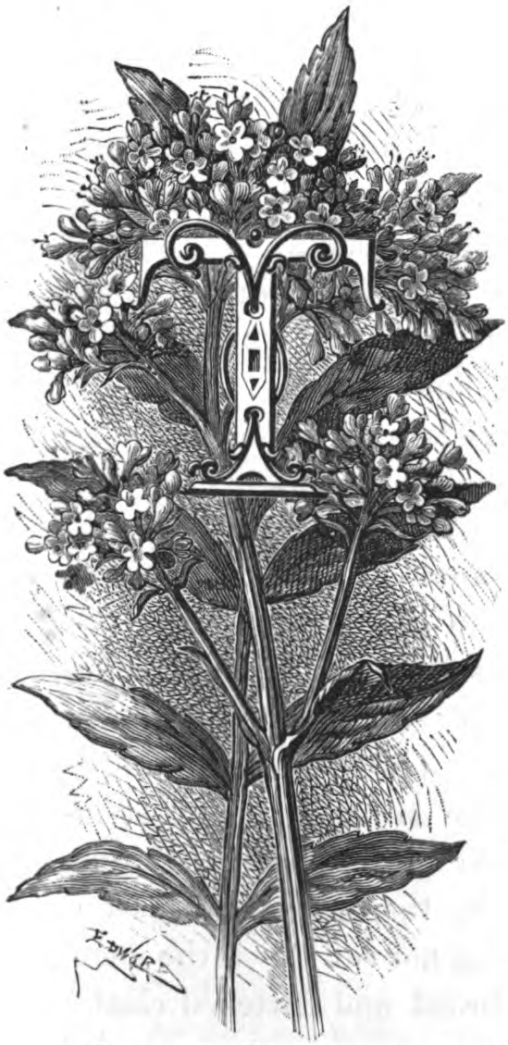

THE VALERIAN.

Valeriana officinalis. Nat. Ord., Valerianaceæ.

THE great valerian, the subject of our present illustration, should be looked for in damp and shady situations. It may ordinarily be abundantly met with by the sides of ditches and streams, and in the tangled undergrowth in moist woods. It is a perennial, and flowers during June, July, and August. It is found throughout Britain; but in the north it is often encountered on more elevated and drier ground than it appears to affect in the southern part of the island, and in this case the plant becomes smaller, and more densely covered with hairs. Though none of the varieties wander far from the typical form, the valerian appears to be more subject than many plants to slight deviations from the normal state of things, hence several more or less permanent varieties have been recognised, named, and figured by various writers. Of these we need

only here definitely refer to the *V. sambucifolia*, a variety which derives its name, signifying elder-leaved, from the form of its foliage, the segments being fewer and broader than in the type form, and assimilating in character to those of the elder.

The large size of the plant, its erect and sturdy-looking growth, and the crowning mass of light-coloured flowers, are all points that tend to make the plant conspicuous when it is seen growing in the sylvan shades, and the rich dark green of the leaves and their beautiful form render the plant attractive to the lover of natural grace and beauty, both before and after its time of flowering.

The root of the valerian sends out numerous large fibres, and has valuable medicinal qualities. This root sends up one stem only, and this attains to a height of some three or four feet, round in general section, but a good deal grooved, hollow in the interior, and more or less hairy, the hairiness being most conspicuous near the base. It terminates in two or more pairs of flowering stems, each pair being placed at right angles to those above and below it. The lower flowering stems lengthen sufficiently to place their flowers nearly or quite on a level with the flowers borne by the upper branches, so that the general mass of bloom does not run down the stem, as in a hyacinth, but forms a broad and flattened cluster at the summit. The leaves are arranged in pairs, and are united at their bases. Each leaf is made up, as may be well seen in our figure, of a series of lanceolate segments, or leaflets, that are placed more or less opposite to each other on either side of the mid-rib of the leaf. These segments vary very much in number, anything between ten and twenty being encountered. The segments, too, vary a

good deal in breadth, being broad when they are few in number, and narrower when more numerous; their length will ordinarily be from two to three inches. The outline is marked by a few coarsely-cut teeth. The upper surface shows the veining very clearly, the under surface is paler in colour, and often more or less clothed with short and soft hairs. The flowers are small and tinged with pink and flesh-colour, their odour being somewhat peculiar, and to most people slightly disagreeable. The corolla is tubular, but without the spur that we have seen is so marked a feature in the red valerian, a plant that we have already figured in our series. From the midst of the five lobes of the corolla rise the three stamens, a curious combination of numbers, as we almost invariably find that all the parts of a flower are in some numerical harmony, being multiples of some one number. Thus in the geraniums the petals, the sepals, and the carpels are all five in number, and the stamens are twice five, while in the lily of the valley the perianth is cleft into six lobes, and the stamens are six in number, and the ovary is three-celled. Our readers will have no difficulty in multiplying examples from their own observation, as it is very exceptional to find a plant wherein this arithmetical harmony is not a marked feature.

The plant owes both its generic and specific names to its medicinal value. The generic name is from the Latin verb signifying to be powerful, while the second name indicates its officinal value. One old name for the plant was phu, or, as we should now say, faugh! an expression of aversion, the plant having a somewhat strong and disagreeable smell that becomes more especially noticeable when one attempts to gather it. At the same time, it appears to us that there are many plants to which the con-

temptuous "phu" could be more justly applied. A more agreeable name for the plant is all-heal, the leaves being applied by the country folk to fresh wounds; and an old name, now rarely found, but to be met with in Chaucer and others of the older writers, is Setwall or Setewall, a name supposed to be a corruption from the mediæval Latin name of the plant; but the derivation appears to us too far-fetched to be of any real value. In Ireland the plant is the *Kearin Leana*, and in Wales we believe it to be the *Llys Cadwgan*, though on turning to Gerarde we find that he gives *Y Nyfiewyn bendigedie*; possibly this may be an older word, but as a knowledge of Welsh is not, unfortunately, one of our possessions, we must leave the point unsettled. The mediæval herbalists called the plant capon's tail, on account, we are told, of its spreading head of white flowers—to our minds, a very unsatisfactory explanation. Other old names were *Theriacaria*, *Marinella*, *Amantilla*, *Genicularis*, and *Terdina*.

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