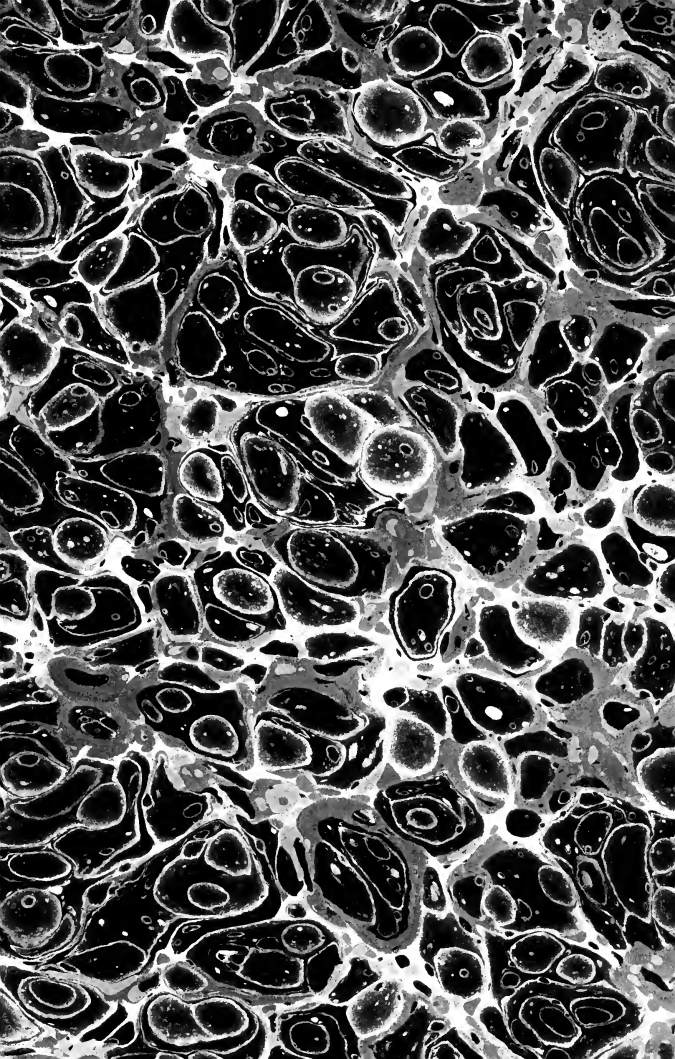

FAMILIAR

WILD FLOWERS.

FIGURED AND DESCRIBED BY

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

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"Not worlds on worlds in phalanx deep,
  Need we to prove a God is here;
The daisy, fresh from Nature's sleep,
  Tells of His hand in lines as clear.
For who but He who arched the skies,
  And pours the day-spring's living flood,
Wondrous alike in all He tries,
  Could raise the daisy's crimson bud,
And fling it, unrestrained and free,
  O'er hill and dale, and desert sod,
That man, where'er he walks, may see
  In every step the stamp of God!"

GOOD.

Fifth Series. i.e. v. 5

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CASSELL & COMPANY, LIMITED:

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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.*

CLUSTERED BELL-FLOWER, *CAMPANULA GLOMERATA. Nat. Ord., Campanulaceæ.*—Calyx adherent to ovary, having five teeth. Corolla regular, campanulate, purple, five-lobed. Stamens five, inserted at base of corolla. Anthers distinct. Style single, cleft at summit into three stigmas. Ovary inferior. Capsule opening at base. Flowers closely sessile in the axils of the upper leaves and forming a compact terminal cluster. Radical leaves large and stalked, rough, hairy, ovate, toothed; upper leaves sessile, ovate, toothed, rough, hairy, clasping stem by their bases. Stalk erect, wiry, angular, varying from an inch or two to a foot or more in length, hairy.—Found in dry pasturage and hedge-banks. Flowers throughout the summer. Perennial.

SALLOW, *SALIX CAPREA. Nat. Ord., Amentaceæ.*—Flowers diœcious, the males in dense cylindrical, sessile, silky, fragrant catkins, the females also in catkins, but green and more openly arranged in the catkin. Flowering before the appearance of the leaves. Stamens two in each flower. Anthers two-celled, bright yellow, conspicuous. Scales of catkins entire. Perianth wanting. Stigmas two. Capsules pedicellate, silky, one-celled, beaked. Stipules large. Leaves stipulate, alternate, roundish-ovate, wrinkled, whitish beneath. A small, bushy tree.—Flowers in early spring. In woods and hedgerows, ordinarily in drier situations than most of the other species of the willow.

* See Prefatory Note to the Summary, Series I.

HOLLY, *ILEX AQUIFOLIUM. Nat. Ord., Aquifoliaceæ.*—Calyx four-toothed. Corolla regular, monopetalous, white, four-lobed, rotate. Stamens four, alternate with corolla-lobes and inserted on corolla. Stigmas four, sessile. Fruit, a scarlet berry, containing four seeds. Flowers in dense clusters in the leaf-axils. Leaves coriaceous, rigid, alternate, evergreen, stalked, shiny, the upper ones sometimes entire and flat, but typically much waved in outline and bordered with strong prickly teeth. A freely-branching shrub or small tree. Bark smooth and greyish.—Woods and hedgerows. Flowers in May and June.

PRIVET, *LIGUSTRUM VULGARE. Nat. Ord., Oleaceæ.* Calyx persistent, four-toothed. Corolla regular, white, four-lobed, tubular at base. Stamens two, inserted at base of corolla. Ovary two-celled, each cell two-seeded. Fruit a fleshy globular, black, shining berry. Inflorescence compact, paniculate, at ends of branches. Leaves nearly evergreen, lanceolate, entire, on short stalks, opposite, exstipulate. Branches long, slender, cylindrical, tough, smooth, pliant. A shrub. —In woods and hedges. Flowers during June and July.

SPOTTED ORCHIS, *ORCHIS MACULATA. Nat. Ord., Orchidaceæ.* Perianth of six segments, superior, irregular, spurred at base of lip. Lip irregularly three-lobed, spotted. Stamen and pistil combined in column in axis of flower. Anther two-celled. Ovary inferior, one-celled. Capsule three-valved. Inflorescence terminal, densely spicate, bracts shorter than the flowers. Stem leafy at base, often a foot or so in height, but very variable. Leaves ovate and lanceolate, entire, parallel-nerved, more or less marked with dark purple blotches. Tubers flattened, lobed.—Perennial. Flowers in June and July. Pasture lands.

PINK CAMPION, *LYCHNIS DIURNA. Nat. Ord., Caryophyllaceæ.* Calyx monophyllous, tubular, five-toothed, swollen after flowering. Corolla of five petals, lamina spreading, pink, two-cleft, scentless, having small two-notched scale at base. Flowers dicœcious. Stamens ten, hypogynous. Styles five, linear, stigmatic throughout their length. Capsule globular, ten-toothed, many-seeded. Leaves opposite, entire,

exstipulate, upper sessile, lower ones stalked, slightly rough, hairy, veining prominent. Inflorescence loosely paniculate. Stem cylindrical, swollen at sides.—In moist woods, copses, and hedgerows. Flowers during June and July. Perennial.

SPINDLE TREE, *EUONYMUS EUROPÆUS. Nat. Ord., Celastraceæ.* Calyx small, flattened out, having four broad short lobes. Petals four, pale green, obovate, rising from flat, fleshy disk. Stamens four, alternating with petals, inserted on disk. Flowers in loose, axillary cymes. Ovary immersed in disk, style very short. Capsule four-lobed, pink, containing large seeds in orange-coloured arillodium. Leaves glabrous, opposite, lanceolate, finely toothed. Stems smooth, green, tough. A shrub, about five feet high.—Woods and hedgerows. Flowers in May and June.

BUXBAUM'S SPEEDWELL, *VERONICA BUXBAUMII. Nat. Ord., Scrophulariaceæ.* Calyx persistent round fruit, four-lobed. Corolla deciduous, monopetalous, rotate, irregular, four-lobed, pale blue. Stamens two, inserted in tube of corolla. Stigma two-lobed. Ovary and capsule two-seeded. Capsule-lobes broad and laterally spreading, twice as broad as long. Inflorescence axillary. Stems procumbent, hairy. Leaves petiolate, alternate, cordate, deeply serrate, much shorter than the flower-stalks that spring from their axils, hairy.—Cultivated ground, rubbish-heaps, and road-sides. Flowers throughout the summer. Annual.

GREEN HELLEBORE, *HELLEBORUS VIRIDIS. Nat. Ord. Ranunculaceæ.* Calyx of five large, persistent, conspicuous, spreading sepals. Petals eight to ten, very small, tubular. Stamens numerous. Carpels many-seeded. Flowers few in number and drooping. Fruit a follicle. Upper leaves sessile, the lower leaves large, divided into numerous segments, on long footstalks, all palmate and broadly spreading, of a dull bluish green, glossy surface, deeply serrate. Stem short, freely branching.—On pasture-lands, in copses, and often about old walls, ruins, and human habitations, preferably on chalk. Flowers in March and April. Perennial.

SEA CAMPION, *SILENE MARITIMA. Nat. Ord., Caryophyllaceæ.* Calyx monophyllous, tubular and inflated, five-toothed, strongly veined and reticulated. Corolla of five white petals, having two-cleft and spreading lamina. Stamens ten. Styles three. Ovary one. Fruit a dry capsule opening at the top, 6-toothed. Leaves opposite, entire, ovate-lanceolate, small, exstipulate. Flowers few in number. Stems spreading.—On sandy and stony beaches. June, July, August. Perennial.

FURZE, *ULEX EUROPÆUS. Nat. Ord., Leguminosæ.*—Calyx two-partite, segments slightly toothed, having two small bracts at base, pubescent, yellowish. Corolla papilionaceous, bright yellow, fragrant. Stamens ten, monadelphous. Style and stigma one. Fruit a two-valved legume. Leaves simple, alternate, stipulate, inconspicuous. Stems freely branching, covered with spreading and rigid spines. Growth compact and bushy.—Commons and sandy or gravelly heaths, railway embankments and cuttings, open forest land, &c. Flowers more or less throughout the year, but chiefly in the spring. Perennial.

BROAD-LEAVED PLANTAIN, *PLANTAGO MAJOR. Nat. Ord., Plantaginaceæ.*—Calyx minute, scariose, four-partite. Corolla four-lobed, minute, scariose, tubed, reflexed. Stamens four, long, springing from tube of corolla. Style and stigma one. Fruit indehiscent, ovate capsule, many seeded. Inflorescence a long cylindrical and dense spike; bract at base of each flower. Leaves spreading, radical, broadly ovate, conspicuously nerved, dull green. Root-stock short and thick. —Meadows and roadsides. June, July, August. Perennial.

TEASEL, *DIPSACUS SYLVESTRIS. Nat. Ord., Dipsacaceæ.* Flowers in compact cylindrical heads, having at base an involucre of six to twelve prickly bracts, rigid, unequal, curving upwards. Calyx minute, cup-shaped. Receptacle bearing the florets covered with spinous and hooked scales. Corolla four-lobed, monopetalous, lilac, having oblique limb. Stamens four, inserted in tube. Ovary one-celled. Style one. Fruit small, dry, indehiscent, crowned by calyx. Leaves opposite, the upper leaves connate, undivided, prickles on midribs. Stems rigid,

prickly, angular, four to five feet high.—Hedges and roadsides. August and September. Biennial.

TUBEROUS MOSCHATEL, *ADOXA MOSCHATELLINA. Nat. Ord., Araliaceæ.* Flowers irregular in their parts, terminal flower having two sepals and the laterals three sepals. Corolla superior, rotate, four or five-cleft according to position. Stamens eight or ten. Berry fleshy, four or five-seeded. Inflorescence a globular head of four lateral flowers and one terminal one, borne on long peduncles. Leaves radical, on long footstalks, triternate, two cauline and ternate, radicals longer than the stem-leaves. Stem slender and herbaceous, and whole plant light green in colour, very delicate and fragile-looking.—Woods and shady banks. April and May. Perennial.

EVERLASTING PEA, *LATHYRUS SYLVESTRIS. Nat. Ord., Leguminosæ.* Calyx of five sepals, the fifth inferior, mouth oblique. Petals five, papilionaceous, standard large, bright pink, veined. Stamens diadelphous, ten. Ovary one-celled. Style and stigma one. Fruit a two-valved, large, and several-seeded legume. Leaves alternate, stipulate, one pair of leaflets, ensiform, branching tendrils, leaf-stalks flattened, winged. Stems weak, climbing, winged. Inflorescence racemose, on long axillary peduncles.—Thickets and rocky places. June, July, and August. Perennial.

STRAWBERRY, *FRAGARIA VESCA. Nat. Ord., Rosaceæ.*—Calyx persistent, ten-cleft, the alternate segments being larger than the others. Petals five, equal, perigynous, pure white. Stamens perigynous, numerous, the anthers two-celled. Styles simple, short. Leaves clothed with soft hairs, alternate, chiefly radical, stipulate on stem. Achenes on fleshy crimson receptacle. Calyx reflexed on ripening of the fruit. Stems herbaceous, radical, bearing a small number of flowers.—Woods and copses. May, June, July. Perennial.

UPRIGHT MEADOW CROWFOOT, *RANUNCULUS ACRIS. Nat. Ord., Ranunculaceæ.* Calyx yellowish green, spreading, five distinct sepals. Petals five, distinct, bright yellow, having nectariferous spot at base. Stamens free, hypogynous, numerous, on receptacle.

Fruit a globular head of numerous carpels. Inflorescence a loose, many-flowered panicle. Stems round, erect, two to three feet in height, freely branching, covered with soft hairs. Leaves deeply divided into palmate and strongly serrated segments, the lower leaves being on stalks, and much more richly cut than the upper and more linear leaves.—Meadows and banks. June and July. Perennial.

LAMB'S-TONGUE, *PLANTAGO LANCEOLATA. Nat. Ord., Plantaginaceæ.*—Calyx scariose, four-partite. Corolla minute, having tube and four spreading lobes in limb. Stamens four, long and conspicuous, inserted on tube of corolla. Style and stigma simple. Fruit a capsule. Inflorescence densely spicate, borne on long, leafless, erect, and angular peduncles. Leaves lanceolate, tapering at each extremity, strongly marked by the parallel nerves, radical, spreading.—Meadows, rubbish-heaps, waste ground. June, July. Perennial.

COMMON VETCH, *VICIA SATIVA. Nat. Ord., Leguminosæ.*—Calyx of five sepals, gibbous at base. Corolla papilionaceous. Stamens ten, diadelphous. Ovary one-celled. Style filiform, simple. Fruit a legume, two-valved, several seeded. Leaves alternate, pinnate, leaflets four to ten in each leaf, varying from obcordate to linear. Branching tendrils. Stipules small, deeply serrate. Flowers axillary, on very short peduncles, solitary or in pairs.—Open spaces in woods, pastures, waste ground. May, June. Annual and biennial.

DEWBERRY, *RUBUS CÆSIUS. Nat. Ord., Rosaceæ.* Calyx of five narrow segments. Corolla of five equal, perigynous petals. Flowers few in number, in loose panicles. Stamens perigynous, numerous. Style short. Drupes clustered on a common receptacle, superior, more or less enveloped in calyx, covered with a grey bloom. Leaves of three serrated and strongly-veined leaflets. Stems more or less with a bloom on them, and covered with small and weak prickles.—Thickets and waste ground. June, July. Perennial.

HENBIT, *LAMIUM AMPLEXICAULE. Nat. Ord., Labiatæ.*—Calyx campanulate, five-toothed, hairy, nearly regular. Corolla rose-colour,

throat of tube inflated, conspicuous two-lobed and spotted lip, upper lip entire, arched. Stamens four, two longer than the other two. Anthers hairy. Ovary with four lobes. Style single, cleft, with two stigmas. Fruit an achene, enclosed in calyx. Leaves opposite, lower ones borne on long stalks, upper ones sessile, all deeply crenate and orbicular. Flowers in compact whorls at summit of stems. Stems quadrangular, much branched.—Fields and waste ground, especially in light and sandy ground. April to August. Annual.

FIELD SCORPION-GRASS, *MYOSOTIS ARVENSIS. Nat. Ord., Boraginaceæ.* Calyx five-cleft, hairy, segments erect, persistent. Corolla hypogynous, regular, salver-shaped, monopetalous, five-lobed, pale blue. Stamens five, inserted in calyx. Ovary four-lobed. Style simple. Fruit composed of four dry, smooth, seed-like nuts. Leaves exstipulate, alternate, simple, entire, hairy. Inflorescence in unilateral racemes, ebracteate, rolled back when young.—Edges of woods, on banks, and on cultivated ground. June, July, August. Annual or biennial.

BUTTERFLY ORCHIS, *HABENARIA BIFOLIA. Nat. Ord., Orchidaceæ.*—Perianth superior, irregular, of six petal-like segments, the two lateral segments widely spreading, pure white or greenish. Lip linear, obtuse, entire, white or greenish. Spur long and slender. Column in centre of flower consisting of stamen and pistil, anther on face of column. Ovary inferior, one-celled. Capsule three-celled. Inflorescence a loose panicle. Flowering-stems with lanceolate bracts, and having two large broadly-ovate leaves at its base, and a few small scales. Tubers large and entire.—Moist pastures and woods. June, July, August. Perennial.

WOOD LOOSESTRIFE, *LYSIMACHIA NEMORUM. Nat. Ord., Primulaceæ.*—Calyx of five acutely-pointed segments. Corolla rotate, bright yellow, deeply five-lobed. Stamens five. Style single, with capitate stigma. Capsule single, one-celled, opening at top. Leaves opposite, ovate, almost sessile. Flowers borne singly on slender and long pedicels from the axils of the leaves; the pedicels curl back after

the flowering is over. Stem slender, procumbent, rooting at the lower nodes.—Woods and copses. May to September. Perennial.

YELLOW ROCKET, *BARBAREA VULGARIS. Nat. Ord., Cruciferæ.* Calyx of four sepals, slightly bigibbous. Corolla small, bright yellow, of four petals. Stamens six, tetradynamous. Ovary and style one. Pods numerous, spreading, linear, terminating in pointed style, four-angled. Inflorescence a long and dense raceme. Leaves alternate, varying in form, lower ones lyrate, upper pinnate or pinnatifid, lobed. Stem stout, erect, branching, furrowed, smooth.—Hedges, pastures. May to September. Perennial.

GOOSE-GRASS, *GALIUM APARINE. Nat. Ord., Rubiaceæ.*—Calyx adherent with ovary. Corolla monopetalous, rotate, white, regular, four-cleft. Stamens four, inserted on corolla. Style one, two-cleft at summit. Ovary one. Fruit a dry two-lobed pericarp, having hooked bristles. Flowers three to ten together on short footstalks springing from axils of leaves. Leaves in whorls, six to nine in a ring, prickly, linear-lanceolate. Stems rough, angular, weak, straggling, freely branching, supporting themselves by numerous recurved prickles.—In hedgerows. June, July. Annual.

CHERRY, *PRUNUS CERASUS. Nat. Ord., Rosaceæ.*—Calyx inferior, deciduous, five-cleft. Corolla of five petals, white, perigynous, equal. Stamens numerous, inserted on calyx. Ovary one. Fruit a fleshy drupe. Flowers in umbels, on long pedicels, issuing from rings of scales. Leaves alternate, serrate, ovate, stipulate. A shrub or small tree.—Woods and hedgerows. May.

WATER AVENS, *GEUM RIVALE. Nat. Ord., Rosaceæ.*—Calyx tube short, five large segments, and five much smaller ones alternating with them, purplish. Corolla dull yellowish red, of five heart-shaped perigynous and equal petals. Stamens perigynous, numerous. Flowers few in number and drooping, growing singly on long peduncles. Fruit an achene, surmounted by a long and feathery awn. Leaves chiefly radical, interruptedly pinnate, the terminal segment much larger than the others, serrate, upper leaves much more simple in character,

lanceolate or ternate, serrate. Stipules small, toothed. Stems erect, scarcely branching.—Marshes, sides of canals, damp woods, and boggy moorlands. May, June, July. Perennial.

MARSH THISTLE, *CNICUS PALUSTRIS. Nat. Ord., Compositæ.* Flower-heads homogamous, numerous, clustered together at the summit of the long stem, forming a terminal and compact corymb. Florets purple, all equal and tubular, five-cleft. Stamens five. Ovary one. Involucral bracts very numerous and closely imbricate. Pappus plumose. Stem winged, prickly, tough, erect, five or six feet high. Leaves decurrent, narrow, pinnatifid, wavy, lobed, prickly.—Moist pastures, damp and shady woods. July. Annual or biennial.

SALAD BURNET, *POTERIUM SANGUISORBA. Nat. Ord., Rosaceæ.*—Flowers grouped in globular heads, on long footstalks. Upper flowers female, lower ones male. Calyx four-lobed, superior. Corolla wanting. Stamens perigynous, very numerous, pendulous. Styles two, long, ending in tufted, purple stigmas. Stem wiry, angular. Leaves pinnate, having numerous pairs of nearly equal, ovate, serrate leaflets. —Dry pastures and embankments in limestone and chalk districts. June, July, August. Perennial.

HOUND'S-TONGUE, *CYNOGLOSSUM OFFICINALE. Nat. Ord., Boraginaceæ.*—Calyx inferior, deeply five-cleft, segments erect. Corolla funnel-shaped, dull crimson; tube short, thick, purple-spotted; limb concave, five-parted, almost closed at mouth by five prominent scales. Stamens five, inserted into tube. Ovary smooth, depressed, four-parted. Style pyramidal, having capitate stigma. Fruit of four globose nutlets. Flowers on short peduncles, in axillary and terminal, unilateral, drooping racemes. Leaves numerous, alternate, waved, soft, lower ones broadly lanceolate, on long footstalks, upper ones lanceolate, sessile, whole plant with strong mousy odour. Stem thick, erect, branching, leafy.—Waste grounds and open spaces in woods. June, July. Biennial.

CARROT, *DAUCUS CAROTA. Nat. Ord., Umbelliferæ.*—Calyx of five small teeth. Corolla of five obcordate petals, having their points inflexed, outer one deeply bifid. Stamens five, on spreading filiform

filaments. Ovary inferior, ovate. Style filiform. Flowers in large terminal umbels of many rays, flat-topped when the flowers are expanded, and become concave as the fruit ripens. Leaves bi- and tripinnate, deep green. Stem erect, furrowed, hairy, branching. Involucral ring of numerous pinnatifid leaves. Fruit clothed with prickles. Root fusiform, yellowish, of strong odour.—Borders of fields, hedge-banks, road-sides. June, July, August. Biennial.

DWARF THISTLE, *CNICUS ACAULIS. Nat. Ord., Compositæ.* —Flower-heads large, purple, ordinarily sessile, few in number, ordinarily solitary. All the corollas tubular, five-cleft. Stamens five. Ovary one. Style one. Pappus plumose, equal, long. Fruit an achene. Involucre obovate, glabrous, scales appressed. Leaves in spreading tuft, pinnatifid, glabrous, very spiny. Stem wanting or very short.—Gravelly and chalky waste land and pasturage. July, August, September. Perennial.

WATER-CRESS. *NASTURTIUM OFFICINALE. Nat. Ord., Cruciferæ.*—Calyx of four ovate, deciduous, glabrous sepals. Corolla cruciform, of four white and spreading petals. Stamens tetradynamous. Inflorescence racemose, ebracteate. Style short, having obtuse capitate stigma. Fruit a two-valved pod. Leaves pinnate, alternate, glabrous, lobed, succulent. Stem thick, glabrous, branching, rooting.—Brooks and streams. May, June, July, August. Perennial.

STARWORT, *ASTER TRIPOLIUM. Nat. Ord., Cruciferæ.*—Flower-heads in terminal corymbs. Involucre of a few imbricated bracts, Ray florets purple, ligulate, sometimes wanting; disk florets yellow, tubular. Leaves linear-lanceolate, entire, alternate, obscurely three-nerved, slightly succulent, exstipulate. Stem erect, glabrous, somewhat branching in the upper part.—Salt marshes. August, September. Perennial.

GARLIC-MUSTARD, *ALLIARIA OFFICINALIS. Nat. Ord., Cruciferæ.*—Calyx of four ovate-lanceolate, connivent sepals. Corolla cruciform. Petals four, white, obovate. Stamens tetradynamous.

Ovary long, tetragonal, with capitate stigma. Fruit a pod, slender, prominently nerved, two-valved, two-celled. Flowers forming a terminal raceme of corymbose character. Leaves cordate, alternate, unequally serrate, sinuate, glabrous, having a powerful odour when rubbed. Stem erect, slightly branching, cylindrical, smooth.—Hedgerows, waste ground. May, June. Annual or biennial.

BEE ORCHIS, *OPHRYS APIFERA. Nat. Ord., Orchidaceæ.*—Sepals ovate, very spreading, pale green or white with pink tinge. Petal small, lip broad, convex, tumid, trifid, spurless, velvety-brown, mottled with yellow. Column erect, curving over anther. Inflorescence spicate, flowers few in number. Leaves lanceolate, the lower ones much larger than the upper. Tubers at root.—Dry pasturage and down land. June, July. Perennial.

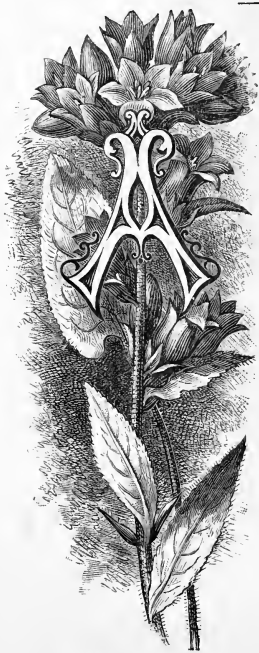
GROUNDSEL, *SENECIO VULGARIS. Nat. Ord., Compositæ.*—Flower-heads almost sessile, in close terminal corymbose clusters. Involucres cylindrical, having numerous equal linear bracts, at base other smaller ones. Florets of the ray wanting, tubular florets yellow. Stamens five, anthers syngenesious. Style scarcely longer than corolla. Ovary one. Achenes with pilose pappus. Leaves pinnatifid, with irregularly-toothed lobes. Stem erect, succulent, branching.

HEMP-NETTLE, *GALEOPSIS TETRAHIT. Nat. Ord., Labiatæ.*—Calyx campanulate, with five pointed teeth, nearly regular, very hairy. Corolla tubular, very variable in size, upper lip erect, ovate, the lower spreading and three-lobed. Stamens four, arranged in pairs, the two anterior being the longest. Ovary one. Stigma two-lobed. Flowers in compact rings in the axils of the upper leaves. Leaves opposite, stalked, acuminate, ovate, hairy, coarsely serrate. Stem slightly branching, square, swelling at nodes, hairy.—Cultivated ground and rubbish-heaps. July, August, September. Annual.

LADY'S MANTLE, *ALCHEMILLA VULGARIS. Nat. Ord., Rosaceæ.*—Flowers small, very numerous, pale green, in lax corymbs at the summits of the stems and lateral branches. Perianth inferior,

monophyllous, having eight-parted limb, the four inner segments being the largest. Stamens four, inserted into perianth. Ovary one, having short style surmounted with capitate stigma. Fruit a one-seeded achene. Leaves alternate, radicals large, on long stems, caulines small, on small stems, orbicular or reniform, plaited, several strongly-serrated lobes, veiny. Stipules large, connate, serrate, spreading. Stems numerous, erect, slender, cylindrical, leafy.—Pastures, fields, and hedgerows. June, July, August. Perennial.

FAMILIAR WILD FLOWERS.



CLUSTERED BELL-FLOWER.

Campanula glomerata. *Nat. Ord., Campanulaceæ.*

AMONGST the different species of British bell-flowers we find a very considerable variety. Of these we have already figured the noble nettle-leaved bell-flower, or *C. Trachelium*, with its large purple bells and general picturesqueness of growth; the creeping campanula, *C. rapunculoides*, with its long line of deep purple and pendent flowers; and the abundant and ever-charming harebell, *C. rotundifolia*, tossing its delicate blossoms to the free air of the heath and moorland. We now figure a fourth example of the

genus, the *C. glomerata*, or clustered bell-flower, a plant no less beautiful than any of the others, as all will admit who have seen its purple spires amidst the vegetation of the hedgerow. It delights in dry upland country, and seems to have a special liking for the chalk, though we find it scattered over the greater part of England. In Ireland it would appear to be unknown, and in Scotland we only find it in the southern counties. Few plants probably vary more in appearance according to the locality in which they are found. When we see it on the face of the open down, it is often dwarfed to a mere three or four inches in height, and the flowers no less than the rest of the plant share in the general diminution of the parts; but when we find it in a more sheltered position, as in a hedgerow, the plant is often a foot or more in height, and crowded with blossoms. As these blossoms cluster at the tops of the stems, the plant is rendered additionally conspicuous, as the mass of purple colour comes prominently forward, and attracts the eye amidst the surrounding verdure. This clustering head of blossoms has given the plant its popular English name, and also its specific name, *glomerata*, a Latin word, signifying formed into a mass like a ball. The flowers are stalkless, and spring in small bunches from the axils of the upper leaves; but the terminal bunch is always considerably the largest, and is in many cases the only one, and in imperfectly developed specimens, or plants that have had to suffer from untowardly hard conditions of existence, is often represented by only some two or three blossoms. We mention this more particularly, and repeat it, because there is no plant that varies more, and our readers might fail to realise that a puny little plant, say three inches high, and showing a

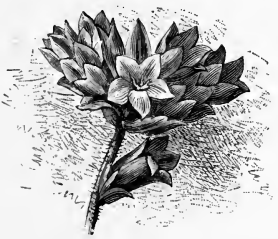
grand total of three small bells, could really be the same thing as the one we have illustrated.

The clustered bell-flower is a perennial, and throws up one or more stems; these are erect in general direction, unbranching, angular in cross section, and varying in degrees of smoothness or hairiness. The leaves that spring immediately from the root or the lower part of the stem are borne on long stalks, but these stalks gradually diminish as we advance up the stems, until we find the upper leaves entirely stalkless, and clasping the stem with their bases. The lower leaves are long, narrow, and deeply serrated, while the upper ones are somewhat more heart-shaped, less toothed, but having their margins a good deal waved. The capsule is short and broad, opening by lateral clefts below the segments of the calyx. We are sometimes told by inquirers into the secrets of nature that the bell-shaped flowers furnish a beautiful example of the adaptation of means to ends, the pendent bells turning from the wind and sheltering the organs within them from all external damage. It is always pleasant to endeavour to comprehend any part of the wonderful scheme of creation, and follow humbly in the steps of the Divine Wisdom, but the clustered bell-flower would seem to show that one must not too hastily indulge in generalities, for its blossoms always stand boldly erect, and seem to need nothing of that protection to which we have referred.

Besides the four species of campanulas we have figured, we have some few others to which we may take this opportunity of referring. First amongst these stands the giant bell-flower, or *C. latifolia*, a tall and handsome species, that is more especially found in the Scottish forests and in northern England, but becomes much rarer as we

travel south. The flowers are large and of a rich blue tint ordinarily, but varying to white much more frequently than is the case with any of the other species. The spreading bell-flower, *C. patula*, is a southern plant, and even in the central and south-eastern counties of England is by no means common; it is a light and graceful plant, not unlike a considerably magnified harebell in general appearance, but the bell is of a much more open and distended form, and the purple is considerably deeper in tint.

The next species, the ivy-leaved bell-flower, or *C. hederifolia*, is a particularly delicate and graceful little plant. It should be sought for in moist woods, chiefly in the south and west of England. The stems are very slender and thread-like, supporting small, delicate leaves—sufficiently like those of the ivy to justify its name—and pale lilac-blue blossoms. These flowers, barely half an inch in length, and very tubular in form, are at first pendent, but ultimately assume the erect position.



SALLOW.

Salix caprea. *Nat. Ord.,* *Salicaceæ.*

EVEN those of our readers who fail to recognise the plant we figure under the name we give it will probably have no difficulty in recalling it under the name of the "palm." After the first few primroses have cast their delicate clustering blossoms upon the hedge-banks, and the golden disks of the coltsfoot have lighted up the waste grounds, one of the most welcome signs of the approaching spring is the blossoming of the sallow, and its branches were in earlier times in great request on the annual recurrence of Palm Sunday. These were carried in processions and strewn on the roads on the Sunday next before Easter, in commemoration of the entry of our Saviour into Jerusalem immediately before His death. As the palm itself was not available, it became necessary to find a substitute, and the golden heads of the

sallow appeared the best available, though sometimes the sombre yew or other evergreen trees were used instead. The custom is of great antiquity, and numerous references to it may be found in old writers, though the limited space here at our disposal forbids our quoting any of them.

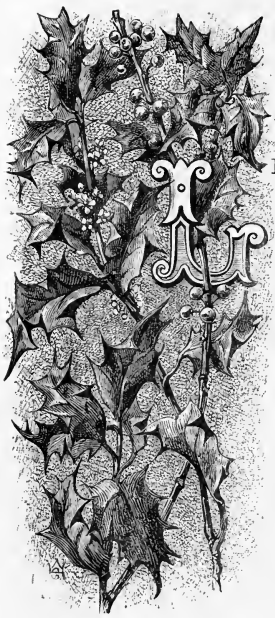
The sallow, like the other species of the genus, is dicœcious, that is to say, its blossoms, instead of being, like those of the buttercup and many other plants, both pistil and stamen bearing together, are on each tree of one sex alone. The golden yellow clusters of the "palm," the subject of our illustration, are the stamen-bearing catkins; the pistillate are green in colour, somewhat longer, narrower, and less compactly cylindrical. Before flowering the male catkins are of a soft grey colour, and very smooth and silky to the touch; but as the stamens develop the silvery grey is metamorphosed into golden yellow. The heads, we find, will continue to expand if the stems be placed in water; the greyer piece in our figure, in the course of a day or two in our study, turned as yellow as the other, and both of them lasted in perfection for some time, so that its picturesque and quaint-looking sprays are eminently adapted for a place either in ecclesiastical or home decoration. The leaves of the sallow are somewhat more egg-shaped and broadened than in some of the other common species of willow, and the shrub does not seem so entirely a plant of the damp low-lying meadows and edges of streams as many of the willows do, for though, like these, it may be found there, it may perhaps equally commonly be found in woods and thickets on higher ground. The word sallow descends to us from the Anglo-Saxons, and signifies a plant suitable for withes or ties, the flexible character of the stems of this and the other willows marking them out as especially use-

ful for such a purpose, or for weaving into basket-work. The generic name, *Salix*, is the Latin word for a willow tree, while the specific name, *caprea*, bestowed on the plant by the great Linnæus, is also derived from the same language, and signifies a goat. Smith, in his "English Flora," published about the beginning of this century, says, "The name caprea seems to have originated in the reputed fondness of goats for the catkins as exemplified in the wooden cut of the venerable Tragus, their namesake." In the illustration referred to, we see a goat standing on its hind legs and reaching up as high as possible for the sallow catkins, which it is represented as eating. The book was published in 1532, first in German, and then, in 1552, in a Latin edition. Tragus was a Latin travesty of the writer's true name, Jerome Bock. In the same way the real name of the great reformer Melanchthon was Schwarzerd, a name signifying in German black earth, and which, in accordance with general usage, was changed into the compound Greek work of the same significance, Melanchthon. Erasmus, in like manner, was really named Gerard, a name which in German signifies amiable; hence he called himself Desiderius Erasmus, the Latin and Greek equivalents of the German Gerard. In mediæval times it was the almost invariable custom to Latinise or turn into Greek the proper names of illustrious men, and this often led to a little heavy humour, and while in some cases the name of the person merely received a classic termination, as Didoens becoming Didonæus, and Lobel being Lobelius, in others the temptation to take such a name as Fox or Bull, and convert it into Vulpes or Taurus was irresistible.

To entomologists the sallow is especially dear, as its fragrant catkins offer great temptation to many kinds of

butterflies and moths, while its foliage finds their larvæ or caterpillars welcome provender. Should any of our readers find on the sallows about the beginning of June a pale green caterpillar having various yellow lines and stripes on each side, they will do well to take it home and endeavour to rear it. It is the larva of the purple emperor butterfly, the *Apatura Iris* of the entomologist, and one of our most beautiful species, and one which may best be obtained by rearing, as it is by no means an easy insect to capture on the wing.

In the well-known lines of Spenser, dealing with the economic uses of many of our trees, we find "the birch for shafts, the sallow for the mill." It is much less liable to split on sudden strain than many other woods, and is therefore used in mill-work and various rustic purposes where this peculiar property renders it specially suitable.



HOLLY.

Ilex aquifolium. *Nat. Ord.,* *Aquifoliaceæ.*

LENGTHENED description of the holly will, we are sure, be wholly superfluous, as there can be but few people throughout the length and breadth of these islands who do not know the plant perfectly well. It seems to thrive best in a light and gravelly soil, and, though possibly some of our readers may be more familiar with it as a material for making hedges, in the woods it becomes a small tree. Its flowers should be looked for in May and June. These flowers are not very conspicuous; but, as we recall the astonishment of a London friend of ours, who seemed to have thought holly was always in a state of red berries when we said something about its flowers, we feel that they are considerably better than nothing. Though they

are individually small, the dense clusters in which they are found in the axils of the leaves, and their delicate creamy-white colour, tend to make them more noticeable. The corolla is all in one piece, but deeply cut into four lobes; and these, instead of forming a cup, as in the buttercup and many other flowers, are thrown boldly back—a feature which may be very readily noted in our illustration. The calyx has four small teeth, and the stamens, too, are four in number. These are rather large, and with their conspicuous yellow anthers form a noticeable feature in the clustering blossoms. The berries, as we all know, are ordinarily bright scarlet, though they may sometimes be found bright yellow instead; and we remember once to have seen, at a meeting of a botanical society, a spray of holly exhibited with orange-coloured berries, the result of a scion of a yellow-fruited variety grafted on a red-berried stock. This is somewhat curious, for, although an artist mixes red and yellow together, to make an orange tint, it by no means follows that Nature mixes her colours in the same way. Though it is, of course, equally open to any one else to try the same experiment, and very possibly many florists may have done so, we may mention that the only example that ever came under our own notice of this grafting together of the yellow and the red came from Bury St. Edmunds.

The leaves of the holly are evergreen, very thick in texture, and shining. The upper leaves are often entire, and wanting in that formidable armament of prickles that is so marked a feature in the lower and older leaves.

Though ordinarily a deep rich green, we at times find plants in which the foliage is streaked, or blotched with

yellow or white; and in one variety, called the hedgehog holly, not only are the edges of the leaf armed with spines, but its entire upper surface. The holly-tree is not only very ornamental but very useful. Perhaps its most practical service is the making of grand hedges, evergreen and impenetrable; but, though a most durable fence when once established, the great drawback to its use is the slowness of its growth. Evelyn, in his "Sylva," thus breaks out into admiration of its combined utility and beauty:—"Is there," he exclaims, "under heaven a more glorious and refreshing object than such an impenetrable hedge, glittering with its armed and varnished leaves and blushing with natural coral?" and he had good cause in his own experience for his fervent praise, for one of the sights of his own garden at Sayes Court was a holly hedge four hundred feet long, nine feet high, and five feet broad. The ease with which such a hedge can be kept trimmed, compared to privet, hawthorn, or any other substitute, is another great point in its favour. The wood of the holly, from the great evenness of the grain, is very valuable to the carver and turner; it is largely used in inlaying, making the blocks for calico-printing, and many other purposes where its hardness and toughness would prove of service. It is mentioned by Spenser amongst the useful trees under the older name of the holm. We find that it has given a name to several villages near which it formerly abounded. Holmwood, near Evelyn's house, in Surrey, is an illustration that at once occurs to one.

The bark of the holly, after a certain amount of maceration, produces the viscid material called bird-lime. Dr. Rousseau, in an essay on the use of holly—which was published in the "Transactions" of one of

the learned societies—strongly advocated the use of the plant as a febrifuge and as a most efficient substitute for cinchona bark. The berries are violently emetic, though birds eat them with impunity.

The holly is associated with our great Christmas festival, and has from the earliest times been employed to decorate our houses and churches—a survival doubtless of the old Roman custom of decking the houses with green boughs during the Saturnalia. Indeed, such a form of rejoicing seems in any case a most natural one; in the Book of Leviticus, for instance, we find amongst the instructions for the due keeping of the Feast of Tabernacles this command: "Ye shall take you on the first day the boughs of goodly trees, branches of palm-trees, and the boughs of thick trees, and willows of the brook, and ye shall rejoice before the Lord your God." In Germany, Sweden, and Denmark, the holly is called the Christmas thorn, from this association with the festival of the Nativity.

PRIVET.

Ligustrum vulgare. Nat. Ord., Oleaceæ.

FEW of our readers will fail to recognise the subject of our present illustration, though probably many of them will be more familiar with it as a plant of the gardens than of the woods. Its utility has doubtless been the cause of its wide diffusion throughout England, yet it is a true wilding, and throughout the southern part of our island may be commonly found in woodlands and thickets. Gerarde's description of it is so happy that we cannot forbear to quote it; indeed, many of the old herbalists were masters of terse detail, and in a few lines give one all the essential facts. "Privet is a shrub growing like a hedge-tree, the branches and twigs whereof be straight and covered with soft glistering leaves of a deepe green colour, like those of periwinkle, but yet longer, greater also than the

leaves of the olive-tree: the flowers be white, sweet of smell, very little, growing in clusters; which being faded there succeed clusters of berries, at the first greene, and when they be ripe blacke, like a little cluster of grapes, which yeeld a purple juice. The common privet groweth naturally in every wood and in the hedgerowes of our London gardens." Gerarde wrote during the reign of Queen Elizabeth, and this little side reference to the privet hedgerows of our ancestors is interesting. Another old writer, the author of the "Theatrum Botanicum," published in 1649, refers also to this use of the plant. "It is carryed up with the many slender branches to a reasonable height and breadth to cover arbours, bowres, and banquetting houses, and brought wrought and cut into many formes of men, horses, birdes, &c., as the workman list, supported at the first with timber, poles, and the like, but aftew'd groweth strong of it selfe, sufficient to hold it in the forme it is made into." Several reasons commend it as a hedge-maker: it grows very rapidly, and soon makes a substantial fence; it is evergreen, and so always looks cheerful; it bears clipping admirably well; it is but little disfigured by insects; its roots are fibrous, and rob the ground less than those of many other shrubs; it bears the smoke and dirt of towns better than most other things; and it is not particularly choice as to soil or situation, though it flourishes most in fairly moist ground. It stands sea breezes, too, better than many other plants. It may be raised either by seeds, layers, or cuttings, the last named being most efficacious when it is desired to produce a fencing as quickly as possible.

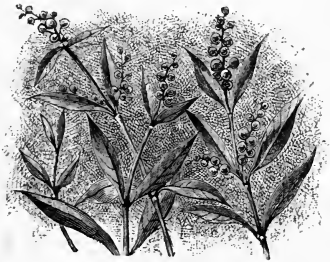
From the berries of the privet a good green dye for woollen materials has been obtained, and it is said to

be less fugitive than most vegetable greens prove to be; but the march of science and the extension of commerce have supplied for a good dye others still better, and the privet, as a tinctorial plant, has been supplanted by other less known but more serviceable shrubs. Curtis mentions that the berries are also used as a colouring for wines—those probably that are described in the multitudinous wine circulars that pour in upon us from every side as "very curious." A more legitimate use for the berries is as one of the items of the winter bill of fare of many of our birds, the bullfinch being especially partial to them. Though we have described the privet as an evergreen we may be allowed to so far qualify this statement as to say that we often noticed in hard winters that the leaves, while retaining their position, frequently turn a purplish brown or chocolate tint; but this feature is by no means unornamental, especially when, as is ordinarily the case, the bunches of black and glossy berries are freely intermixed with the foliage.

When growing in a wild state the privet attains to a height of some six or seven feet, and forms a compact-looking shrub. Haller mentions a variety having white berries, but this we have never seen. Mathiolus affirms that "the oyle that is made of the floures of privet infused therein and set in the Sunne is singular good for the inflammations of wounds," and so forth; and the plant is also used, according to other authors, as a decoction, a gargle, a "plaister," or a "powther," for most of the ills that flesh is heir to, from "the headache comming of choller" to consumption.

Any one visiting their privet-hedge during August will very probably find upon it one or more caterpillars of the

privet hawk-moth, the *Sphinx Ligustri* of the entomologist. As these caterpillars are some three inches long and as thick as one's little finger, they are decidedly conspicuous. In colour they are vivid green, slashed with seven streaks on either side of white and lilac. On turning into the chrysalis or pupa stage they burrow into the ground, and any one turning up the soil beneath their privet-bushes will no doubt find them in this new stage of existence. If they are carefully taken up and re-buried in a box of earth and brought indoors, the perfect insect will emerge in the following June. The moth is a grand insect, being over four inches long from tip to tip of its front wings. The front wings are pale brown, mottled and striped with darker brown and black; the hind wings pink, crossed by three broad black bands. The earth in which the pupa is re-buried should be occasionally damped, as would have been the case had we left our prize to the dews and rains of heaven; failing this the earth would get so hard and dry that the perfect insect could never force its way out and emerge into the sunlight from its living tomb.



SPOTTED ORCHIS.

Orchis maculata. *Nat. Ord., Orchidaceæ.*

AMONGST the numerous species of orchis that spring up each recurring year in our pastures, few are more commonly to be found than the subject of our figure. Many of the orchis family have a certain bizarre aspect that makes them quaintly attractive—as we may see, for example, in the bee orchis, or the butterfly orchis, both figured in this volume; but the spotted orchis exhibits no such mimicry of other natural forms, but rests its claim on our admiration on its delicate tint and picturesque mottling and striping. Many of the names, we may say in passing that are bestowed upon some of the species of orchis are rather far-fetched; and though we can remember the delight with which we welcomed the afore-named bee orchis, our disappointment was perhaps equally great when we first saw the butterfly orchis. The form, quaint as it is, suggests

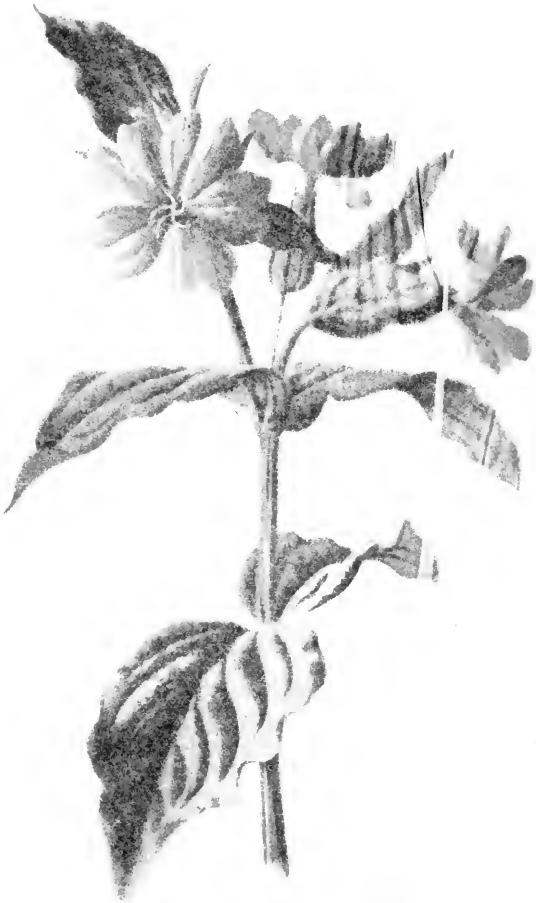
little or nothing of the butterfly; whether we had expected to see a plant laden with red admirals, peacocks, or wood argus, we scarcely stopped to inquire; suffice it only to say that in our case, as probably in many others, the reality did not bear out the somewhat hazy and nebulous anticipations formed. Those, however, who find the present flower have no such cause of complaint, for there can be no doubt that it fully bears out its name, and in so doing at the same time calls attention to one of its most beautiful and picturesque features. The spotted orchis is one of the later species; many of the kinds may be looked for in April and May, but this rarely appears before June. One accepts a statement of this kind very much as a matter of course; yet, when we give a moment's thought to it, one cannot but be greatly impressed with the sense of the unfailing working of nature's laws. As the year revolves, plant after plant appears in orderly sequence, and each has its appointed time. The snowdrops lead the goodly throng, and all their fair successors are marshalled in their set places throughout the changing seasons. This fixity of law in nature is one of the most striking characteristics. We see it again in the fact that one spotted orchis is in all essential points just like any other spotted orchis, though they may be separated by a space of 500 miles, or by an interval of 500 years. The primroses of last year are in all essential points—their delicate colour and odour, and all else that make them so attractive—just such as nestled in the undergrowth when our ancestors were painted savages, just such as year by year—till climatic influences change, or the dissolution of all things comes—shall spring up at the opening of each recurring year, to the delight of generations yet unborn. Empires totter

and decay, and the aspect of the earth is transformed through the influence of steam and electricity, so that even the men of a hundred years ago would be startled could they re-appear on the scene of their former labours; but in the woods and wilds their ruffled spirits would find welcome repose in the familiar notes of the lark or the golden bowls of the buttercups. Like the "Brook" of Tennyson, amidst the coming and going of men these remain for ever, stable in the midst of change, and inimitable in a world that speaks much of its progress, and dwells upon its ever-increasing development. The works of man, being at the best imperfect, change and pass away, the old order giving place to the new; but the works of God need no after-thought; the altogether lovely needs no added grace; perfection calls for no after-development.

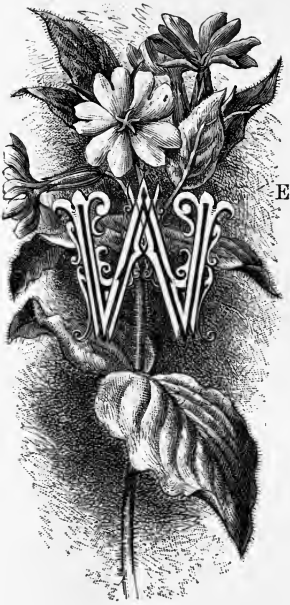
The spotted orchis is so called by botanists and herbalists, and the name is merely a translation into the vernacular of the scientific title. Other names for our present plant are the hand orchis, and the somewhat more unpleasantly-sounding title of dead man's fingers. A second book name for the plant is the palmate orchis. These names have evidently some common underlying idea; and we find, on investigation of the plant and its nomenclature, that they are derived from the curious finger-like lobes into which the tubers are divided. As to the more ancient and distinctly provincial names, we may, perhaps advisedly, take refuge in the way that one of the old herbals we consulted deals with the matter, and say at once, "It hath gotten as many names almost attributed to it as would about fill a sheet of paper," and there be content to leave the subject.

The stem of the spotted orchis is ordinarily about a foot

in length. The leaves spring from this slender stem at distant intervals, and have the curious blotching of purple that may be so noticeably seen in our sketch of the plant. The flowers vary in tint from pure white to pale lilac; but in gathering a bunch of them the variations of colours in the various heads are often very noticeable. The flowers crown the summit of the stems, and form a dense and compact mass of blossoms for a distance of some three inches. The lip is deeply cut into three irregular lobes, and the spreading lateral sepals are also very conspicuous. Each flower has a long spur; this is scarcely, if at all, seen in the general mass of flowers, as they are too compactly placed to enable one to perceive it; but it may be very clearly seen in the lowest flower of all in our plate, as its isolated position gives us the opportunity we require. The spotted orchis varies a good deal, not only in colour but in the shapes and size of the leaves, the more or less conspicuous bracts, and so forth; but the points of resemblance are, after all, more than the points of divergence, and there is no real difficulty in its identification.



CAMPION



THE PINK CAMPION.

Lychnis diurna. Nat. Ord. Caryophyllaceæ.

WE have already illustrated the white campion, the ragged robin, and the bladder campion, and the present species is equally common and equally attractive. There are fourteen different kinds of campion, divided between the two closely-allied genera, *Silene* and *Lychnis*, most of them being comparatively common, though some are very local or have their home amongst the mountains. On turning to Culpeper's "Herbal," we find that he definitely describes only the white campion and the present species, but winds up by saying, "there are forty-five kinds of campion more." Several species are found in gardens, but as his book does not deal with cultivated plants, we can only conclude that our author has been found tripping; perhaps it is a *lapsus pennæ* for "four or five kinds of campion more."

The pink campion is a perennial, and throws up each year

several upright stems, varying in height from a few inches to two or even three feet. These stalks are round in cross section, swollen at the joints whence the leaves spring, and readily breaking across at those points, hairy, and, towards their extremities, forking. Where the plant has grown amidst surrounding herbage the stems are green and appear to be succulent, but in more exposed situations they are more slender, and often deep dull crimson in colour. The leaves are thrown off in pairs, and are generally as hairy as the stems. The calyx, too, shares in this general hairy character, has five acute teeth, and is strongly ribbed. It varies somewhat in form, according as to whether the flower it encloses is stamen-bearing or pistilliferous—in the latter case being more globular than in the other. The corolla is composed of five heart-shaped petals, the colour in some plants being much deeper than in others. The styles are five in number, white, long, and thread-like; they may be very clearly seen in the centre of the flower in our illustration. The stamens are ten in number, five being longer than the other five. Instead of finding both organs in the same plant, as is so generally the case, all the flowers on one plant will be found to have styles alone, and all those on another to be furnished with stamens exclusively. Our illustration presents us with the former of these; it was unnecessary to figure both, as the general appearance of the plants remains so nearly the same. The pink campion is abundantly met with everywhere in moist shady places and on hedge-banks, and flowers throughout the summer, commencing as early as May.

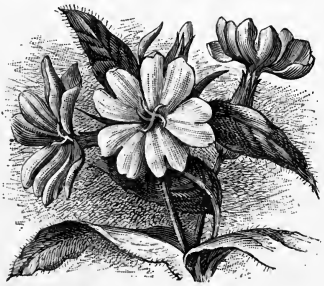
On taking down "Dodonæus," we find that "the seed and floures, with the whole herbe of the wild campion, are very good against the stinging of scorpions,

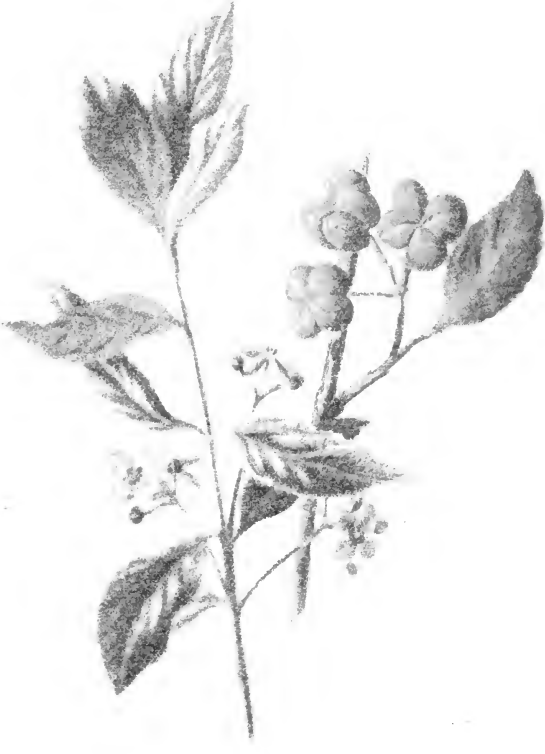
in so much that their vertue is so great in this behalfe that this herbe onely throwen before the scorpions taketh away their power to do harme." This fear of scorpions seems to have haunted the people of the Middle Ages, though in England it was a very chimerical terror indeed. The book we have just quoted was "first set forth in the Douch or Almaigne toong by that learned D. Rembert Dodoens, physition to the Emperor: And now first translated out of French into English by Henry Lyte, esquier." So far as we are aware, neither the Dutch nor the French have any more reason to fear scorpions than we have.

"If all Dame Enuies hatefull broode hereat shuld hap to prie,
Or Momus in his canckred spight shuld scowle with scorning eie,
Yet maugre them this worthy worke the author's name shall raise,
And painefull toile so well imploied shall reape renowned praise.
Not only he whose learned skill and watchfull paine first pend it,
And did with honor great (in Douch) to countie his commend it,
But also he whose tender loue to this his natiue soile
For vs his frinds hath first to take almost as great a toile.
A trauell meete for gentlemen and wights of worthy fame,
Whereby great princes heretofore have got immortal name.
By registring their names in herbes, as though thereby they ment
To testifie to all degrees their toile and trauell spent
In such a noble facultie was not a slauish thing,
But fit for worthy gentlemen, and for a noble king.
For if by herbes both helthe be had and sicknesse put to flight:
If helthe be that withut the whiche there can be no delighte,
Who dare enuy these worthy men that have imploid theire paine
To helpe the sore, to heale the sicke, to raise the weake againe?
No fie of that but Dodonæus aye shall have his dew,
Whose learned skille hath offered first this worthy worke to viewe.
And Lite whose toile hath not been light to dye it in this graine,
Deserues no light regard of vs, but thankes and thankes againe
And sure I am all English harts that like of physickes lore
Will also like this gentleman, and thank him much therefore."

The doctrine of signatures, as it was termed in the

Middle Ages, or, in other words, the belief that every plant bore stamped upon it some indication of its medicinal use, must have been brought to bear upon this plant either with a peculiarly strong penetration, or possibly an especial obtuseness, for there is nothing scorpion-like to the outward eye either in form, colour, or anything else. All one's feelings towards the pink campion are necessarily kindly, for it is one of the pleasant indications in the hedgerow that stern winter's reign is over, and it finds a place in every rustic nosegay with the cold steely blue of the blossoms of the bugle, the rich purple bells of the hyacinths, and the snowy stars of the anemone.





THE SPINDLE-TREE.

Euonymus Europæus. Nat. Ord., Celastraceæ.

BEAUTIFUL as the subject of our illustration certainly is when the later months of the year recur in their season, it presents itself in an entirely different garb to us in the spring. Its beauty is then of a more refined and less evident type; and we can well imagine that the great majority of people are more familiar with the plant in its autumn dress, for in the one case a somewhat close examination is necessary, while in the other our attention is almost compelled by it. Few, we imagine, of those who are likely to read these remarks but would pause instinctively when they suddenly came in their walks upon a mass of these quaint and beautiful berries. The small green flowers appear in May; at this time the whole tree is clothed in all the freshness of the spring verdure, while in autumn the delicate green cross-like blossoms have given place to

hundreds of fruits of the brightest and rosiest pink colour, and of the quaintest form, and the once verdant foliage glows with exceptional brilliancy even amongst the rich autumnal tints that surround it in the hedgerow. Even when the chill winds and biting frosts of November and December have swept all trace of foliage from the branches, the ruddy and waxen berries yet remain to give unwonted life and beauty to the dreariest scene. As the seeds ripen, the various capsules open down their centres and expose to view the large and brilliant orange-coloured seeds lying within them.

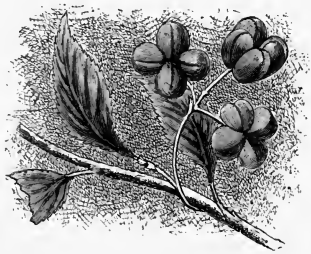
The spindle-tree is scarcely a tree at all, but rather a hedgerow shrub, that attains to a height of some five to twelve feet. The leaves are broadly lance-headed in shape, smooth to the touch, and having their outlines minutely toothed, like a fine saw. The slender flower-stems bear at their summits some three to six flowers in a cluster. These flowers are a pale yellowish-green in colour. The fruit is four-lobed, and in each lobe is a single large seed. Occasionally a variety of the spindle-tree is found in which the fruit is pure white, affording a very rich and curious contrast with the bright orange seeds seen within on the opening of the valves. Beautiful as these fruits are to the eye, they are possessed of a very actively poisonous nature, a property not obscurely hinted at in its ancient name, Euonymus, a name handed down to us by the old Greek writer Theophrastus, and which modern botanical science has retained. The name is derived from Euonyme, the mother of the Furies in classic mythology.

The hard wood of this tree is commonly used for making butchers' skewers; and its familiar name, spindle-

tree, points to another of its uses. We nowadays associate the idea of spindles with gigantic cotton-mills and the ceaseless whirr and vibration of machinery; but the name was bestowed long before the power of steam was pressed into service, and the spindle referred to was the homelier form associated with the distaff—things that are now little more than a memory of the past. Fusus is the Latin word for a spindle, and by some of the old writers our plant was called the Fusanum and the Fusoria, and by the Italians it is still called the Fusano, and by the Germans the Spindelbaum. In France it is ordinarily the Fusin, though they sometimes call it Priest's Cap, the form of the fruit being somewhat suggestive of the biretta worn by the priesthood. The four lobes of the fruit were also the cause of the plant being called by some of the mediæval writers the Tetragonia and the Quadratoria. Parkinson, in his "Theatrum Botanicum," suggests that it might very well be called the square-berried tree; but the name is evidently one of his own composition, and we find no indication anywhere, either in his books or others, that the suggestion was ever adopted. The spindle-tree is also in some old herbals called the skewer-wood or the prick-wood, and gatter, gatten, or gadrise. Chaucer, in one of his poems, calls it the gaitre.

Prior, in his altogether excellent book on plant-names, explains these old words as follows:—The first is from the Anglo-Saxon words *gad*, a goad, and *treow*, a tree; the second is made up of *gad* again, and *tan*, a twig; while the third is again *gad*, and *hris*, a rod. The same hardness that fitted it, as we have seen, for skewers, spindles, and the like, made it equally available for the

ox-goad. Amongst other uses of this tree or shrub, we find that on the Continent it is sometimes utilised for the making of pipe-stems; the young shoots, too, make excellent charcoal, either for the purposes of the artist or in the fabrication of gunpowder. The seeds are said to yield a good yellow dye when boiled in water, and a green one by the addition of alum; but all such dyes are ordinarily very fugitive. We have tried several such suggestions found in the books of the old herbalists, but never found them of any real value; as a rule the colour does not at all come up in brilliancy to what one might expect from the description, and in any case it has no lasting beauty. Some old author starts with something that is after all only a guess or a fallacy, and then generation after generation copy the original statement, some writers being too idle to take any trouble in verifying or disproving it, and others regarding it almost as a heresy to throw any doubt on the authority to whom they go for information.



BUXBAUM'S SPEEDWELL.

Veronica Buxbaumii. Nat. Ord., Scrophulariaceæ.

WE have in England some seventeen distinct species of speedwell, and of these we have up to the present point only illustrated two, the Germander Speedwell, or *Veronica Chamædrys*, and the Brooklime or *V. Beccabunga*. The speedwell we now figure exhibits all the characteristic features of the genus, as may readily be perceived by comparing it with our figures of the two other species, though it is perhaps not so well known, and even when seen is often mistaken for another species of speedwell, the *V. agrestis*, which it a good deal resembles. The plant is an annual, and should be looked for in fields, gardens, and waste lands any time from May to September. The particular piece we sketched for our figure was growing by the roadside, and we mention the fact because it enables us to say that though the plant is an annual it must readily be produced

from seed, for we have seen the plants spring up year after year on the same piece of bank as regularly as though they were as perennial as oak-trees, or any other such symbols of endurance.

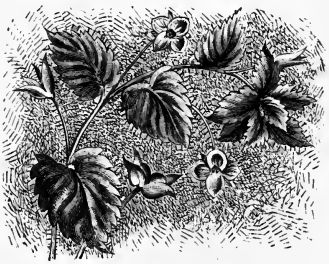
The Buxbaum's speedwell branches freely and attains to a height of a foot or so; its stems and leaves are thickly clothed with soft and silky hairs. The leaves are placed singly at irregular intervals along the stem, but are more numerous as we approach its summit. They are broadly heart-shaped, having their margins deeply cut into teeth, and each leaf has its short leaf-stalk, or in more technical language we may add that they are petiolate, cordate-ovate, inciso-serrate. All the leaves on the plant are of the same character. The flower-bearing stems that spring from the axils of the leaves are very long, and give a decided character to the plant, while the flowers themselves have the curious Veronica character—three large and fairly equal segments and then a lower and narrower one. The blossoms are a bright clear blue in colour, and for a Veronica are decidedly large. The fruit or capsule that succeeds the flower is twice as broad as it is long, and this flattened-out character is a very marked specific feature. It may be seen most clearly as the capsules ripen and develop, and is therefore best exhibited in our drawing in the detached piece at the bottom. The fruit, it will readily be observed, is two-lobed.

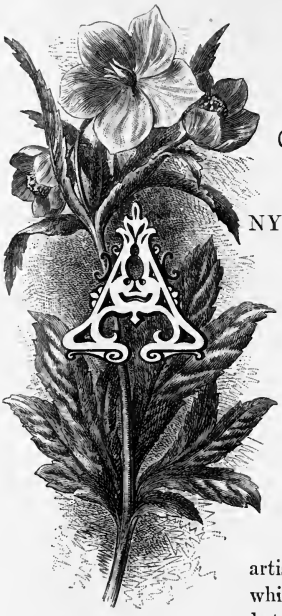
This graceful and beautiful flower derives its somewhat uncouth name from a distinguished botanist of the last century. Such complimentary names have often been applied by men of science in each other's honour, thus we get the Bartsia, so called by Linnæus in honour of his friend, John Bartsch a distinguished German botanist; the Schenchzeria,

in honour of three Swiss botanists named Schenchzer; and the Goodyera, so named in commemoration of John Goodyer, an English botanist often referred to by Gerarde. Amongst the specific names we in the same manner find not only Buxbaumii, but Halleri, Babingtoni, Raii, Borreri, Mackayi, Witheringii, Lawsoni, and many others. In old plant lists we find the hoary sedge given as the Carex Buxbaumii, but this name is now disestablished, and the plant appears in the lists as the *C. canescens*. The only work of Buxbaum's with which we are acquainted, though he probably wrote others, is the "Centuriæ duæ Plantarum circa Byzantium et in Oriente Observatarum minus Cognitarum," a book published in two volumes in 1729, and illustrated by numerous plates. The Buxbaum's speedwell, like several of the others, may be termed a plant of cultivation, springing up in the gardens and fields, and never wandering far from human society and influence. The plant is a southerner, and though we find it throughout England, and even in the adjacent part of Scotland, it is more especially at home in less northern latitudes, and it is very probable that it was introduced with some kind of foreign seed at some bygone period that we cannot now trace. We some time since found a flower which was an entire stranger to us growing in Surrey in the midst of a field of swedes, and subsequent investigation demonstrated that it was a native of Peru. A friend of ours has so far managed to acclimatise the plant that it now springs up in his garden every year, and what is even in this limited dégree possible in the case of this distant stranger becomes much more possible in the case of a plant of southern Europe.

Of the common species of speedwells we may mention

the thyme-leaved, or *V. serpyllifolia;* the common veronica, or *V. officinalis;* the water speedwell, or *V. Anagallis;* the marsh speedwell, or *V. scutellata;* the ivy-leaved speedwell, or *V. hederifolia;* the procumbent speedwell, or *V. agrestis;* and the wall speedwell, or *V. arvensis.* The spiked speedwell, a very handsome species, having its clear blue flowers arranged in a dense spike, is decidedly rare; botanically it is the *V. spicata.* The rock veronica, or *V. saxatilis,* another fine species, having but few flowers, but those large and handsome-looking, is a plant of the mountains, and is chiefly found in the highlands of Scotland, while the alpine speedwell, or *V. alpina,* is still more rare. The vernal speedwell, *V. verna,* and the finger speedwell, *V. triphyllos,* are also exceedingly scarce, each having been very seldom met with, and that only in some two or three of the eastern counties.





THE GREEN HELLEBORE.

Helleborus viridis. Nat. Ord. Ranunculaceæ.

ANY of our readers who may by chance find a specimen of our present plant will have little difficulty in recognising it, the palmate character of its foliage and the unusual colour of its flowers being sufficiently striking points to aid in its identification. Though we have spoken of the colour of its flowers, it is only in deference to popular phraseology; for as the artist would divide things into white, black, or coloured, so the botanist divides his plants into green and coloured. The green hellebore should be looked for in thickets and woods, and appears to thrive best in a stiff and calcareous soil. Like the henbane or the deadly nightshade, too, it seems to find in the society of mankind an especial attraction; hence we find it on ruins and at the foot of old walls. It is in some cases an introduced plant, but in some of the eastern and southern counties it is probably indigenous. In many of

the Hertfordshire lanes it is, we know, a plant of frequent occurrence; and Curtis, in his "Flora Londinensis," gives Finchley as a metropolitan station, though, doubtless, the wood to which he refers has long ago been overwhelmed by the inevitable march of the men of bricks and mortar.

The green hellebore begins to flower in February, and continues to blossom until the middle of April. The five large spreading bodies forming the conspicuous cup of the flower are the sepals of the calyx; the petals are very much smaller, from eight to ten in number, tubular, green, and divided into two lobes at the top. The stamens are numerous, and from their difference in colour from the calyx and corolla, are decidedly conspicuous, the yellowish convex mass of anthers telling out clearly from the green cup in which they stand. The flowers of the green hellebore are drooping, and ordinarily somewhat few in number, the leaves large, and divided into numerous fine and deeply-toothed segments. The upper leaves are sessile, the lower borne on long foot-stalks, and all glossy in effect, and of a dull and bluish green.

We find an interesting reference to the hellebore in Bishop Mant's poem on the Laws of Nature:—

> "Why is the lowly speedwell blue?
> The strawberry white? The nettle spread
> With yellowish-white and purplish-red?
> What gives the pileworts golden sheen?
> The hellebores their blossoms green?
> One purple-tipped, the other still
> Verdant throughout."

The first of the two hellebores referred to is the *H. fœtidus*, or bear's foot; the second is the plant we illustrate. In our figure it will be seen that the sepals are en-

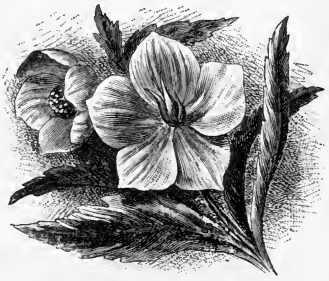
tirely green; but in the allied species they are not "verdant throughout," but have a fringe, or border, of dull purple colour. Both are British species. A third well-known species is the black hellebore, or Christmas rose (*H. niger*), a plant of Southern Europe, that may often be met with in cultivation; in this the broadly-displayed sepals are pure white, and in the centre, surrounding the clustering stamens, are the small and inconspicuous green petals. Another foreign species, *H. officinalis*, is—or it would be more correct to say was—held in repute as a medicinal plant, but the two British species and the Christmas rose possess powerful effects, and are at times substituted for it.

As it may be somewhat puzzling to some of our readers to find that the species which is especially distinguished as the black hellebore has large and striking flowers of a pure white, we hasten to explain that it derives both its English and botanical name from the colour of its roots—the parts used medicinally, and therefore well known to many herbalists and physicians, who had perhaps little other knowledge of the plant. The fresh root of the hellebore applied to the skin produces inflammation and blistering, and given internally it is powerfully irritant, so that some considerable degree of care is needed in its employment; but we find both a tincture and a powder of it are still occasionally used by the faculty, and directions for their proper preparation, use, and so forth, are all duly set forth in the manuals of materia medica. In Burton's "Anatomy of Melancholy" we find that—

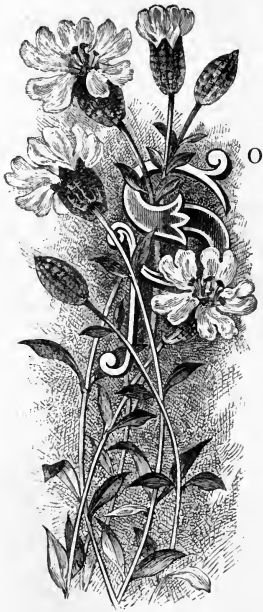
> "Borage and hellebore fill two scenes,
> Sovereign plants to purge the veins
> Of melancholy, and cheer the heart
> Of those black fumes which make it smart."

But an overdose produces the less cheering symptoms of syncope and convulsions, followed by death.

Some of the older writers, as Parkinson and Gerarde, regarding matters from a more purely medical point of view than their successors, call the green hellebore the bastard black hellebore, or the wild black hellebore, while Fuchs names it pseudo-helleborus. Gerarde says it is "good for mad and furious persons; for melancholy, dull, and heavy men; for those that are troubled with the falling sickness; for lepers; for them that are sicke of a quartane ague; and briefly, for all those that are troubled with black choler and molested with melancholy." He gives various ways of administering it, one being "the leaves dried in an oven after the bread is drawne out, and the powder thereof taken in a figge or raisin, or strawed upon a piece of bread spred with honey." Bad as an attack of the melancholy may have been, the remedy would appear to have been almost worse.



AMPION



SEA CAMPION.

Silene maritima. Nat. Ord., Caryophyllaceæ.

SOME writers on matters botanical speak of the present plant as only a variety of the common bladder campion, *Silene inflata*, a plant that has already made an appearance in our series. Bentham, for example, in his "Handbook of the British Flora," winds up his description of the bladder campion by saying: "A sea-coast variety, with short diffuse stems, thicker, more obtuse leaves, and almost solitary flowers, has been distinguished as a species under the name of *S. maritima*." Hooker and Arnott, in their "British Flora," admit it to specific rank, as did the author of the well-known standard work "English Botany," but the former, after describing the plant, go on to say, "This, though it has smaller stems and leaves than the last, has larger flowers; yet we will not assert we have done right in again raising it to the rank of a species." In so doubtful a

case we may very possibly be asked how we came to admit it to a place in our series while other plants. concerning which there can be no doubt, find no room. To this appeal we can, we think, make full and complete reply. The plant we figure is so abundantly met with on sandy and stormy sea-shores that our series would have been manifestly incomplete without it, and whether it be only a sea-side modification of the common bladder campion or an entirely different plant, its appearance at least is so different as to call for a separate illustration. As the sea-side flora, too, is comparatively so small, we are glad to avail ourselves of any additional example of it.

The sea campion grows in clumps on the most unpromising-looking situations, where the wild winds rush tumultuously over the waste, while the beach on which we find it may be either sand or the less-promising surface of rounded boulders, that render walking so difficult, and that present a stony surface that one would imagine utterly repellant to any of the children of Flora.

> "The Eryngo here
> Sits as a queen among the scanty tribes
> Of vegetable race. . . . .
> Here the sweet rose would die; but she imbibes
> From arid sand and salt sea dewdrops strength:
> The native of the beach, by nature formed
> To dwell amongst the ruder elements."

The plant referred to in these lines of Drummond, one of our little-read poets, is the interesting sea-holly, or *Eryngium maritimum*. Its dense heads of small blue flowers, the quaint spiny forms of its foliage, and the singular purple bloom over leaves and stems, combine to make it a very curious plant. When gathered it loses much of

its beauty of colouring, but as it dries it retains the angular rigidity of its foliage, and may then be preserved for years amidst groups of shells or other trophies of the beach. Though the lines of Drummond refer to one plant, while we are writing of another, they are equally true of both; and if our readers will begin with "The campion here," they will arrive at a very just impression of the wild home of our present plant.

The stems of the sea campion are naturally short; the fierce cold winds that beat across the beach effectually prevent any untoward aspirations, and each stem bears but one or two flowers; one of our stems, we see, bears one flower, while the other has, beside its expanded blossom, the promise of another. These stems spread a good deal laterally, and are rather closely covered with the small and fleshy leaves. Both stems and leaves often have the cold blue-green tint that is so characteristic of the maritime flora, more or less changed into warmer tints of crimson and brown.

The plant is perennial. The flowers are large and handsome-looking as they shine like stars amongst the dense mass of foliage, and well repay in their fragile-looking grace the regard we gladly give them, as we watch their gallant struggle for existence far from sheltering fence or shady hedgerow. We need indeed waste no such misplaced pity on them, as the Divine Hand that placed them there fitted them amply for the circumstances surrounding them, and it would speedily prove no mercy to them to move them from their wild surroundings to some quiet inland dell. The wild freedom and the boisterous music of the crashing surf and the cry of the sweeping gull are the natural accompaniments of their lot in life. The nestling prim-

rose needs the sheltering bank, the hyacinth the solemn shade of the woodland, the heath the open moorland, and as we visit each scene in turn we find in all alike the proofs of adaptation.

> "I have learned
> To look on Nature, not as in the hour
> Of thoughtless youth, but hearing oftentimes
> The still, sad music of humanity.
> Nor harsh, nor grating, though of ample power
> To chasten and subdue. And I have felt
> A presence that disturbs me with the joy
> Of elevated thoughts; a sense sublime
> Of something far more deeply interfused."

The coy and sheltered primrose and the wind-tossed campion are alike the children of one common Father, and have equally received at His hand all that is essential for their well-being.

FURZE.

Ulex Europæus. Nat. Ord., Leguminosæ.

NO one who is at all familiar with our commons and waste lands can be ignorant of the present plant, its rich wealth of golden blossoms stretching over many acres of ground, the sweet fragrance of its flowers, and the long duration of its flowering season, being all points that arrest the attention even of the most indifferent. Early in the month of February we may find it here and there in blossom, "a token to the wintry earth that beauty liveth still;" and as the spring advances the dark and sombre-looking masses of prickly foliage become thickly laden with its brilliant blossoms. As the spring passes into summer, and the primroses, hyacinths, and all the other floral beauties of the opening year give place to their successors, the furze still continues in all its richness of colour; and as summer, in turn, gives place to

autumn, and its blossoms fade away, the furze still stands its ground, and brightens the declining year.

It is a common saying among country folk that when the furze is out of flower kissing is out of season, whence we are of course given to understand that as at almost all times some few blossoms at least may be met with, such a token of affection can rarely be ill-timed. Even when the golden flowers of the furze are but sparingly to be found, the plant is always welcome, as it preserves its verdure throughout the year. Our plant is almost equally well known as the gorse, while a third name for it is the whin. Goldsmith speaks of the "blossomed furze," and Cowper of the "prickly gorse," its two commonest names and its two most striking features being thus at once illustrated. Thompson, too, calls it "the flowering furze poured forth profusely"—a testimony to a third marked feature, its abundance. Goldsmith, however, goes on to call it "unprofitably gay," while Cowper terms it "shapeless and deformed, and dangerous to the touch;" and here we must at once beg to enter our protest. The furze is most distinctly not unprofitable. It is sometimes planted as a hedge; at other times it affords an admirable cover for game. It will grow near the sea, too, and is, therefore, of great value in shielding young plantations from the salt-laden and sweeping gusts of wind that would prove fatal to them, while few things throw out a fiercer heat when burnt.

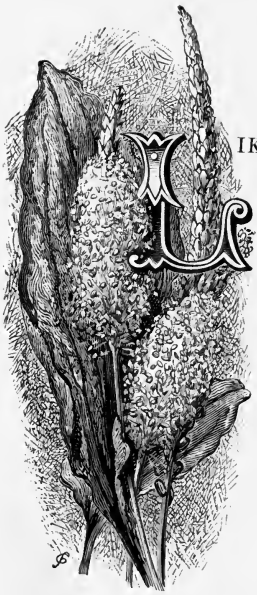
Any one at all familiar with country life will have seen the furze faggots being cut on the heath, or will at least recall the places bare of all but stumps whence this harvest has been gathered. It is ordinarily cut once in three years, so that we generally find not only the bare ground, but

patches elsewhere of more or less up-springing shoots, and in other places the full-grown plants awaiting the woodman's visit. Its ashes yield a serviceable dressing for the land, and its upper shoots, after being bruised with a mallet, form a valuable fodder for cattle and horses. In large dairy establishments the gorse is crushed almost into a pulp by a small engine, and then given to the cows. It may, therefore, be sown to advantage on poor land, the proper proportion being at the rate of 35 or 40 lbs. of seed to the acre. It is ready for cutting in the second autumn, and should yield some two thousand bundles, or about eighteen tons per acre. If to this we add its more indirect service to us through the industry of the bees, we shall at all events have clearly demonstrated that the furze can scarcely be called "unprofitably gay"; besides, beauty is in itself an end, and we need not feel under any compulsion to reduce everything to a strictly utilitarian standard. We ourselves feel perfectly content to enjoy its beauty in the landscape, and to revel in its golden richness: Cowper's injurious epithets, then, need not delay us long; a glance at our figure, or, better still, a walk over the breezy and furze-clad common, will effectually dispose of them.

The word furze is derived from its Anglo-Saxon name, *fyrs*, while gorse, also Anglo-Saxon in its origin, is from *gorst*, a waste, and refers, of course, to the open commons and moorlands on which we find the shrub. The derivation of the word whin is obscure, and two or three different theories are given in various etymological works; but into these we have not space to enter. The furze is sometimes, but less commonly, called the thorn-broom, its spiny branches, laden with the large yellow broom-like flowers, being, of course, the cause

of the name. A variety, distinguished from the typical plant by its smaller size, upright growth, and soft and succulent stems, is sometimes met with; it is ordinarily called Irish furze, as it was first observed in County Down.

In our second volume may be found the description and illustration of the rest-harrow, a plant having considerably larger leaves than the furze, and a rich array of pink blossoms. As these blossoms, however, though pink, are of the same size as those of the furze, and of the same papilionaceous or pea-flower type, while the plant has spine-guarded stems, the rest-harrow is sometimes called the petty-whin. The bilberry, too, from its growing on the open moorland and common, the characteristic home of the golden-blossomed furze, is sometimes locally known as the whin-berry.



BROAD-LEAVED PLANTAIN.

Plantago major. Nat. Ord., Plantaginaceæ.

LIKE its near relative the lamb's tongue, narrow-leaved plantain, or ribwort, the broad-leaved plantain claims a place in our series, for there are few plants that from their abundance and universal distribution can show a better right to the title of Familiar Wild Flowers. It may be found anywhere by road-sides and in meadow land. It is, perhaps, in these latter days better known than respected, though there was a time when its more or less real virtues gave it a high place in rustic esteem. All the species of plantain are mucilaginous and astringent in nature; and in more primitive days, when the herbs required for the healing art had to be in large measure derived from the neighbouring hedgerow or meadow, it was, no doubt, a distinct acquisition to the store of the rural practitioner. In the Highlands of Scotland it is still, we believe, called the

Slan-lus, or plant of healing; and the old herbals are full of its commendation, and abound in suggestions for its use in all sorts of directions. Dioscorides, Galen, and many others of the ancient writers, bestowed on it lavish praise for its services in all inflammations, bleedings, the bites of mad dogs, of scorpions, and of venomous serpents, for ophthalmia, insanity, hysteria, asthma, phthisis, fevers, ague, and many others of the ills of suffering humanity, applying it internally, or in poultices, fomentations, gargles, and so forth—in fact, in every way in which it was possible to turn its services to account. All these details of the ancients are carefully reproduced by the mediæval writers—as, for instance, that "the juice mixed with oyle of roses, and the temples and forehead anointed herewith, easeth the paines of the head proceeding from heate, and helpeth franticke and lunaticke persons very much, as also the bitings of serpents or a madde dogge." Erasmus, in his "Colloquia," tells a story of a toad, who, being bitten by a spider, was straightway freed from any poisonous effects he may have dreaded by the prompt eating of a plantain leaf; and a relative of our own informed us that in the United States the plant is called snake-weed, from a belief in its efficacy in cases of bites from venomous creatures. A favourite dog of his was one day stung by a rattle-snake, and a preparation of the juice of the plantain and salt was as promptly as possible applied to the wound. The poor animal was in great agony, but quickly recovered, and shook off all trace of its misadventure.

The greater, or broad-leaved, plantain is almost cosmopolitan. It would almost appear to possess a peculiar sense of companionship and domesticity, for it has followed the migrations of our colonists to every part of the world,

and in both America and New Zealand has been called by the aborigines the Englishman's Foot, for, with a strange degree of certainty, wherever the stranger race has taken possession of the soil, there the plantain in like manner asserts its claim to a home.

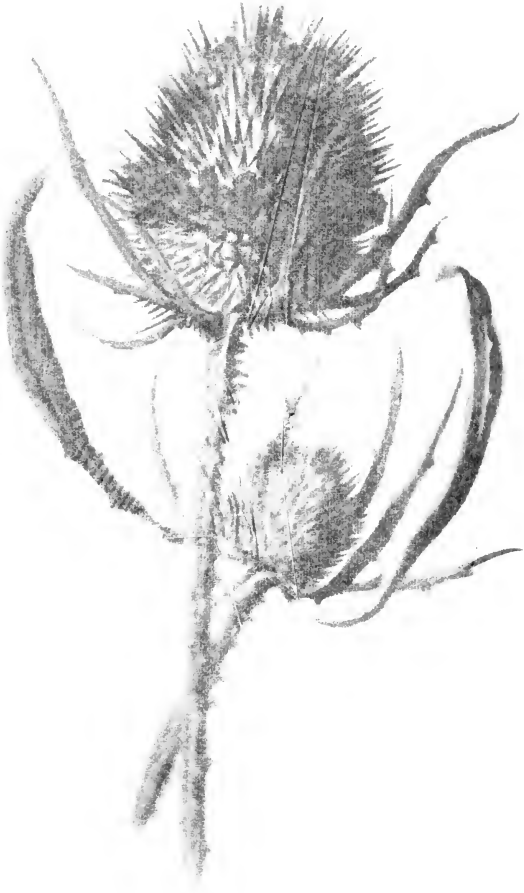
An old English name for the plantain is the way-bread, a name apparently meaningless at first sight; but on turning to some of the older herbalists, we find it given as way-bred. The name, therefore, bears no allusion to any food-yielding property, but to the habitat of the plant, flourishing as it does by the roadside, born and bred amidst the busy haunts of men. In a very curious old book, "Leechdoms, Wortcunning, and Starcraft," it is called way-broad. This opens out a new theory, that the plant was possibly so called from its broad and spreading leaves flaunting by every path-side. The Anglo-Saxon name for the plant was *wegbræd*. The generic name, *plantago*, is derived from the Latin word *planta*, the sole of the foot, a name that may have been originally bestowed either from the broad flat form of the leaves, from their closely appressed growth, in almost or complete contact with the ground, or from their growing where they get trodden under foot of man.

Though the plant ministers in no way to the food and sustenance of man, it is probably to many of our readers a well-known food-plant. Cage-birds greatly enjoy it, and its collection and sale along with the equally well-known chickweed and groundsel is a well-recognised branch of street industry. Many of our smaller native birds also are indefatigable collectors of it, not, indeed, as a commercial speculation, but for home consumption.

The root-stock of the broad-leaved plantain is short and

thick, while from it issue numerous white fibres that strike deeply into the earth, and from their stronghold render the plant very difficult to eradicate. The leaves vary very much, both in size and mode of growth; when the plantain is found amongst the luxuriant herbage of the hedgerow the foliage is large, on long foot-stalks, and struggling upwards, like all its surroundings, to the necessary air and light; but on lawns and road-sides the leaves are considerably smaller, massed in a solid rosette, and pressed closely to the earth. The plant seeds freely, and is a great disfigurement to a lawn. If left alone, plantains rapidly multiply, and quite spoil the look of the turf, besides presently throwing up their multitudinous scythe-blunting flower-stems; and if eradicated, the place where their dense rosette of leaves had destroyed the grass is for some time an unsightly feature in the midst of the verdant expanse.

Like the ribwort, an allied species we elsewhere figure in our present volume, the broad-leaved plantain has its leaves very conspicuously veined.



THE TEASEL.

Dipsacus sylvestris. Nat. Ord., Dipsacaceæ.

THE teasel, though not so common as some other plants, is very generally distributed, and we should imagine that few persons out for a day's ramble in the country would fail to come across a specimen or two of it. Its harsh, tough, wiry stems offer no temptation to any animal to browse on them, and long after most plants have died away with the summer or autumn, the dry gaunt stalks of the teasel and its brown and withered heads stand erect in the hedgerow and attract our notice. Some of our botanists admit three species, the *D. Fullonum*, or fuller's teasel, the present species, and the *D. pilosus*, a small teasel, while most of them are inclined to blend the first and second into one. The first form has the hooked scales of the flower-head largely developed, and cultivation is found to preserve this feature, while neglect or

a poor soil causes it to disappear and pass into the second form, and there is little reason to doubt that the fuller's teasel should be considered merely as a variety of our present plant. The small teasel is a distinct species; it may at times be found in moist hedgerows, but is not generally distributed; its height, the shape of its flower-heads, the form of the foliage, are all quite distinct from the present plant.

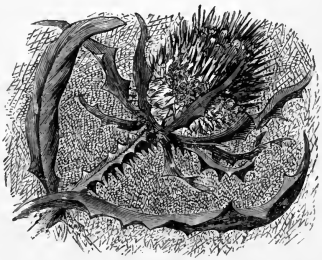
The common teasel should be searched for on waste land, in the hedgerows, and by the roadside. It flowers rather late in the summer, and while commonly distributed in the south of England, becomes rarer as we go northward. The plant is a biennial, and attains to a height of some four or five feet, though we may sometimes find specimens only eighteen inches or so in height, bearing the crop of cylindrical flower-heads. The whole plant is very harsh and prickly to the touch. The lower leaves are large, and lance-headed in shape, and coarsely toothed; the upper leaves are more pointed in character, grow in pairs, and have their bases so grown together as to form a deep cup, capable of holding dew and rain. This conspicuous feature has earned the plant its older and alternative name of Venus's basin, and it was held that the water which collects in this natural receptacle—and may almost always be found there—was a remedy for warts. Its generic name, *Dipsacus*, also refers to this peculiarity of structure, being derived from the Greek verb signifying to be thirsty.

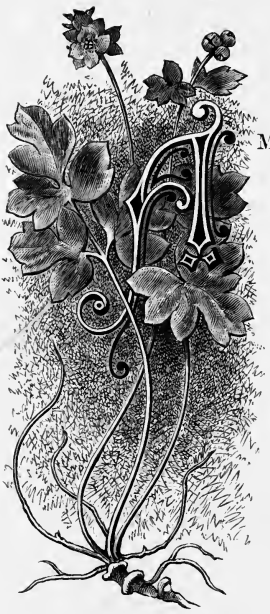
Lyte, in his translation of Dodœns (1586), calls our plant the card thistle. "The card thistle his first leaues be long and large, hackt round about with notches like the teeth of a sawe, betwixt these leaues riseth a holow stalke of three foote long or more, with many branches, set here and

there with diuers hooked sharp prickles, and spaced or seuered by ioints, and at euery of the sayd ioints grow two great long leaues, the which at the lower endes be so closely ioined and fastened together round about the stalke, that it holdeth the water, falling either by raine or dewe, so sure as a dish or bason. At the top of the branches grow long, rough, and prickle heads set full of hookes; out of the same knops or heads grow small purple flowers placed in cels and cabbins, like the honie-combe, in which chambers or cels (after the falling away of the flower) is found a seed-like fenil. The knops or heads are holow within, and for the most part hauing worms in them, the which you shall find in cleaning the heads. The small wormes that are founde within the knops of teasels do cure and heale the quartaine ague, to be worne or tied about the necke or arme."

Gerarde, in his "Historie of Plants," tells us his own experience in this latter matter. It would appear from this that the theoretical remedy would not bear the rough strain of actual use. He shall, however, speak for himself in his own refreshingly quaint way:—"It is needlesse here to alledge those things that are added touching the little wormes, or magots, found in the heads of the Teasell, which are to be hanged about the necke, for they are nothing else but most vaine and trifling toies, as my selfe haue proued a little before the impression hereof, hauing a most grieuous ague, and of long continuance: notwithstanding physicke charmes, these wormes hanged about my neck, spiders put into a walnut-shell, and divers such foolish toies that I was constrained to take by phantasticke people's procurement; notwithstanding, I say, my helpe came from God himselfe, for these medicines, and all other such things, did me no good at all."

The flower-heads are numerous, growing singly on the extremities of the footstalks, and first breaking forth into flower in a ring of blossoms near the centre. Cloth-makers have found that no invention can supersede the natural teasel-head for raising a nap on woollen cloth. These heads are therefore an extensive article of commerce, the plant being largely cultivated for this purpose in the west of England, in France, Germany, Italy, and elsewhere. Many thousands are imported every year, and any one who is familiar with any of the centres of the clothing industry, will remember seeing the waggon-loads of teasel-heads going through the streets to the different factories. The heads are cut as soon as the flowers wither, about eight inches of stem remaining attached to them, and they are then dried, and sorted into qualities. The great utility of the teasel-head is that it gives the necessary nap, but breaks at any serious obstruction, while all metallic substances in such a case expect the cloth to yield first, and therefore tear the material.





TUBEROUS MOSCHATEL.

Adoxa moschatellina. Nat. Ord., Araliaceæ.

AMONGST the more conspicuous floral treasures of each recurring spring, the delicate little blossom we have here figured runs a considerable risk of being overlooked. It has, nevertheless, a refined charm of form and tint that makes it a not unworthy companion of the delicate sulphur-coloured flowers of the primrose, starring every hedge-bank and coppice, the pure white blossoms of the stitchwort, or the royal purple of the hyacinths, as their countless blossoms clothe the woodland glades in rich masses of colour. The moschatel has no charms so immediately patent to all beholders as these, yet we doubt not that those who may hitherto have overlooked it will be grateful for our introduction of it, and will henceforth give it due recognition. Were we asked to justify our commendation and particu-

larise its charms, we would point at once to the delicate green of its foliage, clothing with its verdant mantle many a spot that would else be bare.

The moschatel should be sought for in woods, on hedge-banks overhung with trees, and generally in shady places. Though the plant is small, the large masses in which it grows give a welcome clothing to many a spot that offers in its damp and dimly-lighted recesses little or no inducement to anything else. In such spots the refined and delicate forms of the moschatel, or the glossy leaves and multitudinous golden stars of the lesser pilewort, find a congenial home. The rich form of the leaves is no less beautiful than their delicate colour; and whatever commendation either of form or tint may be bestowed on the foliage is no less the due of the clustering ring of blossoms. The moschatel should be looked for in the situations we have indicated during April and the beginning of May; after which it

> "Melts in unperceived decay,
> And glides in modest innocence away."

The order to which the plant belongs is in Britain represented by only two genera, and each of these consists with us of but a single species. The little inconspicuous moschatel and the much better known ivy are the only representatives we possess of this order, though abroad it contains many and various plants, from forest trees to wayside herbs. It would, of course, be foreign to our present purpose to indicate how it comes to pass that plants so apparently unlike as the present species and the ivy should have got into close companionship, or how it is that they alone represent a great natural order to us. To make this clear would necessitate more technical description

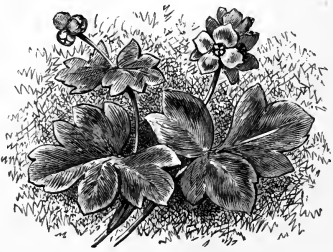
and analysis than is here desirable; but those who care to pursue the subject at greater length will find in such "Floras" as those of Dr. Hooker or of Bentham all the information they could desire. John Ray, in his early system of plant classification, placed the moschatel amongst his *Herbæ bacciferæ*, or berry-bearing plants; but such broad massing of plants has little scientific value, and is only a degree better than placing it amongst root-possessing plants. Another practical disadvantage, from the English point of view, is that in these islands the plant rarely produces its berries at all.

The early writers found considerable difficulty in assigning its botanical position to the moschatel. One old author, we see, calls it the musk-ranunculus, whilst another places it amongst the fumitories—in either case the form of the leaves being probably the cause of the arrangement. If our readers, after studying our present plate, will turn to the various species of buttercup, and to the common fumitory that we have already figured, they will see that there is a certain similarity in this respect.

The root-stock of the moschatel is covered with thick fleshy scales, and from this the flower-stem rises to a height of some six inches. The flowers are pale green in colour, and form a little cluster at the summit of the stem. The terminal flower has often four divisions in the corolla, while the lateral blossoms frequently have five; but this is by no means a constant arrangement. The stamens vary in the same way from eight to ten. The radical leaves, as may be very clearly seen in our figure, are borne on long stalks, and are deeply cut into numerous segments, while the flower-stems each bear a single pair; these are on shorter stems, and less elaborately divided. The cluster of berries

is green in colour; each berry contains from one to five oval and flattened seeds, but ordinarily the smaller numbers are the most commonly to be found. In many cases the berries are single-seeded.

Though some of the early botanists called our plant the *Moschatella*, or the *Moschatelleria*, it has, ever since Linnæus bestowed its present name on it, been the *Adoxa*. The name may be considered fairly descriptive, compounded as it is of two Greek words, signifying "without glory," in allusion to its humble and lowly growth and station. The specific name is Latin in origin, and refers to the slightly musky smell of the plant. The English name betrays its foreign origin, and can scarcely be called a really popular name, the plant being too inconspicuous to have received one. It is sometimes given as moscatel, and at others as moschatel, or moschatell.



NARROW-LEAVED EVERLASTING PEA

Lathyrus sylvestris. Nat. Ord., Leguminosæ.

WHILE the narrow-leaved everlasting pea is not a familiar wild flower in the way that dandelions or buttercups are—a thing that we may meet with here, there, and everywhere—it is, like the wood vetch, *Vicia sylvatica*, which we have already figured, a plant that may be found in fair profusion if one only goes to the right place. Curtis, we see, in his "Flora Londinensis" speaks of it as growing in the Oak of Honor Wood, at Peckham, and as being abundant in many parts of Kent in the hedges by the roadside. Curtis, of course, only gives localities within easy reach of the metropolis. Though found in the hedgerows occasionally, it is more especially at home in thickets and rocky places. We remember to have been much struck with its appearance in some of the wilder parts of the Undercliff, in the Isle of Wight; and it was in just such another locality that we found the piece from which our

sketch was taken. When found at all, the plant is ordinarily met with in abundance. It should be sought for in flower during June, July, and August. It is a hardy perennial, so that when it is once established in a district there is no difficulty in finding it year after year. The stalk is six feet or more in length, climbing and branching freely, smooth to the touch, and having its angles expanded into lateral wings, that run along it on either side. The leaf-stalks, too, are flattened and winged in the same way, and terminate in a three-branched tendril; each leaf-stalk bears a single pair of long and sharply-pointed leaflets, and at its base are two small and narrow stipules. The large size of the leaf unfortunately prevented our showing this latter feature on our plate. The flower-bearing stems are some six inches long, wingless, springing from the axils of the leaves, and each bearing numerous flowers. The flowers themselves are large and attractive-looking, rosy-red in colour, conspicuously veined, and of the papilionaceous form one is so familiar with in the furze, broom, clover, meadow vetchling, and other equally common examples of the great natural order to which they and this belong. The seed-vessel is a pod of some two or three inches long, at first green, but afterwards changing to a bright, but pale brown. Each pod contains some ten or twelve globular and blackish seeds.

That the present species should be the narrow-leaved everlasting pea will naturally suggest to our minds that there is possibly a broad-leaved species as well, and for this we have not far to seek, though we must look for it in the garden, and not in the hedgerow or copse. The broad-leaved everlasting pea is one of the commonest, most old-fashioned, and most beautiful adornments of an old-fashioned garden. Some few writers consider it as but a variety of the plant

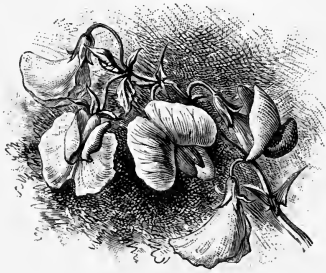
we figure; but most botanists give it full specific rank as the *L. latifolius*. It has at rare intervals been found in woods in various counties throughout England; but it is a very doubtful native. We see that Edwards, in his "Flora Britannica," speaks of it as follows:—"The stalks several, thick, climbing by means of tendrils to the height of six or eight feet, or even higher in woods;" while others tell us that, when found as a wildling, it is always an escape from cultivation. When, however, we find the plant in the heart of a large wood far removed from human habitations, we feel that this sweeping statement has its difficulties.

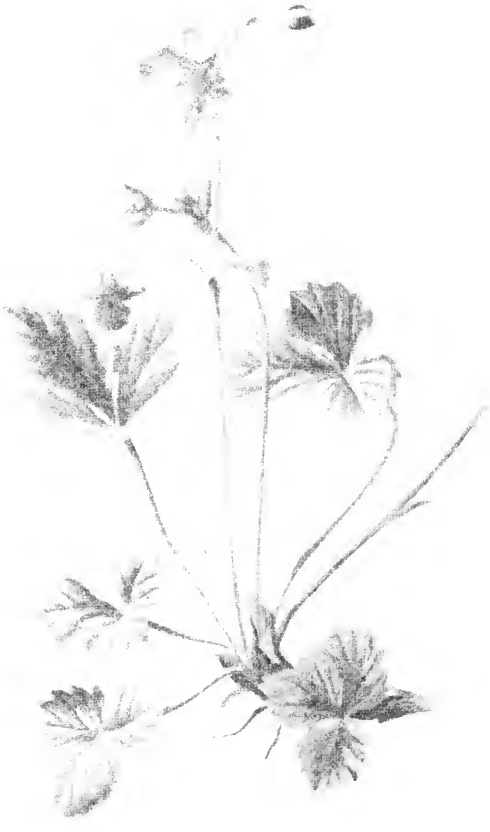
The name *Lathyrus* was applied by Theophrastus to some leguminous plants, but the exact species cannot now be traced. The name was bestowed by the great Linnæus on the present genus.

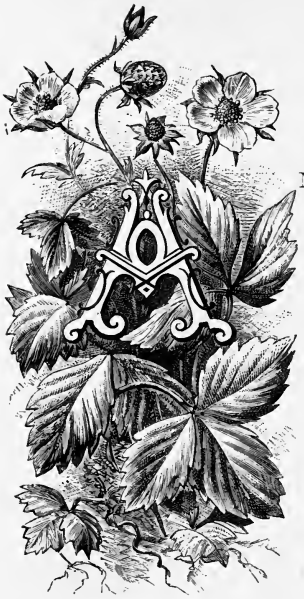
As Theophrastus will be to many but the pale shadow of a great name, we may advantageously diverge into a brief biography. Botanical lore dates back, we are told by some enthusiasts, to Adam himself, while Solomon's treatise, that extended from the lordly cedar of the slopes of Lebanon to the lowly hyssop on the wall, is a stock reference. The writings of the somewhat mythical Æsculapius date still earlier than those of Solomon; but the most ancient Greek writer whose works have actually come down to us is Hippocrates. He was born at Cos, in the year B.C. 459. Theophrastus was a Lesbian, and was born about B.C. 390. He was one of the disciples both of Plato and Aristotle, and is said to have written some two hundred treatises on very diverse subjects. Twenty of these have been preserved to us, and out of this small number two only are on plants. He treated on vegetable physiology, the nature and properties of various kinds of

timber, on the ornamental plants of the garden, on wild plants, on various kinds of grain, on gums and resins, and so forth, dealing with the whole subject in a broad and comprehensive way. He was one of the chosen followers of Aristotle, and was entrusted by him at his decease with all his writings. He died at the age of a little over a century, regretting the shortness of his life, and that he had been able to do so little of what he had proposed to himself. Dioscorides, whose name we have from time to time had occasion to introduce, was the third of the great trio of ancient Greek writers on natural history.

The first of the Greek botanical works introduced into Western Europe on the invention of the printing-press was the treatise of Dioscorides. A Latin translation of this was prepared by a Venetian nobleman, and issued from the press in the year 1478. The work of the second great Greek writer on plants, Theophrastus, was printed only five years afterwards, in 1483. Both these books ran through many editions, and, at the time of their republication in the Middle Ages, they were held in great esteem.







THE WILD STRAWBERRY.

Fragaria vesca. Nat. Ord., Rosaceæ.

AMONGST the many graceful little denizens of the hedge-bank, few, perhaps, are more pleasing than the wild strawberry, whether we regard its pure white blossoms with their golden centres, the form of the foliage, or the ruddy fruit. It is abundantly to be met with in woods and copses, and on somewhat sheltered hedge-banks. It flowers during April and May, and, like the bramble, may be found frequently both in flower and in fruit at the same time. It appears to be equally at home in Europe, Northern and Western Asia, the north of Africa, Canada, and all the more northerly portions of the United States of America. The fruit of the wild strawberry is as wholesome and delicious as that of the garden plant; it has a pleasant sub-acid taste of its own, but the great drawback is that, owing to the small size of the fruit, one soon gets tired of the labour of collecting it.

The strawberry has been an object of cultivation in England from a very early period, many of the finest varieties being only developments from the wild strawberry, and others from the hautboy, *F. elatior*. One naturally thinks of the well-known Shakespearian quotation —"My lord of Ely, when I was last in Holborn, I saw good strawberries in your garden there," and we find other references of much earlier date to the strawberry.

> "Then unto London I did me hye,
> Of all the lands it beareth the pryse;
> Gode pescode owne began to cry,
> Straberry rype, and cherrys in the ryse."

The spelling of the word must be noted, as some persons jump too readily at conclusions, and when they see the plants in a well-ordered garden all neatly surrounded by fresh straw, think that they have solved the easy mystery of its name. In Anglo-Saxon it is the streowberie, and the name was given to it either from its long suckers being strewn on the ground, or from their straying propensities. John Lydgate has the same form of spelling, and, though the orthography of the earlier writers was of the most erratic description, we may at least take it for what it is worth, and neither build too much nor too little upon it, and this form of spelling certainly suggests stray-berry. Any one who has noticed the long runners travelling for many feet across a neglected bed will see considerable force in the use of this term. John Lydgate, born about 1370, was a writer of clear fluent verse, bringing home to the uneducated the works of the Greek and Latin poets, or satirising in his rhyming moralities the abuses of the time. The reference to the strawberry will be found in his "London Lickpenny," wherein he introduces the street

cries of his day, and points a moral against avarice and the denial of justice to the poor.

The generic name is derived from the Latin word *fragrans*, a word that carries its meaning on its face, and will at once suggest to the most unlearned of our readers the idea of fragrance, while the specific name signifies edible, a sufficiently frigid way of putting it, as most people consider strawberries not only edible but are very glad to find themselves in a position to reduce their opinions to practice. It is singular that a fruit so delicious should have been held in so slight esteem by the ancients: the references to it in Pliny, or Ovid, or Virgil, for example, deal with it very coldly, and merely as a wild fruit, but in these later days it has received full attention. It is a particularly easy plant to grow.

The stock is perennial, scaly, and fibrous, throwing out numerous slender runners which, in turn, root at intervals and produce new plants. The flower-bearing stems spring directly from the roots, and are erect, herbaceous, clothed with soft hairs, and some six inches in height: either entirely leafless or with one, or possibly two, leaves of very simple character upon them, a feature that may be clearly seen in our illustration. The flowers are few in number on each stem. The leaves are of the form botanically termed ternate, and are composed of three nearly equal leaflets; each leaflet being egg-shaped and deeply cut into teeth like a saw. The leaves, like the stems that bear them, are often thickly clothed with silky hairs. The petals are five in number, pure white in colour, easily shattering, and the calyx is cleft into ten divisions. The stamens are numerous, and form a compact ball-like yellow mass in the centre of the flower. The fruit is fleshy and succulent, ordinarily

bright red, but sometimes white. The strawberry-leaved potentil, *Potentilla Fragariastrum*, by the older botanists called the sterile strawberry, closely resembles it: into the botanical differences it would here be scarcely advisable to go at any length, but the presence or absence of fruit is in itself a very conspicuous point of difference, as the pseudo-strawberry never produces the succulent and ruddy fruit that is so conspicuous in the true plant.

We remember to have seen the wild strawberry very pleasingly introduced in a sixteenth-century MS. in the British Museum, the white flowers and crimson fruit being painted on a golden ground; it may be seen, too, very gracefully rendered in the foreground of a picture of the Virgin and Child, by Hugo Vandergoes. The Gothic stone-carvers of Southwell, Wells, and elsewhere were not oblivious of its charms, and we have seen it, too, in old stained glass.

UPRIGHT MEADOW CROWFOOT.

Ranunculus acris. Nat. Ord., Ranunculaceæ.

WE have already seen in our remarks on other species of crowfoot or buttercup, that the genus is distinguished by a peculiar acridity, a quality which finds its maximum in the flower before us. Though we have never ourselves experienced it, we are told by various authorities that the mere carrying of the plants in the hand is often sufficient to cause blistering and inflammation. This property it loses when made into hay, but the plant is in any case unwelcome to the agriculturist, for cattle dislike it exceedingly in its green state, or if hard pressed for forage, can only eat it at the expense of blistered mouths; while in its dried state, though it has lost its hot and biting pungency, it is at best but hard and tough, and yields little or no nourishment. It is, therefore to the interest of the

farmer to eradicate it as far as may be. Though it bears a strong similarity to the bulbous crowfoot, a plant we have already figured, a little discrimination will soon enable us to distinguish the two species.

The upright meadow crowfoot worthily deserves its name, as it is one of the tallest of our buttercups, and there is a peculiar lightness and delicacy in its freely up-springing stems. The plant may often be found a yard or more high, and its appearance is distinctly "genteel," to quote Martyn, the author of the "Flora Rustica." The meadow-crowfoot has perennial roots, consisting of numerous white fibres. The stems are hollow, often more or less covered with soft silky hairs, and very freely branching towards their summits. The leaves vary a good deal in form, according to their position on the plant, a feature that may be very clearly seen in our illustration. The lower leaves are on long footstalks, composed of numerous widely-spreading and deeply-divided segments, while the upper leaves are small, composed of few segments, simple in form, and few in number. The flowers form a golden crown to the plant, being very numerous, and growing at the extremities of the stems. These flower-bearing stems are not channelled or furrowed as in many of the other species, but are smooth and cylindrical. The calyx is composed of fine greenish yellow and spreading sepals, while the corolla has the same number of bright golden yellow and glistening petals; in its centre is the clustering mass of stamens. The fruit consists of numerous small bodies, technically called achenes, clustered together into a globular head; an example of the form may be seen in the centre of our illustration.

The plant is one of the flowers of the early summer,

but though it may be found in flower by the beginning of June, it lasts much longer than many other blossoms, and may often be found throughout the summer and well into the autumn. It is naturally more noticeable, however, in the earlier months of the year, when it has not so many rivals to distract attention from it, and though roadside and waste-ground specimens greet us all through the summer months, it is especially a plant of the meadows, and shares with the rattle, the ox-eye, and many other fair wildlings the fell doom of the mower's scythe. It is a plant of general distribution, and is in most places abundant.

Our plant shares with the bulbous and the creeping crowfoots the generally popular names of buttercups, kingcups, and goldcups. It is also one of the "butter flowers" of Gay and other poets. Gay associates the flower with the rosemary, or herb remembrance, in his description of the rustic funeral: —

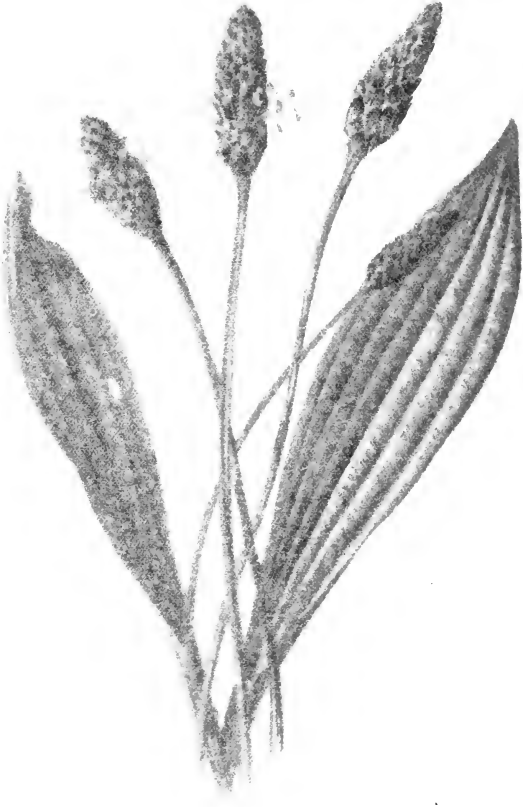
> "To show their love, the neighbours far and near
> Followed with wistful looks the damsel's bier;
> Sprigged rosemary the lads and lasses bore,
> While dismally the parson walked before.
> Upon her grave the rosemary they threw,
> The daisy, butter-flower, and endive blue."

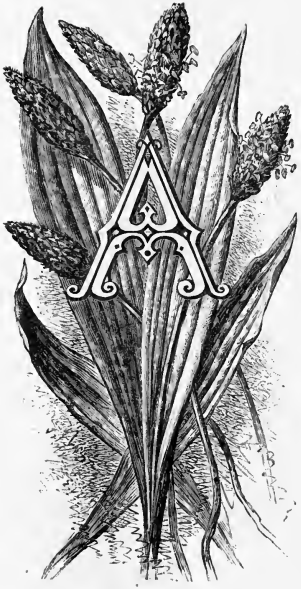
Though the rosemary was almost always associated by the earlier writers with the idea of bereavement, the connection was not a necessary one, and we sometimes, as in the boar's head carol, find the herb introduced as a remembrance of old customs of a joyous nature.

Shakespeare writes of the "cuckoo-buds of yellow hue," but the name cuckoo-bud or cuckoo-flower was applied rather vaguely to various plants, such as the stitchwort, the

ladies'-smock, and marsh marigold, that flowered at the time of the arrival of the cuckoos; and it is an open question whether the meadow-crowfoot was ever included by the mediæval writers in this happy family. If not, it at all events very well might have been.

In France the meadow-crowfoot is the grenouillette, a name similar in meaning to its generic name Ranunculus, and referring to the moist meadow land in which the plant best prospers. In the mediæval botanico-astrological treatises the meadow crowfoot was reckoned a plant of Mars, on account of its acrid and fiery nature. One old author we see says of it, "They grow very common everywhere; unless you turn your head into a hedge you cannot but see them as you walk." We doubt, indeed, if even this would be sufficient to avoid all sight of them, for we have seen their golden blossoms springing up on many a hedge-bank, but we may accept his somewhat flippant statement, as it stands at least as a testimony of the abundance of the flower.





LAMB'S-TONGUE.

Plantago lanceolata. Nat. Ord., Plantaginaceæ.

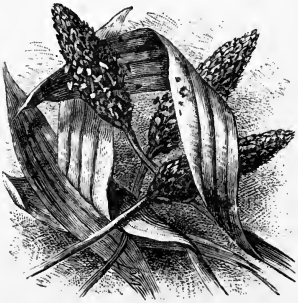
AMONGST the plants of the meadow and pasture, few are more abundant than the lamb's-tongue; hence we could not deny it a place in our series, though it would be gross flattery to place it on a par in attractiveness with many of the plants we have figured. Still it has a certain wild picturesqueness of its own, and, like everything else in the whole realm of nature, improves on acquaintance and study. It derives its name from a supposed resemblance in the form of the foliage to the tongue of a lamb, but our readers will not have reached our present volume, we are sure, without having made the discovery that a very slight resemblance indeed is in most cases all that is required in rural nomenclature. The resemblance in the present case is fairly illustrative of this easy-going system, and some writers, not

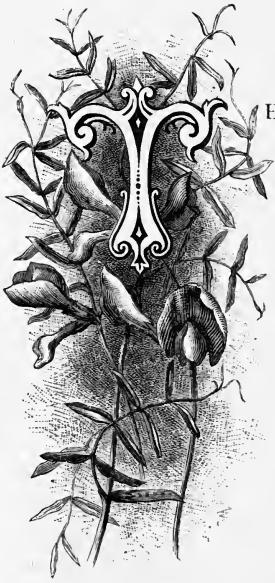
so easily satisfied as others, have endeavoured to transfer the meaning from lamb's tongue to Lammas tongue. Lammas was a festival held in olden times at the beginning of August; a thanksgiving for the first-fruits of the harvest, and several plants owe their popular names to the fact of their flowering at some special season in the mediæval calendar. Any attempt however, to thus identify our present plant with Lammas is not altogether happy, as it begins flowering some six weeks before this date. The added word tongue, too, is meaningless in such a connexion, and we can only conclude that whether the idea is in harmony with our critical faculty or not, lamb's-tongue in its most literal significance is what we are expected to accept. Many of our plants have English names bestowed by the rustic dwellers on the country side, and these vary in quality from the admirably expressive to the intolerably stupid, and in addition to these they have other English names that no rustic ever uses, but which may be briefly described as "bookish." Such a name for our present species is the narrow-leaved plantain. In some old books we find the plant called *Costa canina*, rib-wort or rib-grass, evidently in allusion to the very prominent veinings on the leaves, a feature that may be very clearly noted in our illustration: a feature too, that caused it to receive the mediæval name of *Quinquenervia*. By Lonicer, Fuchs, and some others of the older botanists, the plant was called the lanceola from the shape of the leaves resembling the head of a lance, a suggestion still preserved in the specific name *lanceolata*. Another old popular name for the lamb's tongue was the kemps, a word at first sight sufficiently unmeaning, yet carrying within it an interesting reference. The stalks of our plant are peculiarly tough and wiry, and

the Anglo-Saxon word for a soldier was *cempa*. If now, like the talented writer on Chinese metaphysics, who so excited the wondering admiration of Mr. Pickwick, we "combine our information," we shall see why our plant is the kemps. It has from time immemorial, been one of the favourite games of country children to arm themselves with a particularly tough lamb's-tongue stem, and then to challenge all comers to break it, each in turn holding up their stem for the others to slash at with theirs, the one that longest survived the ordeal being of course victorious and the champion. The plant is also for the same reason provincially called cocks, an allusion that carries us back to the days of our grandfathers, when a main of fighting-cocks had such an attractive power.

The economic use of the lamb's-tongue seems to have long been a matter of dispute, though we imagine that the verdict is now finally given against its utility. Curtis, in his "Flora Londinensis," says "the farmers in general consider this species of plantain as a favourite food of sheep and cattle, hence it is frequently recommended in the laying down of meadow and pasture land; and the seed is for that purpose kept in the shops. How far the predilection of cattle for this herb is founded in truth, we cannot at present determine; nor do we pretend to say how far it is economical to substitute this plant in the room of others which produce a much greater crop, and which they show no aversion to. We should be rather inclined to think that plantain (or rib-grass as it is called) should be but sparingly made use of, particularly if the farmer's chief aim be a crop." As a good crop really is the farmer's chief aim ordinarily, it will be seen that our author holds it in very small esteem.

When the plantain grows amongst the tall grasses of the meadow its leaves are longer, more erect, and less harsh, than when we find it by the roadside, or on any dry and barren soil. The leaves are often slightly hairy, and have at times a silvery appearance from this cause, but this is more especially apparent in the roadside specimens. The flower-stalks are longer than the leaves, furrowed and angular, and thrown boldly up. The flower-head varies a good deal in size and form, sometimes being much smaller and more globular than those represented in our illustration. The sepals are brown and paper-like in texture, and give the head the somewhat peculiar rusty look; the corolla is very small and inconspicuous, tubed, and having four spreading lobes. The stamens, four in number, are the most noticeable feature, their slender white filaments and pale yellow anthers forming in the aggregate a conspicuous ring around the flower-head.





COMMON VETCH.

Vicia sativa. Nat. Ord., Leguminosæ.

THE vetch has long been cultivated as a forage-plant, and has therefore got widely distributed. It may be found almost everywhere: on cultivated ground, on dry pasturage, on waste patches of soil, and in open woodlands. Cultivation has to some extent modified its appearance, and some two or three varieties or sub-species have been recognised, but these have a way of running into each other that makes their identification difficult, and for our purpose, at least, we need attach little or no importance to them. Cultivation in rich ground naturally makes the plant more luxuriant in growth, the stems attain to a greater height, the leaflets are broader and the flowers larger; but all these modifications are but developments that can readily be traced to its change of circumstances, and directly we attempt to make a specific difference difficulties arise.

Attempts have been made to discriminate between the cultivated and the wild plants, and the first has retained the name of *V. sativa*, while the second has been re-named as *V. angustifolia*. This latter specific name signifies narrow-leaved, while *sativa* denotes that which is cultivated. The first is said to have broad leaflets, the flowers in pairs, and the pods erect, while the second, the wildling, has narrow leaflets, the flowers solitary, and the pods spreading. On turning to our illustration, made from a plant growing in a large forest and far removed from all suspicion of being under the influence of cultivation, we find that one piece has the flowers singly and the other has them in pairs. According therefore, to the specific differences we have quoted, our plant is two things at once, "which"—to quote Euclid—"is absurd." An attempt has also been made to form a low-spreading variety of the plant into another species, under the title of *V. Bofartii*, but the test of observation and cultivation has conclusively shown that it runs into the other forms and has no permanence. We may, then, ignoring these differences, speak of the plant as only one.

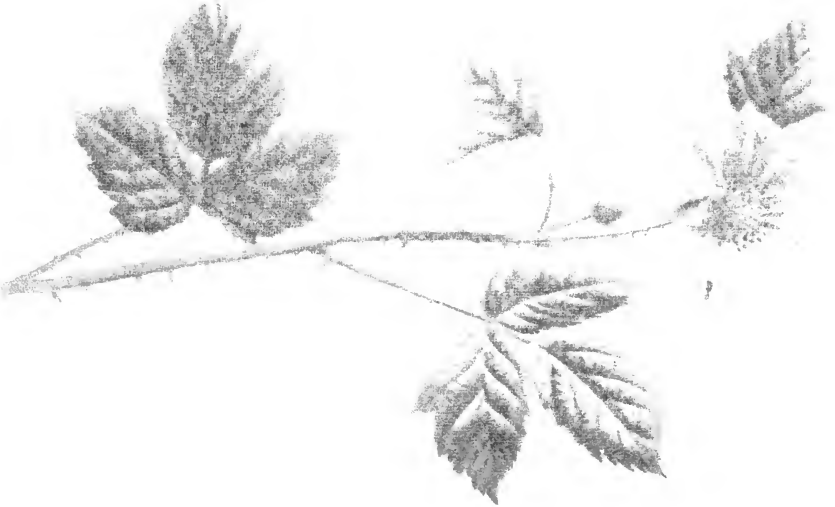
The stems of the vetch are sometimes short and spreading, sometimes erect. The leaflets vary in number from about six to ten on each leaf, and these leaves terminate in a branched tendril that helps to support the plant, though it has not the climbing habit of many of the wild peas and vetches. The flowers are singly or in pairs in the axils of the leaves, and these are followed by the characteristic pea-like pods, each an inch or so in length, and containing about a dozen small globular seeds. The flowering-season is the spring and early summer. The common English name of the plant varies from vetch to fetch and fitch,

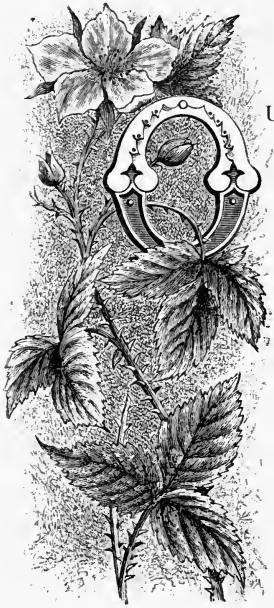
while in Germany it is wicke, in France vesce, and in Italy veccia. All these names have a strong family likeness, and are derived, we are told by Prior, in his "Popular Names of British Plants," from the Latin verb signifying to bind; in allusion, of course, to the tendrils and the straggling growth on hedges and neighbouring plants that is so characteristic of some of the plants of the genus. The generic name, *vicia*, probably carries a similar significance, though its derivation is now a point of dispute, some finding significance for it from the Latin and others from the Celtic. Our plant is also sometimes called the tare, and in some of the older writers we get both the common names combined into one, and our plant called the tare-fytche; the origin of the name is doubtful, but it has been suggested that it is derived from the French verb *tirer*, to drag, from the unceremonious way the plant has of utilising other plants for its support. The name is not so appropriate to this species, however, as to several of the others.

The vetch has from a remote period been grown in southern and central Europe as a forage-plant, but the date of its introduction into England is not known. It has the great advantage of coming on early, and is often sown with rye, as the stems of the latter afford it the needful support, and the whole crop is then made up into bundles and sold as fodder. Even the dweller in the town will probably remember noticing cartloads of its verdant, succulent-looking foliage passing through the streets. It is greatly liked both by horses and cows, and it is one of the most nutritious foods they can have; its seeds, too, are often given to poultry and pigeons. "This is a certaine knowne pulse to doves wherewith they are much delighted,

and although they be wild, yet where the dove-houses are served herewith they also will resort and become tame with the rest, and therefore some countrey people knowing it sow some fields therewith to serve to that use." It does not seem to have been commended by the ancients either as a meat or a medicine for mankind—"they yeeld a thicke clammy nourishment and hard of digestion,"—and instead of curing, as most things do, almost every evil under the sun, the mediæval physicians are content to commend it merely for use as "a pultis."

When grown as a field-crop the plant has a decidedly rich and luscious appearance, and we can readily enter into the feelings of a cow who has a reputation to keep up with the dairy-maid when she turns from even the fragrant but decidedly dry-looking hay to the manger full of the cool and succulent-looking vetches.





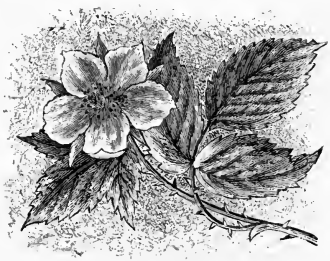
DEWBERRY.

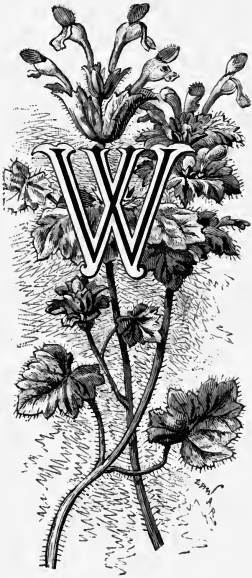
Rubus cæsius. Nat. Ord., Rosaceæ.

OUR great botanical authorities are hopelessly at variance as to what is a blackberry and what is not, and while some will tell us that there is but one species, others go so far as to say that there are thirty-six. It is a plant that varies considerably, and this variation of the parts has led to an excessive multiplication of supposed species; and as scarcely two writers agree as to what should be legitimately counted a specific variation of structure, and what should not, the whole subject has got into a very chaotic state. The dewberry has a close affinity to the blackberry, and some of the varieties of each are found to closely approach each other; but one ordinarily finds no difficulty in identifying it. The stem of the dewberry is covered with a greyish bloom, and is much more slender and weak than that of the blackberry, and

hard seed, and a juyce of the colour of claret wine, contrarie to the common bramble, whose berries being ripe are of a shining blacke colour, and euery berry containes usually aboue forty graines closely compacted and thrust together."

Several other species of *Rubus* are found in Britain, and are more or less common, the *R. idæus*, or raspberry, being one of the most abundant. The fruit is small, but fully equal in flavour to that of the garden raspberry, and makes even superior preserve. The cloud-berry, *R. chamæmorus*, is found in profusion in Scotland, but extends no farther south than Derbyshire. The fruit is large, and of a rich orange colour, giving a very welcome refreshment to the mountain-climber. The stone bramble, *R. saxatilis*, is another northern species. The flowers of all these three kinds are white, the first and third being small and inconspicuous, while the blossoms of the cloudberry are as large in size and as pure in colour as those of the wood anemone.





THE HENBIT.

Lamium amplexicaule. Nat. Ord., Labiatæ.

WE find in Britain some three or four species of *Lamium*. It is necessary to put matters in this somewhat vague way, for some botanists recognise as species what others are content to deem mere varieties. Thus one botanist, after describing our species, adds, "very difficult to be distinguished by characters either from the last or the next species, and perhaps the three might be judiciously combined." Those, however, of which there can be no doubt are the *L. album* or white dead-nettle, the *L. purpureum* or red dead-nettle, and the present species. To these may be added the yellow dead-nettle or weasel-snout, classed by some botanists in a genus of its own, *Galeobdolon*, on account of certain modifications of structure, but retained by others in the same genus with the rest we have named. All these, with the exception of the Henbit, are often popularly called archangels, and our series includes illustrations of all four of them. While

the other three species are more especially plants of the spring the Henbit may be found in flower throughout the whole season. We find in our rough floral notes, made from time to time, the following entry respecting our present plant:—"Found well in flower on Oct. 15th, in a field of swedes, together with the charlock and Shepherd's-needle, the three all well out, and abundant all over the field."

Our remarks as to the spring character of the red and white dead-nettles must be taken with a certain limitation; as a matter of fact, there is perhaps scarcely a month in the year when examples of each could not be met with, but it is in an especial degree in the spring that we find the hedge-banks whitened over or suffused with a dull purple glow from the abundance of their flowers. The Henbit, though a common-enough plant, is never so abundant, never found in such aggregated masses, as the others; nor does it seem to have so distinctly a time when it is at its best, but at any time from April to October it may be ordinarily met with on waste land, amidst field-crops, and in gardens. It is an annual.

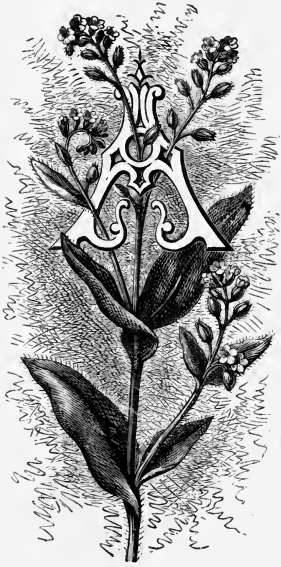
The Henbit attains to a height of from nine inches to a foot, nearly upright in general direction, yet branching freely. These branches are thrown out in pairs, and spring from near the ground; they are square in section, as in the other dead-nettles. All the leaves spring in pairs from the stems, the lower ones being on stems and of a rounded heart-shaped figure, and deeply cut in outline; the upper leaves are of very similar character, but stalkless, and closely surrounding the stem—a fact that is brought out in the specific name *amplexicaule*, a Latin word derived from two others and signifying stem-embracing. The flowers

grow in rings at the tops of the stalks, and are of very various sizes, some being but little larger than the calyx from which they spring, while others are three or four times its length, of a bright rosy-red, and more slender and delicate than those of the red dead-nettle. We notice that one old writer speaks of them as "small-hooded gaping blew flowers," but we have already had frequent occasion to notice in the old herbals that, though their authors could often most pithily describe the leading features of the growth of a plant in a very few words, they are often by no means to be relied on when it becomes a question of tint.

The name Henbit, according to Prior in his altogether admirable book, "The Popular Names of British Plants," was bestowed on it from some fancied nibbling of its leaves by poultry, and we find the same idea conveyed in the name bestowed on it by the Germans, Flemings, and others, and in the Old-Latin name for the plant, *Morsus-gallinæ*. The generic name *Lamium* is derived from the Greek word for throat, and refers to the long tubular corollas of this and the allied plants; by some of the earlier botanists it was called Alsine. We find it under this name, for instance, in the herbals of Gerarde and Parkinson. The word signifies growing in groves, and has been bestowed upon several very different plants, though perhaps on none less appropriately than on the Henbit. These early writers, too, associated the plant, for some extraordinary reason, with the chickweed, though there may possibly be some association or line of ideas now lost to us that in some way unites the plant bitten of hens and the weed of the chicks. However this may be, the plant in old herbals rejoices in the far-stretching title of the great ground-ivy-leaved chickweed. The shape of the leaves and their growth

in pairs is distinctly suggestive of the ground-ivy, a plant we have figured in our series, but which is in no way related to the true ivy (*Hedera Helix*). Nevertheless, from the resemblance of the Henbit to the one plant, it has somehow received a name derived from the other, and is by some old writers called the hederula.

In the same way the ivy-leaved speedwell, the Veronica hederifolia of the botanist, was by some of the old writers called the lesser Henbit, thus making confusion worse confounded. The real Henbit was called the hederula, a name derived from the true ivy, because it was something like a plant that had no connection with, or resemblance to the ivy, while another plant, one of the speedwells, that really has its foliage sufficiently like in form to the true ivy to justify the botanical name, hederifolia, is called the lesser Henbit, though it has no relationship whatever with the real Henbit, and is not even in the same great natural order. The whole difficulty arises from the earnest desire the early writers seem to have felt to find resemblances, and on the strength of these to ally together plants of the most diverse natures.



FIELD SCORPION-GRASS.

Myosotis arvensis. Nat. Ord., Boraginaceæ.

ANY one who is familiar with the beautiful forget-me-not of our streams will have little difficulty in detecting a family likeness between it and our present plant; both are members of the same genus, *Myosotis*, though the former is undoubtedly the more attractive of the two. We have in Britain some six or seven species of scorpion-grass—some of them of considerable rarity, and others widely distributed and commonly to be met with—and of these the field scorpion-grass, the subject of our present illustration, is the most abundant of all. It will be found on hedge-banks, the edges of woods and copses, and perhaps more especially on cultivated ground, its bunches of greyish green leaves soon making their appearance on any part of the garden or field that has escaped the hoe, and its flowers being displayed during June, July, and August.

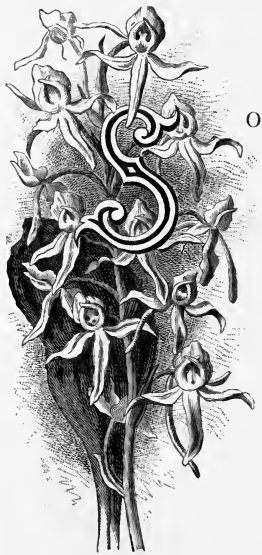
The stem is weak, often somewhat straggling, and a foot or so in length, both stems and leaves being a good deal clothed with soft hairs. The calyx is acutely five-cleft, and shorter than the pedicel bearing it. The flowers, when we compare them with those of the forget-me-not, are small and insignificant-looking, though they are of too bright and pure a blue to altogether escape our notice. The corolla is widely displayed and all in one piece, but cut up into five broad, rounded lobes. The flowers are borne on long leafless racemes. These flowering stems often fork off into pairs, and at their terminations roll round like the tail of a scorpion, a peculiarity that we may see in the comfrey and some few other flowers, and which has procured for our plant its most common popular name. It is sometimes also called the field forget-me-not.

The name *Myosotis* signifies mouse-ear, a name bestowed on the genus from the shape and hairiness of the leaves, and originally applied by the old Greek writer Dioscorides. The slight resemblance of the curled-up buds to the tail of a scorpion was naturally held as an indication that the plant possessed potent powers against the evil powers of the scorpion and against snakes and other such like venomous creatures. We have already referred to the extraordinary dread that scorpions seem to have inspired in mediæval times, though England can never have had any practical experience of them in the living state, or even when dead. Possibly the fear of them was a tradition handed down from the days of the Crusades. Gerarde we see gives six herbal remedies against the stinging of bees and wasps, and one against the stinging of nettles, while against the far more remote danger of the sting of the scorpion, his readers are fore-armed with

seventeen distinct remedies. These plants were sometimes called scorpoides by the older writers, but at other times this name was limited to one or two foreign plants with very twisted seeds, and our English plants were grouped with them in the old herbals, yet separated by the title of false bastard scorpoides. After describing these foreign plants, Dodonæus, for example, goes on to speak of the forget-me-not and the present plant, making the one masculine and the other feminine. "There is yet two other small herbs which some do also name scorpion-grass or scorpion-wort, although they be not the right. The one of them is called male scorpion, and the other female scorpion. The male bastard scorpoides groweth about the length of a man's hand, or to the length of a foote, his stalks are crookedly turning aboue at the top, whereon the knops, buds, and floures do stand, euen like to a scorpion's taile; the leaues be long, narrow, and small. The floures be faire and pleasant, being of fine little leaues set one by another, of azure colour with a little yellow in the middle. The female bastard scorpoides is very much like to the male, sauing that his stalks and leaves be rough and hairie and his floueres smaller. The tops of the stalkes be likewise crooked, euen as the tops of the male. The male bastard scorpoides groweth in medowes, alongst by running streames and water courses; and the neerer it groweth to the water the greater it is and the higher, so that the leaues do sometimes grow to the quantitie of willow leaues. The female bastard scorpoides groweth in the borders of fields and gardens. The bastard scorpoides haue none other knowen name, but some do count them to be scorpion herbs."

Besides the forget-me-not, a plant we have already

described, and the present species, we have the wood scorpion-grass, the early field scorpion-grass, and the changeable scorpion-grass. The first of these, the *M. sylvatica*, is found in woods and shady places on the mountains. It is not under any circumstances a common plant, but appears to be more especially met with in Scotland and the north of England, though such southern localities as Essex and Kent are mentioned in the Floras Its flowers are bright blue, and very large and handsome looking. The early field scorpion-grass, or *M. collina*, is a small annual that may sometimes be found in dry open expanses, on the tops of walls, and other dry places. Its small but brilliantly blue flowers expand in April and May. The changeable scorpion-grass, or *M. versicolor*, may be very commonly found on banks, in meadows, by roadsides, and in fact almost anywhere: it derives its name from the fact that its corollas are at first pale yellow, and gradually change to blue, until they become a quite deep cerulean tint prior to their decay. The plants should be looked for in April, May, and June. *Sylvatica* signifies that which pertains to the sylvan shades; *collina* refers to the dry hillside; while *versicolor* alludes to the varied and changing tints seen in the blossoms of the species so-called.



BUTTERFLY ORCHIS.

Habenaria bifolia. Nat. Ord., Orchidaceæ.

SOME of the species of orchis, as for example the bee orchis, mimic so admirably the natural forms from which they derive their popular names, that there has been a great temptation to carry this fanciful nomenclature farther than facts altogether warrant. Of this the present species may be taken, we think, as a fair illustration, for quaint as the flowers are, it is in the last degree improbable that they would have suggested to any one the idea of a butterfly, had we not already had other species named after the monkey, the lizard, the spider, the bee, the fly, and even man himself.

The butterfly orchis should be sought for in moist woods and copses; it may also at times be found on meadow land, but then it is often so dwarfed that it is scarcely recognisable as identical with the plant growing in more favourable conditions. It is generally distributed over

Britain, though in some localities it is unknown, and where found at all is found in abundance, its pale clustering mass of flowers rendering it very easily visible in the woodland shade. This pale tint of its blossoms is one ready means of identification, and the extreme length of its spur is another marked characteristic. This feature is readily noticeable in our illustration, though another equally well-marked point, the delicious fragrance of its flowers, is a quality altogether too subtle for reproduction; this odour is more especially noticeable in the early morning and evening. The structure of the blossoms, too, is very curious, though we could scarcely hope to satisfactorily indicate it without the use of diagrams and technicalities. The species is not so difficult of culture as several of the others; and those who will be at the trouble of carefully removing it may hope to derive enjoyment from its quaint beauty each recurring spring, when possibly they may not have any opportunity of seeing it growing as a wildling in its forest home.

There was once a time, ere London had become a province of brick and mortar, when the citizens had little or no need to transport the butterfly orchis to their urban gardens. We find it mentioned, as one of the plants of the metropolitan district, in the "Flora Londinensis" of Curtis; and on turning to old Gerarde, an author who always gives London localities if possible, we find that he writes as follows concerning our plant: "That kinde which resembleth the white Butterfly, groweth upon the declining of the hill at the north end of Hampsted heath, neere unto a small cottage there in the way side, as yee go from London to Hendon, a village thereby. It groweth in the fields adjoyning to the pond or pinnefold without the gate, at

the Village called High-gate neere London, and likewise in the wood belonging to a Worshipfull Gentleman of Kent, named Master Sidley, of South-fleet." Gerarde goes on to say that "there is no great use of these in physicke, but they are chiefly regarded for the pleasant and beautifull floures wherewith Nature hath seemed to play and disport herselfe."

The tubers of the root of the butterfly orchis are two in number, somewhat large, and terminating below in long points. "To describe," says an old author, "all the several sorts of orchis would be an endless piece of work; therefore, I shall only describe the roots, which are to be used with some discretion. They have each of them a double root; within, some of them are round, in others like a hand: these alter every year by course; when the one riseth and waxeth full, the other waxeth lank and perisheth. Now it is that which is full which is to be used in medicines, the other being either of no use, or else, according to the humours of some, it destroys and disannuls the virtue of the other, quite undoing what that doth."

The stalk is a foot or more in height, having small scaly leaves at intervals upon it, smooth to the touch, but prominently ribbed. The large radical leaves are ordinarily two in number—hence the specific name *bifolia*—but we may at times find three. These are a rich green in colour, and broadly oval in form, the veinings upon them being distinctly seen. The flower-cluster is often six or eight inches long, the flowers themselves being either pure white or slightly tinged with green or cream-colour. The blossoms may be looked for early in June, and they continue well into August. The plant varies a

good deal in size and form, and some of these extreme variations have by some botanists been considered of sufficient importance to give specific rank; but the new species thus formed, *Habenaria chlorantha*, is by no means generally accepted.

Though in ordinary parlance the plant takes rank as an orchis, it will be noted on inspection of its botanical name, that the men of science have placed it in another genus. As this transfer from the genus *Orchis* arises chiefly from a different structure of the anthers, and deals with technical details of structure which would be scarcely appreciated by non-botanists, we may for all practical purposes consider it an orchis. *Habena* signifies a thong or strap; the name was bestowed upon the genus from the long and strap-like form of the lower part or lip of the flower.

WOOD LOOSESTRIFE.

Lysimachia nemorum. Nat. Ord., Primulaceæ.

WE have in Britain four species of yellow loosestrife, and we have now, including the present illustration, had the pleasure of introducing our readers to three of them. All these belong to the same genus, *Lysimachia*, and in addition to these there is another plant of a quite different genus, the purple loosestrife or *Lythrum Salicaria*, of which also we have furnished an illustration. Of the yellow loosestrifes, the plants already figured have been the *L. vulgaris*, or great yellow loosestrife, so conspicuous an adornment of our river-sides, as it throws up its stem some three feet high, and bears on its summit its clustering golden flowers; and the *L. nummularia*, the creeping loosestrife, money-wort, herb-twopence, or creeping-Jenny (for it is a general favourite, and has many popular names), which sends its long lines of conspicuous

yellow blossoms and glossy verdant leaves creeping amidst the herbage of the hedgerow. The only species we have not figured is the *L. thyrsifolia* or tufted loosestrife. In this the stems are some two feet high, the leaves are numerous and lanceolate, and the small yellow flowers spring in dense bunches from the axils of the leaves. It is found in wet marshy ground, or by the sides of streams, but is very rarely met with in England, and chiefly in the northern counties when found at all, though it occurs somewhat more frequently in Scotland.

The wood loosestrife, the subject of our present illustration, is one of the smaller species, its slender stems being rarely a foot in length. It should be looked for in woods and shady copses, from the end of May to the beginning of September, and it seems to thrive more especially where there is a considerable amount of moisture in the soil. All lovers of woodland scenery will be aware that beneath trees the ground is often decidedly soft, and when we come to a place where we more especially hesitate whether to go on or to turn back, we may expect to find the wood loosestrife not far off.

The meaning of the generic title *Lysimachia* we have already referred to in our comments on a preceding species in the genus; the specific name is Latin in its origin, and means that which pertains to woods or groves. We recognise it again in the botanical name of the wood anemone—*Anemone nemorosa*—and some few others. A good many other plants have the terms *sylvestris* or *sylvatica* applied to them, but these would appear to be distinctions without any real difference, as the sylvan shades are equally those of the woodland or the grove. The hound's-tongue, *Cynoglossum sylvaticum*, and the wood

scorpion-grass, *Myosotis sylvatica*, are neither more nor less plants of the forest than the wood loosestrife itself.

The root of the present loosestrife is perennial, and composed of numerous long whitish fibres. From this spring several slender spreading stalks, weak and prostrate in character, often rooting near their bases, and generally bright red in colour; the leaves grow in pairs, on short foot-stalks, and are of a broadly oval form, but pointed at their extremities. They are glossy on both the upper and under surfaces, somewhat prominently veined, and have their margins waved. In our illustration it will be seen that in one case the leaf stands alone, and so far seems to dispute our assertion that the leaves always grow in pairs, but it will also be seen that the foot-stalk of the second leaf is visible, and that it is only some accidental circumstance that has deprived the plant of that particular leaf. The botanist desires to see the absolute facts of plant structure, and runs some little risk of making his drawings too suggestive of diagrams, while the artist often too little regards these facts, and draws the object as he thinks he sees it, trusting to the artistic eye and accuracy of perception to supply all that is needed. Our aim has been in all our drawings to try and combine these two things—the absolute facts of the case and those picturesque accidentals that tell somewhat of the history and vicissitudes of the particular plants.

The flowers of the wood loosestrife have a deeply five-cleft corolla, broadly displayed and a brilliant yellow in colour. Each flower is supported on a long and slender stalk, rising from the axils of the leaves. The five long and narrow segments of the calyx may be seen in the flower that turns its back on us. The globular capsule

that succeeds the blossom has a way of twisting round on its stalk in the same manner as the pimpernel does, and on this account and from general similarity to that flower the old authors often called the wood loosestrife the yellow pimpernel. A drawing of the pimpernel will be found at page 53 in our second volume, so that a comparison of the two plants may be readily made.

YELLOW ROCKET.

Barbarea vulgaris. Nat. Ord. Cruciferæ.

THE yellow rocket may commonly be met with in fields, and on waste lands by the roadsides; the specific name *vulgaris* is a sufficient testimony to this fact. It may be found in flower from May to August. Its general growth is stiff and erect, the stout and branching stem attaining to a height of some eighteen inches or two feet. The leaves vary in character according to their position on the plant. "It hath many greene, broad, smoothe, and flat leaves, like unto those of the common turneps." Both upper and lower leaves are clearly shown in our illustration: the upper leaves, it will be seen, are cut into numerous deep depressions so as to form a leaf of several rounded lobes, while the lower leaves are considerably larger and consist of a large terminal lobe, and

at intervals down the stem some few others of much smaller and narrower form. The flowers are individually rather small, but as they are very numerous, and of a clear bright yellow colour, they become sufficiently noticeable in the mass. They are of the well-known and characteristic cruciferous or cross-bearing type. The pods that succeed the blossoms are a very conspicuous feature, as they are often much longer than those we figure. Our plant, as we see by the clustering buds and small size of the pods, is yet in a comparatively early stage of the flowering state. As the upper buds one by one expand into blossoms the stem elongates, and the lower pods develop until they are some two inches long or even more. The pod is quadrangular, and contains a single row of seeds. It must always be borne in mind that the mathematician and the botanist use similar terms sometimes, but with a different significance. Many leaves, for example, are botanically termed oblong, though their outline would not by any means satisfy the definitions of geometry; and in the same way, when we speak of the pod being quadrangular we do not imply that the form is as rigidly four-angled as a section through the leg of a kitchen table. The plant varies somewhat at times in the form of the leaves, some being much more markedly lobed and cut than others; and in some examples the flowers or pods are larger than in others. Attempts have been made to convert these variations into type-forms as the basis for new species, but for this there would seem to be little or no justification.

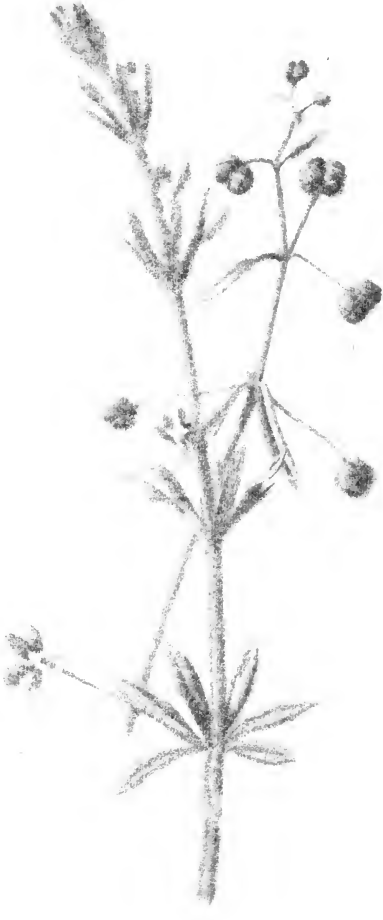
The yellow rocket is also called the herb St. Barbara, the bitter winter cress, and the land-cress. The first of these names arose from the mediæval association of plants with saints; examples of such dedication are not uncommon,

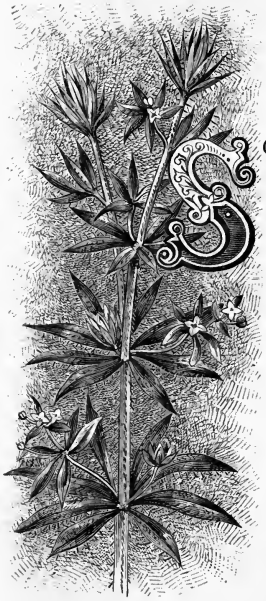
we need here only refer to St. Anthony's nut, St. Barnaby's thistle, herb Bennet, herb Christopher, and St. John's wort. The yellow rocket was at one time cultivated as an early salad, and it was probably placed under the patronage of this special saint from its being sown about the 16th of December, the day consecrated to her. To St. Barbara was assigned, during the Middle Ages, the somewhat unsaintly and unwomanly function of presiding over the safety of arsenals and powder magazines. At first sight one is at a loss to account for such an association, but the legend attached to her name gives us the needful clue to the mystery. It appears that on her profession of Christianity her father denounced her to the authorities, and after she had been subjected in vain to torture, the task of her decapitation was assigned to him, but when he was about to strike the fatal blow a flash of lightning laid him dead at her feet. Hence she was invoked in thunderstorms by the timid, and her protection would naturally be claimed by those who had charge of warlike stores and realised the disturbing influence the artillery of heaven might exercise on their stores of powder.

The name bitter winter cress was bestowed on the plant because, as we have already indicated, it was cultivated as a salad-plant. One great recommendation it possessed was that it was available at a time when other plants were not procurable, as its leaves continue green all the winter long. If the outer leaves are picked as the plant grows up, and the flowering-stems cut off and kept down, a plentiful supply of leaves may be obtained from it throughout the winter and spring months. The plant is very rarely destroyed by frost, and we may see its glossy leaves on the hedge-banks even in the midst of winter: they have a slightly

bitter and pungent taste, that commends them as an ingredient in a salad. People nowadays no longer avail themselves of much which afforded welcome sustenance to their forefathers, and many of the plants contemptuously passed by, or burnt as useless cumberers of the ground, would furnish wholesome food were it not for the combined ignorance and prejudice that prevent their use. We could imagine no book much more useful than one giving simple illustrations of such plants and hints as to the best way of utilising them; but as no one would buy it, we need pursue the idea no farther.

The name land-cress is evidently bestowed on the plant as a means of distinguishing it from the water-cress. Some species of water-cress have yellow flowers, and strongly resemble our present plant, but the form of the pods will suffice in any case to distinguish them. Our ancestors believed that the seed of the rocket would cure the bites of the serpent, the scorpion, and the shrew-mouse. Perhaps it would.





GOOSE-GRASS.

Galium Aparine. Nat. Ord., Rubiaceæ.

SCATTERED as it is in almost every neglected garden, on every piece of waste ground, or rambling over every hedge, we may be tolerably certain of finding the plant here figured. Though its stems are very slender and feeble-looking, they have great roughness and power of grip, and by this means sustain themselves amongst other herbage, and run for many feet amongst the denizens of the hedgerow. Stem and eaves alike are closely covered with numerous small hooks, and both these and the fruits cling with tenacity to anything with which they come in contact. Any one who has brushed along the hedgerows while botanising or blackberrying will be familiar with the look of the numerous fruits of the goose-grass that will be found attached to the dress; the old Greeks, noticing this, ascribed to the plant a peculiar fondness for mankind, and called it the Philanthropon.

The name goose-grass is bestowed upon the present species because geese have a great partiality for it, though horses, sheep, and cows seem equally fond of it. It is a plant of many names; one frequently hears it called cleavers, or clivers, from its habit of cleaving to other things for support, while in Scotland it is often known as grip-grass, a name that as clearly as the others carries its meaning on its face. It has, of course, no real connection with the grasses, but our forefathers did not go in for nice distinctions, and called many another lowly herb a grass on no better grounds. Another old popular name for the plant is the catch-weed; it is sometimes called the tongue-bleed, too: any one who will endeavour to draw a small portion of the plant across his mouth will at once see why. A very old name, Anglo-Saxon in its origin, is the harriff, a word compounded of two others, and signifying hedge-robber. The burdock, another plant with clinging fruits, at one time shared this name with it; the name arose, of course, in each case, from the habit the plant has of laying hold on any passing substance. Other names are goose-bill, loveman, and scratchweed.

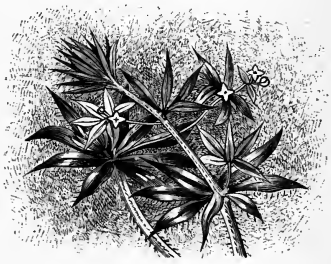
The goose-grass is an annual; the roots are long and fibrous, the stems quadrangular, weak, brittle, and jointed, having the hooks to which we have already referred placed along the lines of the four angles, freely branching, and attaining at times to a length of seven or eight feet. The lateral branches are thrown off in pairs. The leaves grow in rings, varying in number from six to nine. We had the curiosity to count one hundred of these rings, and found that thirteen of them were composed of six leaves, thirty-eight had seven leaves, while no fewer than forty-one were made up of eight leaves each, and the

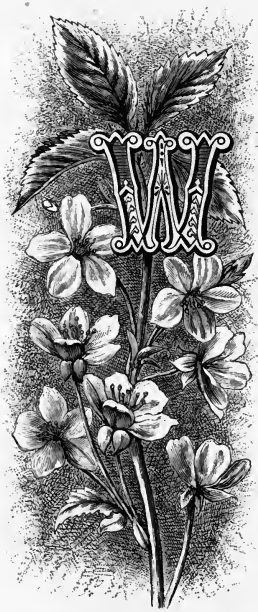
remaining eight alone had nine leaves in the ring. The flowers are few in number and small in size, a cluster of from two or three to eight or nine being borne on a peduncle springing from the leaf-ring. Each little corolla is conspicuously cross-like in form, a feature seen equally well in the bedstraws, plants belonging to the same genus, and one of which, the cross-wort, we have elsewhere figured. On the dying away of the flowers, they are succeeded by fruits that resemble two dry and globular berries in contact; the form may be readily seen in our illustration. The bristly character of the fruit, and its consequent attachment to the clothing of animals and man, is an evident provision for its wide dispersion and propagation.

The goose-grass forms one of the ingredients for the cooling spring drinks in such favour with our great grandmothers; the expressed juice was taken internally in cutaneous eruptions; and the herb, when crushed and bruised, was applied externally as a soothing poultice. Even yet the services of the plant to humanity are not exhausted, for we are told that the roots will yield a good red dye; that the berries, when dried and slightly roasted over the fire, form an excellent substitute for coffee, and yield a very colourable and palatable imitation of it, while the whole plant gives a decoction equal to tea. The juice taken in wine was supposed to be a remedy for the poison of the adder; and it was also added to broth and pottage "to keep them lean and lank that are apt to grow fat." It was drunk twice a day, too, by the victims of yellow jaundice, and in divers other ways pressed into rural medical practice.

Besides the present plant and the cross-wort, of both

of which we have already given illustrations, the *G. verum*, or Lady's bedstraw, is another very common and attractive species. Its yellow flowers are individually small, but, as in the case of the Yellow Rocket, they grow in such large and compact masses as to render the plant a conspicuous ornament of the dry hedge-banks it especially delights in.





CHERRY.

Prunus Cerasus. Nat. Ord., Rosaceæ.

WE have already depicted one species of *Prunus*, the blackthorn, or sloe; the only other representatives of the genus amongst us are the present plant and the bird-cherry, or *P. Padus*. The cherry is found in an apparently wild state in spots far remote from cultivation, as, for example, on the mountains of Scotland, as well as in our English lanes and fields. While some writers dispute whether it be truly indigenous with us, or merely the degenerate descendant of some long-since-introduced variety, we can at all events point to the fact that it is widely disseminated almost everywhere. We owe the introduction of the garden cherry into these islands to the Romans, and while it is possible our hedge cherry may be but a degeneration from this, it is at least as possible that while we have indigenous wild

apples and plums, we may have equally indigenous wild cherries.

Pliny, in an interesting passage, writes as follows:—"The cherry did not exist in Italy until the victory of L. Lucullus over Mithridates, in the year of the city 680. He was the first to introduce this tree from Pontus, and now, in the course of one hundred and twenty years, it has travelled beyond the ocean, and arrived even in Britannia." The tree, we are told, was brought from a place called Cerasus, in Pontus, but it is doubtful whether the Romans called the fruit the cerasus from the name of the place, or whether they so called the place from the abundance of the cerasus there, in the same way that saffron is not so called because it was cultivated at Saffron Walden, but Saffron Walden was so called because so much saffron was cultivated in its neighbourhood. Be this as it may, the Romans called the cherry the cerasus, and their name is yet preserved amongst the nations they subdued, as we may see in the French cerise, the Spanish cereza, the Portuguese cereja, the Italian ciriegia, and the English cherry. In Chaucer and other old English writers the word is given as cherise.

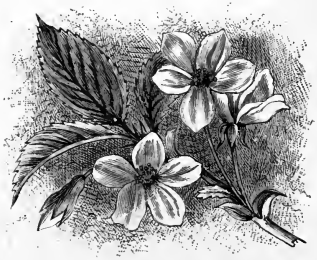
For some long period after the Roman occupation we find no reference to the plant or fruit, and it has been supposed by some writers that the cultivation of the tree was lost during the stormy period that followed; we hear nothing of it during Saxon, Danish, or Norman occupation, but from a passage in a poem by Lydgate (who was born about 1370), we find that the hawkers of London were then exposing cherries for sale amongst their other wares.

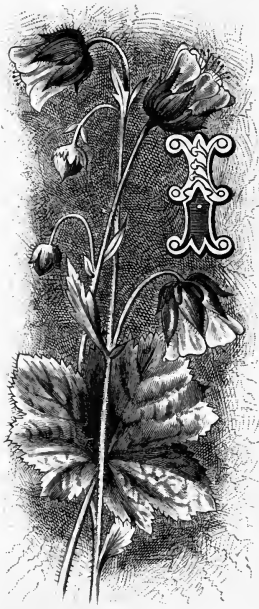
The wild cherry may be found in flower in the

woods and hedgerows in May, at which time it is too conspicuous to be overlooked. Its flowers are large, pure white, and very numerous, so that the whole shrub or tree is a mass of white, and may be seen a mile away. The leaves are large, deeply veined and serrated, and but few in number during the flowering-season. The blossoms are borne on stems about an inch and a half or two inches long, in groups of some three or four; these spring in a clustered arrangement from the little groups of leafy scales that are given out at intervals from the stems. The petals and sepals are each five in number, and on the expansion of the blossom the calyx is thrown boldly back on the stem, in much the same way that we see it in the bulbous crowfoot, a plant we have elsewhere figured. The stamens form a conspicuous yellow mass in the centre of the flower. The fruit is globular and smooth, and though edible by birds and boys, has a bitter taste that makes it very inferior to the cultivated kinds. The gum which exudes from the wild cherry is equal to gum arabic, and the wood is hard and tough, taking a good polish and having a grain that makes it sought after by the turner and cabinet-maker. Besides the ordinary employment of cherries in cookery and as a dessert fruit, they are largely used on the Continent for distillation. Kirschenwasser is a spirit obtained from the fruit and kernels, and noyau, ratafia, and maraschino all owe more or less of their potency and flavour to the same fruit.

The Romans are known to have cultivated eight kinds of cherries, while Tusser, in his delightfully quaint "Five Hundred Pointes of Good Husbandrie," first published in 1573, mentions only "cherries black and red," together with "damisens, respis, filbeards, boollesse," and several other

fruits. Parkinson refers to thirty-four sorts, and in these later days this number has been considerably exceeded. Loudon we see, in his "Encyclopædia of Gardening," gives a list of thirty-six sorts, but expressly indicates that he could have made the list longer, and that he only cared to set down the best kinds. The cherry delights especially in a dry and light soil, but in Kent, the paradise of cherry-growers, many of the best orchards are on a deep loam. Birds, and especially blackbirds, are particularly fond of cherries, and as they rise at very early hours, long before any one else is about, they manage to do a great deal of mischief. Scarecrows in the trees soon lose their terrors, and where the trees are large it is much easier to suggest netting them over than to accomplish this satisfactorily. We have often had occasion to wish that the "Small Birds Protection Act" could be somehow supplemented by a little cross legislation, bearing some such title as the "Cherry and Currant Protection Act," as it is, to say the least of it, aggravating, to watch one's fruit slowly ripening, and then much more rapidly vanishing.





WATER AVENS.

Geum rivale. *Nat. Ord., Rosaceæ.*

IN a previous volume we have figured one species of avens, the common avens, or Herb Bennet, the *Geum urbanum* of botanical nomenclature; a plant abundantly to be met with almost everywhere in the hedgerows and on banks. A reference to our illustration will show that though in foliage the common avens is very similar to the water avens, its flowers are entirely different, those of the one forming a small but widely-spreading golden star of five petals, while the flowers of the other, as our illustration shows, are much larger, of bell-like form and of reddish tint. We have thus dwelt upon the marked differences in the flowers of the two varieties—differences that can be still more readily perceived by an inspection and comparison of our illustrations, because it is a curious fact that when the two species are found in the same neigh-

bourhood, we frequently find hybrid forms partaking of the characters of both, and inclining sometimes towards one and sometimes towards the other. What may be called the typical intermediate form was at one time raised to the dignity of an independent species, under the title of *Geum intermedium*, a name that sufficiently explains itself; but as every degree of hybridism and transition from the two extremes may be met with, there is evidently no justification in admitting the claim of any particular degree of change to an independent existence. We have ourselves met with every stage of gradation between the two extreme types.

The water avens, as its name implies sufficiently clearly, is a lover of moist situations, so that we find it ordinarily by the banks of rivers and canals in the coarse herbage that fringes their margins, or in ditches. It is not, however, so exclusively a plant of the low-lying valleys as its name would perhaps, lead us to suppose; the specimen, for example, from which our illustration was taken was growing in a wood on the summit of a considerable eminence, but we need scarcely remind any one who has had any experience of mountains, whether in Cumberland, Wales, or Switzerland, that marshy and swampy ground is by no means uncommon on them, and it is in such situations that we find the water avens. It is altogether a northern plant, flourishing most freely in the northern parts of Europe, in Canada, and Siberia, and though occasionally found in southern England, it is very much more common in the northern counties and in Scotland.

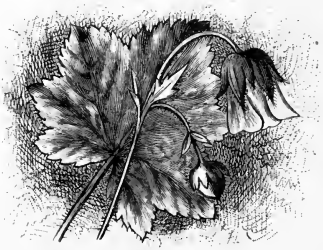
The generic name geum is derived from the Greek, and signifies yielding an agreeable flavour: this refers, however, to the root of the other species in the genus, the *G. urbanum*; while the specific name is based on

the Latin word *rivulus*, a small brook. On turning to Prior, to see what he could tell us of the significance of the popular name, we were met by the following very unsatisfying statement:—"Avens, in Promptorium Parvulorum *avence*, in Topsell and Askam *avance*, Mediæval Latin *avantia* or *avenci*, in Ortus Sanitatis *anancia*: a word of obscure origin and quite unintelligible: spelt also anartia, anantia, arancia, and amancia." Several of these authorities for the spelling are decidedly antique; for example, the last book referred to was brought out in the year 1486, so that we must conclude that all clue to the original meaning of the word is lost in the mists of far-reaching antiquity.

The root-stock of the water avens is perennial, the stems are erect, about a foot high, scarcely branching, having only a few leaves upon them, and those of a very simple character. Most of the leaves spring from the base of the plant, and have one large terminal lobe and a few small lateral leaflets. The whole plant is hairy. The flowers are few in number, often drooping, the five petals forming together a compact and cup-like corolla. The petals are heart-shaped, and vary in colour from a dull orange to red or purplish. The calyx is cleft into ten segments, five being very much smaller than the others with which they alternate. It is dull reddish-purple in colour, and partakes of the same compact nature as the corolla. The stamens are of the usual rosaceous character, an indefinite number of them clustering together, and forming with their anthers a yellow mass in the centre of the flower—using the term centre, of course, in its artistic, not botanical, sense, for here, as elsewhere, the female organs occupy the actual centre, and the stamens surround them.

Though the common avens had a great reputation in ancient and mediæval times as a medicinal plant, we fail to find any special commendation of the water avens. It is either passed over unnoticed, or we are merely told that its properties are similar to those of the common avens. It was, however, often used in olden times to flavour ale and other beverages, its roots, like those of the commoner species, having a somewhat aromatic character, and a slight astringency. It was held to not merely improve the flavour of the home-brewed ale, but also to preserve it from turning sour.

Our modern herbalists collect the water avens, and we learn that in the United States especially it has a popular reputation, and is held in great esteem as a febrifuge and tonic, in such settlements as that of Eden so graphically described by Dickens.



MARSH-THISTLE.

Cnicus palustris. Nat. Ord., Compositæ.

IN our series we have already figured several species of thistle, the lordly spear-plume, the fragrant musk-thistle, the curious and beautiful milk-thistle, and others, and even in our present volume will be found another in addition to the present plant. All are common plants, and as such claim a place, as of right, in our series. Culpeper, we see, begins and ends his description of the British thistles as follows:—"Of these there are many kind growing here in England, which are so well known that they need no description." There are certain manifest advantages to the author in this way of treating the subject, but to any one in search of information the treatment appears a little bold. Of the ash-tree, for example, he writes:—"This is so well known that time will be mis-spent in writing a description

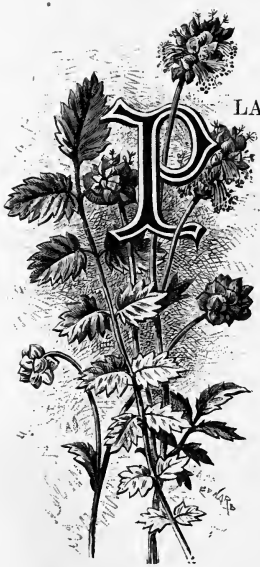
of it." Of the barberry again he writes;—"The shrub is so well known by every boy and girl that has but attained to the age of seven years, that it needs no description;" while of the cherry he says, "I suppose there are few but know this tree for its fruit's sake, and therefore I shall spare writing a description thereof. In like flippant manner he discourses of the white lily, and several other plants.

Like all other plants, the Marsh-thistle was placed by mediæval botanists under the planetary influences: "Mars rules it, it is such a prickly business." Many of the older writers approached the study of plants less from a botanical than a medico-astrological point of view, and ascribed Jovial, Mercurial, or Saturnine influences to the wayside weeds. In one of these old books the writer divides his readers into two classes: the vulgar, and those who study astrology, and thus addresses them:—"To the vulgar: kind souls, I am sorry it hath been your hard mishap to have been so long trained in such Egyptian darkness, even darkness that may be felt. The vulgar road of physic is not my practice, and I am, therefore, the more unfit to give you advice. If I should set you to look at the sun, I should dazzle your eyes and make you blind. To such as study astrology, who are the only men I know that are fit to study physic, physic without astrology being like a lamp without oil, you are the men I exceedingly respect, and such documents as my brains can give you at present I shall give you. Fortify the body with herbs of the nature of the Lord of the Ascendant, 'tis no matter whether he be a Fortune or Infortune in this case. Let your medicine be something anti-pathetical to the Lord of the Sixth. If the

Lord of the Tenth be strong, make use of his medicines: but if this cannot well be, make use of the remedies of the Light of Time. Be sure always to fortify the grieved part of the body by sympathetical remedies. Regard the heart, keep that upon the wheels, because the sun is the foundation of life, and therefore, those universal remedies, *aurum potabile* and the philosopher's stone, cure all diseases." All which points we trust our readers will duly bear in mind when they doctor themselves with this or any of the other plants of our series, or we must most distinctly decline to be responsible for any consequences that may ensue. But *revenons à nos chardons.*

The marsh-thistle, as its name implies, prefers moist situations, and may be looked for—or rather, found, as its abundance precludes the necessity of search—not only on marshy grounds, but on moist heaths and commons, damp meadows, and the boggy places in woods. It is ordinarily some five feet high, but in this last locality its growth amongst the sheltering and shade-casting trees is often considerably beyond this, while its long, slender, and scarcely-branched stem and erect growth make it look even taller than it is. As it is pre-eminently the thistle of the marsh, and is never found except in such localities as we have referred to, it is not likely to be mistaken for any other thistle. Like all the rest of its relatives, it often varies to white flower-heads, and while the stem and leaves are exceptionally spiny, it differs from most of the other species in having its flower-heads defenceless. Both these characters, the excess of spiny defence in one part and the absence of it in another, may be clearly seen in our figure. The leaves are long,

narrow, and stalkless, their bases being produced down the stem, their upper surfaces of a deep green, and the whole leaf more or less covered with rough hairs. The lateral segments of the upper leaves are long and narrow, while the terminal portion of the leaf is carried out into a still longer and more acute point, giving a very quaint and marked character to the form. . The flower-heads are numerous, and densely massed in clusters at the end of the stem; the flowers themselves are of the well-known composite type, and are succeeded by a mass of feathery down. As the plant is a biennial, there should be no great difficulty in its extirpation by the husbandman, but it is very necessary that it should be eradicated or cut down before seeding-time, otherwise each passing breeze will waft its winged seeds far and wide over the country-side. The neglect of one farmer falls on all in such a matter. In many cases it would probably be possible to meet the plague most effectually by effective drainage operations.



SALAD BURNET.

Poterium sanguisorba. Nat. Ord., Rosaceæ.

PLANTS, there is no doubt, in not a few cases may be very common and yet scarcely come within the literal scope of our title and be called familiar; and the present species, the salad burnet, may be taken as a very good illustration of that fact, for it is abundantly distributed throughout the country, and yet we venture to say that to ninety-nine pairs of eyes out of a hundred that light here upon its counterfeit presentment, it will be a stranger. The reason of this is not far to seek; the small size of its flower-heads and their absence of strong colour are sufficient to render the plant invisible amongst the grass to those who only cast a casual glance at the herbage at their feet, while it does not occur in such masses, nor on spots so bare of other vegetation as the equally inconspicuous moschatell, and other such-like plants do, thus more or less compelling us to give it our observation.

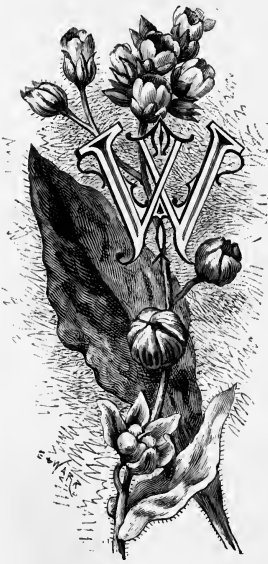
The influence of geological formation is often much greater than many persons who have not studied the matter at all would suppose, for we find numerous species attaching themselves, either exclusively or by evident choice, to certain soils; the chalk hills of our downs, for example, whether met with round Dover, or Guildford, or wherever else they may be, afford a good illustration of this. The salad burnet is a lover of chalk and limestone, and is abundant wherever we get a dry hill-side or high-lying pasturage of this character in the south. It is much more rarely met with in either Scotland or Ireland, than in England.

The salad burnet is a perennial, and should be looked for during June, July, and August. Inconspicuous as it is, it is not without a certain quaint charm of its own; the foliage is richly cut, and the flower-heads are very curious. Several nearly upright stems, from nine inches to a foot or so in height, are thrown up from the root; these are somewhat angular, often reddish in colour and smooth to the touch. The leaves spring in alternate arrangement from these stems; each leaf is composed of numerous lateral leaflets, small, and deeply cut into acute teeth. The necessities of our space have compelled us to be content with showing a leaf having seven pairs of these leaflets, but leaves with twice that number are quite as commonly met with. The flowers grow in globular heads, the lower flowers in each head being males, and the upper ones females. Hence, at the lower part of each head we see conspicuously the hanging tufts of stamens, while the whole is surmounted by the less noticeable, but delicate and richly coloured stigmas. The staminiferous flowers are large and spreading, green in colour, and often edged with crimson;

the pistil-bearing flowers are smaller—the first, or stamen-bearing, are cut into four very evident lobes; the second four-cleft, but much more finely.

Attempts have been made to introduce both this and our allied species the great burnet, or *Sanguisorba officinalis*, into agriculture, but the results would appear to have by no means answered the expectations of those who promoted the idea. The leaves of the salad burnet, when bruised, smell somewhat like cucumber, and have an acid flavour that at one time led to its introduction into salads, a fact still preserved in its common name; while others added it to wine, on account of an agreeable taste it was held to contribute to the mixture. This preparation is commemorated in the generic name *poterium*, a word signifying drinking-cup. Pliny highly commended a decoction of the plant beaten up with honey, for divers complaints. This old use of the plant as a flavouring and a medicine is incidentally seen in the following extract from the "Theatrum Botanicum." "It groweth wilde in divers places of this Land, in dry sandy places, but is usually preserved in gardens, to be ready at hande when it shall neede to be used." According to this author, the plant possesses many "vertues." "It is a speciall helpe to defend the heart from noysome vapours, and from the infection of the Plague or Pestilence, and all other contagious diseases, for which purpose it is of great effect, the juice thereof being taken in some drink. It is also a singular good Woundherbe for all sorts of wounds, both of the head and body, either inward or outward, to bee used eyther by the juice or decoction of the herbe, or by the powder of the herbe or roote, or the water of the distilled herbe, or else made into oyle or oyntment by it selfe, or with other

things to be kept." We see, too, that in the "New Herball or Historie of Plants" of "that learned D. Rembert Dodoens," a quaint old black-letter volume published in 1586, the burnet is strongly commended as a healer of wounds, "made into powder and dronke with wine, wherein iron hath bene often quenched, and so doth the herbe alone, being but only holden in a man's hand as some have written. The leaues stiped in wine, and dronken, doth comfort and rejoice the hart, and are good against the trembling and shaking of the same." These are but samples, mere surface skimmings, of some of the more evident "vertues" of this lowly herb: space forbids our adding more, nor, indeed is it necessary, for if our readers will only consider that it is a sort of general-heal-all, a more detailed catalogue becomes needless.



HOUND'S TONGUE.

Cynoglossum officinale. Nat. Ord., Boraginaceæ.

WHY this plant especially should be called the hound's tongue is not immediately clear, though we are told by old authorities that it derives its name from the shape of its leaves. These, possibly, are about as similar or dissimilar to the tongue of a dog as the foliage of some half-dozen other plants that at once occur to one's mind. It is, however, altogether too late in the day to raise objections on that score, for the plant is the hound's tongue not only in England, but in the vernacular of all Europe. In France, for example, it is the *Langue de chien*, in Germany the *Hundszunge*. The generic name, *Cynoglossum*, Greek in its origin, carries the same significance. One old author, Coles, in his "art of simpling," breaks away, we see, from the general theory that the plant derives its curious title from the shape and texture of the leaf, and

appeals to a still older, and perhaps equally reliable, authority, for he tells us that the plant "will tye the tongues of houndes so that they shall not bark at you, if it be laid under the bottom of your feet, as Miraldus writeth." The size and soft texture of the leaf were probably the cause of the name, in the same way that we find another plant with long and rough leaves called the ox-tongue. Pliny, in his writings, refers to a plant called cynoglossos, but it is not certainly known what plant he meant.

The whole plant has a very strong and disagreeable smell, resembling as nearly as possible that of mice; and we can only wonder that a resemblance so patent should not have influenced its name. Cattle in general dislike this nauseous herb, but goats will sometimes crop its foliage. As goats, however, will eat with impunity either tobacco-leaves or those of the deadly nightshade, their eccentric taste may well stand alone.

The hound's tongue seems to be rarely attacked by insects or caterpillars, though the larva of the scarlet tiger-moth, the *Hypercompa dominula* of the entomologist, may sometimes be found upon it. The caterpillar is black, with a broad pale yellow stripe along the back, and the moth into which it ultimately develops is one of our gayest and most beautiful insects, the front wings being dark green, spotted with yellow and white, while the hind wings are a deep crimson, spotted with black.

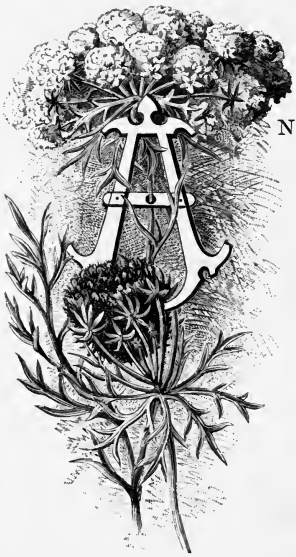
The specific name of the hound's tongue refers to the officinal value of the plant, but though formerly included in the Materia Medica of the London and Edinburgh Pharmacopœias, and still used in some parts of

the Continent, its medicinal use in England is now a thing of the past. Its medicinal effects seem of too doubtful a nature to make it of any real service, for while some authors ascribe to it valuable narcotic and astringent properties, others deny that it has any healing influence at all. Its lurid appearance, offensive smell, and the aversion with which animals regard it, are points that have justifiably caused it to be regarded with suspicion. Even the handling of the plant for any considerable time will in some persons produce nausea, giddiness, and fainting. It would seem almost impossible for anybody, however stupid, to mistake this plant for anything culinary, but more than one case is recorded in medical works where the plant has been eaten in error, and with the gravest results. The root of the hound's tongue is tapering, and some eight or nine inches long, and dark reddish-black externally, but whitish within. The stems are thick, erect, some two feet high or so, branching freely near their summits, and clothed with rough hairs.

"The roote of Dogstoong," the writer of a treatise published A.D. 1586 tells us, "is very good to heal wounds, and it is with good successe laid to the disease called the wild-fire, when it is pund with barley meale. The water or wine wherein it hath bene boyled cureth woundes and hote inflammations, and it is excellent against the boils and grieuances of the mouth. For the same purpose they make an ointment, as followeth:—First they boyle the iuice thereof with honey of roses, then when it is well boyled they mingle turpentine with it, sturring it hard, untill all be well incorporate together, then they apply it to wounds."

The leaves are numerous, alternate, long, and narrow,

and their margins are a good deal waved. In colour they are of a greyish-green, and the numerous short hairs upon them not only cause them to look greyer, but give them a soft feel to the touch. The lower leaves are on long stalks, and are considerably broader in proportion to their length than the smaller stemless leaves that clasp the stalks. The flowers are small and of a dull reddish-crimson, arranged in racemes. The arrangement is unilateral: that is to say, all the flowers spring from one side of the stem. The flower racemes are terminal, or issue from the axils of the upper leaves, and ordinarily are slightly drooping. The fruit is of a somewhat curious character, being divided into four portions and very rough to the touch; our illustration gives a sufficiently good idea of its character. "The seed is flat and rough, three or foure togither like to a true-loue knot, the which do cleave fast unto garments, when they are ripe." The hound's tongue is a biennial, and should be looked for in woods and on waste ground during June and July.



CARROT.

Daucus Carota. Nat. Ord., Umbelliferæ.

ANY one who is at all familiar with the look of the garden carrot will have no difficulty in recognising its wild progenitor, for though cultivation has done much to improve the plant, its main features, the richly-cut leaves and densely-clustered blossoms, remain unaltered. When we pull the plant up, we "make assurance doubly sure," for the well-known odour of the root settles the point beyond all further doubt. The wild carrot is very generally distributed throughout Britain, on the borders of fields and by the road-sides, and seems to thrive more especially near the sea. It may be found in flower throughout the whole of the summer. The root is spindle-shaped, slender, firm, somewhat tough and woody, yellowish in colour, penetrating some distance into the ground, and having only a few lateral rootlets. The leaves are very finely

divided, and of the form termed botanically tri-pinnate. When a leaf is composed, as in the case of the ash or the parsnip, of a number of lateral leaflets, it is said to be pinnate or feather-like; when these lateral divisions are themselves pinnated, it is said to be bi-pinnate, or twice-feathered. The leaf in our illustration is of this character, but some of the lower leaves are still more divided, and become tri-pinnate. The lower leaves are considerably larger than the upper; their arrangement on the main stem is alternate, and all embrace it with that sheathing base which is so characteristic of the umbelliferous plants.

The stems are erect and branched, furrowed, attaining ordinarily to a height of some two feet, but sometimes exceeding this; both stems and leaves are more or less clothed with short coarse hairs. The umbels of the flowers are terminal, large, and composed of numerous rays. The flowers themselves are very small, but from their whiteness and number, present in the aggregate a very conspicuous appearance. During the flowering-period the head is nearly flat or slightly convex, but as the seeds ripen the form becomes very cup-like; hence one of the popular names for the plant is bird's-nest, while in Germany it is the *Vogelnest*. The two contrasting forms, the umbel during the flowering and during the fruiting stage, may be clearly seen in our illustration. The ring of finely-divided and leaf-like bracts at the point whence the umbel springs is another noticeable feature. The fruit is covered with numerous little bristles, arranged in five rows.

If any of our readers will rescue just the head of a carrot, before the cook consigns it to the rubbish-heap, and then place it in a small saucer of water, in a short time it will throw up a very graceful and delicate

tuft of leaves. We have seen very pretty winter ornaments made by suspending these carrot-heads in damp moss; all that is necessary is to slice the top off the carrot, say half an inch deep, and then keep it moist. Our plant is in France the *carotte*, and in Italy the *corota*. The derivation of the word is obscure, but it has been suggested that it owes its origin to the Celtic word *car*, signifying red. The only drawback that one feels in accepting this etymology is a doubt as to whether the Celtic peoples cultivated the carrot at all. It is only the cultivated root that is red, the wild one being yellow in colour; if, therefore, they only knew it in its wild state, they would naturally have called it by some name signifying yellow-rooted.

The generic name *Daucus* is handed down to us from the old Greek writers; there seems to be no reasonable doubt that the plant so called by Dioscorides and other old authorities is the carrot. Pliny speaks of the finest carrots being procurable in his day from Candia, and we from time to time meet with other references that seem to identify the ancient plant with the root so well known to ourselves. The carrot was in ancient times much valued for its medicinal properties, and the old Greek name refers to its stimulating character. Carrots contain a large amount of sugar. From one pound of carrots we are able to obtain one ounce and eleven grains of sugar, while out of the sixteen ounces fourteen are water. In the interesting catalogue of the Food Collection at Bethnal Green Museum, prepared by Dr. Lankester, we learn that the maximum amount of work produceable by a pound of carrots is that it will enable a man to raise sixty-four tons one foot high, so that it would appear to be a very efficient force-producer. The amount of water will probably surprise many people;

but when we consider that in an average specimen of humanity, a man of eleven stone or one hundred and fifty-four pounds weight, about one hundred and eleven of these are water, we see that a goodly supply to repair waste and wear and tear is necessary. Physiologically, a man may be considered as being about twenty pounds of carbon, a little phosphorus, small quantities of iron, sodium, and other substances, and several pailfuls of water.

Carrots are also extremely useful for cattle-feeding, and one cannot give one's horse or cow a greater treat than a few of these sweet and succulent roots. The compressed roots make an admirable food towards the dietary of voyagers; they can be reduced to powder, and thus become very portable. In France and Germany a spirit is distilled from the carrot, one gallon being yielded by about one hundred and fifty pounds of roots; attempts have also been made to extract sugar from them, but in competition with either cane-sugar or that obtainable from the beet-root, it has not proved commercially successful. A less legitimate use of the carrot is as an adulterant of coffee.

THE DWARF THISTLE.

Cnicus acaulis. Nat. Ord., Compositæ.

ANY one familiar with the great expanses of chalk down-land so characteristic of the south of England will scarcely have failed to notice the dwarf thistles that dot them over so abundantly. Even if they have not perceived the crimson flower-heads nestling in the short turf, which makes a tempting resting-place, it is more than possible that their pleasant dream of rest has been rudely dispelled by the anguish created by putting one's hand on the prickly foliage, thickly spread over the ground; and there is certainly no more practical way of appreciating the force and point of the motto that accompanies the heraldic use of the thistle as the national badge of Scotland—"Nemo me impune lacessit"—no one trifles with me scathless. An old writer thus discourses on the stinging nettle:—"This vexing vegetable of subtil acrimonious parts, are listed under valiant Mars, who hath armed them with flaming

swords, to offend those that dare to lay hands on them," and we may well re-echo his words, though clothed in somewhat hyperbolic language, and apply them to this other vexing vegetable, the dwarf thistle. One's first impression on seeing these thistles thickly spreading over the far-reaching downs is that they are some ordinary species that has got dwarfed by the keen winds which sweep across these breezy expanses. We are so used to the idea of thistles some three, four, or even six feet high, that we cannot at once realise that the little rosette at our feet is a truly representative plant, and a veritable and distinct species. The specific name signifies stemless, and the plant is sometimes, in popular nomenclature, called the stalkless thistle, but a reference to our illustration will show that these names are not quite in accordance with the facts of the case. Its almost total want of stem at once renders its identification easy; it rarely attains to more than an inch in height, though we have once or twice seen it four or five inches high. As no other thistle when an inch high develops flower-heads, the present plant cannot be mistaken for the seedling state of any other species.

The root-stock of the dwarf thistle is woody and perennial, and from it springs a spreading rosette of very prickly leaves closely appressed to the turf, and having numerous and well-armed lateral segments. The darker colour and glossy surface of these leaves tends to make them somewhat conspicuous amongst the short verdant grass-blades; but in any case the plant is particularly humble-looking, and would entirely escape notice were it not for the large crimson flower which springs from the centre of the radiating leaves. These flower-heads are large even when compared with many other species

of thistle, and appear especially so when we regard the diminutive plant from which they spring. Commonly only a single flower-head springs from the centre of the leafy tuft, but in other rosettes we find two or more. Our illustration represents three, but the flower-heads are more ordinarily solitary. After the conspicuous purple flower-heads we find the scarcely less conspicuous masses of white feathery down. This down, with its attached seeds, is dissipated by the wind and sent far and wide. The abundance of this plant in dry pasturage makes it one of the plagues of the agriculturist, as it takes up the room that he would prefer to see occupied by the sweet upland turf. It is one of the later flowering species of thistle, and should be looked for in July, August, and September: it seems to be only found in the southern and central counties of England, and more especially in the former, being, in fact, as we have already indicated, in an especial degree a plant of the chalk. Hence we find it more especially on the great expanses of cliff and downland so characteristic of parts of Surrey, Sussex, Kent, and Hampshire. Where found at all the dwarf thistle is found in abundance.

The roots of the various species of thistle were boiled in wine by our ancestors as correctives of impurities and poverty of the blood. "The same layd to with vinegar healeth the wild scurffe or noughty scabbe." Pliny started the idea, an idea which the mediæval writers reverently passed on—that if a bald head were fomented with a decoction of thistle the application would bring a luxuriant covering back again. We have great pleasure in presenting this fact, or pseudo-fact, to the knowledge of our readers who may be in search of a hair-restorer: we may yet live to see glowing advertisements of the "world-

famed Cnicuaculis," as it is probably at least as effective as some other preparations, while the raw material is so abundant that the preparation of the restorer, say at seven and sixpence the bottle, affords a fine field for commercial energy and speculation.

The Scottish thistle, like the Irish shamrock, is a choice subject for learned argument, and much discussion has been raised as to which species has the honour of giving the national badge to Caledonia. Such discussion here would be wholly out of place, and even the bare recapitulation of the various views for or against the different species would be decidedly superfluous, but we may just mention that the present plant is one of those held to have a good right to claim this proud position.

WATER-CRESS.

Nasturtium officinale. Nat. Ord., Cruciferæ.

IT will doubtless be conceded that whatever degree, more or less, of acquaintance which some of our readers may have had with certain of our plants, we have at length, as in the case of the daisy and the dandelion, all reached a common meeting-ground, a plant that is familiar to every one. All our readers, urban as well as rural, will have made acquaintance with the water-cress, though only the latter will have seen it, as we have figured it, in the flowering state. The plant is not so desirable as an esculent during the flowering-season, and it is naturally the aim of the water-cress grower to cultivate large masses of foliage rather than to allow free flowering. Hence the townsman has no opportunity, so long as he keeps within sight of the paving-stones, of seeing the plant as we have figured it.

The root of the plant is long and creeping, composed of numerous tufts of slender white fibres. It is very

easily eradicated. In the river at the bottom of our own garden we have in some years had large quantities of the plant in vigorous growth, some of the masses being many square yards in area; and when this and the water buttercups, and other aquatic plants, blocked the river up too completely, we always found that while many of the things could only be kept down by a free use of the scythe, the water-cress, with a comparatively slight pull, could be entirely dislodged, and sent floating down stream. The floating portions presently lodge on a shallow part of the bed of the river, or get drifted into a quiet back-water, and there speedily re-root themselves. When the plant is in flower its multitudinous blossoms give quite a white mantling to the stream, and at a little distance, as one looks up or down stream, look almost as though not flowers, but flour had been freely sprinkled! The stems are from a few inches to some four feet long, and have numerous rootlets springing from their lower portions. The leaves vary in form according to their position on the stem; those of the flowering-shoots are shown in our sketch, but those with which we are more familiar as an article of diet are much larger, often bronzed or purpled, and having the terminal leaflet much larger than the others. The corolla is of the cruciform type, so characteristic of the great natural order to which the plant belongs. The pod is an inch or so in length.

The fool's-cress, water-parsnip, or *Sium nodiflorum*, is often found growing with the water-cress, and as the latter is thoroughly wholesome, while the former is deleterious, some little care should be exercised, though there is no real difficulty in discriminating them. The fool's-cress belongs to the umbel-bearing plants; all its flowers, therefore, are

borne on stems that spring in bunches from one point, like the ribs of an umbrella, while its leaves are much longer, more acutely pointed, and of a paler green than those of the water-cress; the leaf-stalks also at their bases sheathe the stem, and those of the water-cress do not. The fool's cress is so called because no one but a very foolish person would really mistake it for the true water-cress. The resemblance between the two species is after all very slight, and the points of difference we have set down are amply sufficient to prevent any possibility of mistake.

The water-cress grows most luxuriantly in clear and gently-moving streams having a gravelly bottom, and the plants have then a far finer development and a richer flavour than those that have sprung up either on mud or in almost or quite stationary water; but we have even heard of its being grown very successfully as a pot-plant in the greenhouse, the great necessity being an ample supply of water, or the plants grow tough and burning to the taste. Water-cress must be familiar to all as an agreeable and wholesome salad, and its culture for the table is very extensively practised in many parts of England. Large quantities are brought in daily for a considerable part of the year to the London markets and other large centres of population, travelling in many cases forty or fifty miles to their destination. One Nicholas Mesner has the credit of being the first man to cultivate it. He was a native of Erfurt, and lived there in the middle of the sixteenth century; but though after this beginning the water-cress was freely grown in Holland and Germany, it was more than a hundred years afterwards that an Englishman, named Bradbury, introduced its culture into England.

A water-cress bed should be about four or five feet wide, and have a good sandy or gravelly bottom: in this the young plants or cuttings are planted in rows about a foot apart, so as to allow free passage of water. The depth of water need not be more than three or four inches. The water-cress bears a great deal of gathering without injury to the plants.

The plant is in France the *Cresson*, and in Germany the *Brunnenkresse*. The generic name is derived from the words *nasus tortus*, a convulsed nose, on account of the pungency of most of the species. The water-cress contains a considerable amount of sulphur and iodine, and though we now value it more especially as a pleasant relish, it is doubtlessly valuable medicinally from its stimulative effects on the digestive organs and its anti-scorbutic virtues to persons of debilitated constitutions. A decoction of it formed at one time a leading ingredient in the "spring tea" our forefathers, or perhaps more especially our foremothers, seem to have had such faith in.

STARWORT

STARWORT.

Aster Tripolium. Nat. Ord., Compositæ.

THE present plant has several names, though of these the Sea-aster and the one we have selected above are at once the commonest and most expressive. Aster, we need scarcely pause to explain, means a star, while wort is the Saxon word for plant. It will be seen, therefore, that the same idea, a reference to the star-like rays of the flower, runs through both names, and any one who has seen its stellate blossoms enlivening in their thousands some dreary sea-side marsh will feel the full appropriateness and beauty of the titles given. Other names in more or less common use are the Michaelmas daisy, the blue daisy, and the blue chamomile. The true Michaelmas daisy is a plant of very near kindred, and we can easily see how the name of the garden flower got transferred to this dweller in the waste, nor is there any more difficulty in understanding how the

names of such well-known fellow-composite flowers as the daisy or the chamomile were shared by the sea-aster or starwort.

"Our ordinary sea-starrewort hath many long and somewhat broad leaves rising from the roote next the ground, smooth, fat, and thicke, and of a blewish-greene colour, from among which riseth up a smooth herby or fleshy-greene stalke, branched towards the toppes into divers smaller branches, with such-like leaves upon them as grow below, but lesser. The flowers that stand at the toppes of them are somewhat large, having a bluish purple border of leaves standing about a yellow middle thrum, which, after it hath done flowering, turneth into downe, and the small seede therewithe is blown away at the will of the winde; the roote hath divers greater strings and many smaller fibres thereat which grow deepe and sticke fast in the middle of the marshie ditches where it groweth." The foregoing, despite its antique phraseology, is as graphic a description of the plant as one need wish for.

The starwort, as we have already indicated, is a denizen of the low-lying lands by the sea that come beneath the saline influences and occasional overflowings of the tide—"you shall hardly misse it in any salt marsh in some place or other if you looke well for it;"—it attains to a height of about a foot under favourable conditions, and should be sought for during the later months of summer, and part of the autumn. Hence it will be seen that not only does its appearance justify the name of Michaelmas daisy but also the late date of its flowering-season.

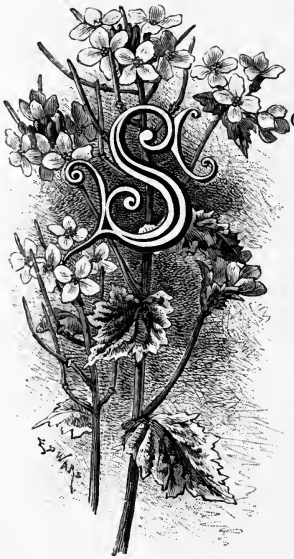
The specific name *Tripolium* is the old Greek name for the plant. Dioscorides says that this name was given because the flowers change colour thrice a day

—an altogether wild statement that one would have imagined could not have survived the day of its birth. Gerarde discourseth as follows on the plant:—It is reported by men of great fame and learning that this plant doth change the colour of its flowers thrice in a day. This rumour we may believe, and it may be true, for that we see and perceive things of as great and greater wonder to proceed out of the earth. This herbe I planted in my garden, whither (in his season) I did repaire to finde out the truth hereof, but I could not espy any such variablenesse herein; yet thus much I may say, that as the heate of the sunne doth change the colour of diuers flowers so it fell out with this, which in the morning was very faire, but after of a pale wan colour. Which proveth that to be but a fable which is reported by some, that in one day it changeth the colour of its flowers thrice: that is to say, in the morning it is white, at noone purple, and in the evening crimson. But it is not untrue that there may be found three colours of the flowers in one day, by reason that the flowers are not all perfected together, but one after another by little and little. There may easily be obserued three colours in them, which is to be vnderstood of them that are beginning to flowre, that are perfectly flowred, and those that are falling away. For they that are flowering and be not wide open and perfect are of a purplish colour, and those that are perfect and wide-open of a whitish blew, and such as have fallen away have a white down; which changing hapneth vnto other plants." Gerarde had himself too great a love of the marvellous to be easily daunted by a wonderful story, but we cannot but respect his love for the truth, and the great pains he took to ascertain what really was the truth. So many of these ancient writers, and

too many of their modern successors, find it exceedingly easy just to pass a story on, so that a statement of any kind, if not too bare-faced, may live an unlimited time without being brought to the test. We have ourselves brought to the rough test of trial and experience very many of the statements found in various books of more or less antiquity, and have frequently found them delusive, until at last we have arrived at a state of almost utter sceptieism on all such points.

The following graphic description of the littoral waste by Merritt is well worth quotation:—

"The marsh is bleak and lonely. Scarce a flower
Gleams in the waving grass. The rosy thrift
Has paler grown since summer blessed the scene;
And the sea-lavender, whose lilac blooms
Drew from the saline soil a richer hue
Than when they grew on yonder towering cliff,
Quivers in flowering greenness to the wind.
No sound is heard, save when the sea-bird screams
Its lonely presage of the coming storm;
And the sole blossom which can glad the eye
Is yon pale starwort nodding to the wind."



GARLIC-MUSTARD.

Alliaria officinalis. Nat. Ord., Cruciferæ.

SOME little care will be necessary to prevent a mistake arising in one's mind between the present plant and the *Sisymbrium officinale*, or common hedge-mustard. Both plants are equally common, and both are figured in our series. The one plant has small yellow flowers, and the other considerably larger white ones; but they are very nearly allied botanically and some writers have placed the two plants in the same genus. No one, however, could possibly mistake one for the other if he saw them both together, as the similarity is verbal alone. Our present plant is called the garlic-mustard, and the hedge-garlic, while the other is the hedge-mustard. Hedge-garlic is not by any means a happy title, as the true garlic, a plant figured in a previous volume, is also a dweller in the hedgerow, and is wholly different from this in every way.

The tall stems and great heart-shaped leaves of the garlic-mustard are conspicuous on almost every hedge-bank during the early summer, and the plant may be readily distinguished from anything else at all like it by its strong garlic-like taste and odour. On this account it was at one time largely employed in the rustic *menu*, either eaten *au naturel* with bread and butter, or boiled as a pot-herb. We have heard, too, of its being fried with herrings and bacon, and in Germany it is largely eaten as a salad and anti-scorbutic with salt meat. According to Bautsch, it has been found useful in tanning, but whatever value it may possess in this way its being inferior to oak-bark and other materials will always prevent its being of any practical service. Horses and sheep refuse it, but cows will eat it, though it is very undesirable that they should, unless their owner is so partial to garlic that he considers it a desirable flavouring to his milk and butter.

The strong garlic-like odour of the plant is expressed not only in its popular name, but in the generic title as well, *Alliaria* being derived from *allium*, the Latin word for garlic. Ray, in his "Synopsis Methodica Stirpium Britannicarum," published in the year 1724, calls it the *Hesperis allium redolens*, a title equally redolent of the garlic. Another popular name for the plant is the sauce-alone. It has been very naturally suggested that this name was given to the herb from the fact that its use in homely cookery rendered any other flavouring unnecessary; but as we find that the true garlic in Spain is the ajo, in Portugal the alho, while in France it is called ail or ailloignon, and in Italy aglio and aglione, it is probable that we are again confronted with a reference to its garlic-like odour, and that sauce-alone is after all sauce-garlic.

Another common name for the sauce-alone or the garlic-mustard is the Jack-by-the-hedge; and in some old herbals it is the *pes asininus* or donkey's-foot, a name bestowed on it from the shape of the leaf, but which is by no means appropriate, and which probably would never have been thought of had there not been already a colt's-foot, a bird's-foot, and the like. The plant has by some more recent authorities been classed in the genus *Erysimum*, and by others in *Sisymbrium*. These genera are closely allied botanically with that in which it is now placed, and we cite them both, as very possibly our readers who may desire to know more of the plant might in some books find it under one heading, and in others under another.

The garlic-mustard appears to be sometimes an annual, but it is more ordinarily biennial. The root is long, white, tapering, forked, and furnished with numerous lateral fibres. The stalk is upright, and from two to three feet high, round, smooth, often purplish at the bottom, branching at the top, but having as a whole a bold and erect growth. The lateral branches are few in number, arranged alternately, and partake of the general upright character. In young plants there are often no lateral shoots at all. All the leaves are stalked, the upper ones being on short stems and the lower on much larger ones; all, too, are coarsely toothed, but they vary somewhat in shape and size according to their position on the plant. The upper leaves are small, and may be described as of a pointed heart-like form; while the lower are much larger, and of a very much more rounded heart-like shape: all are very deeply veined and somewhat wrinkled. The flowers are white, growing in a cluster on the summit of the stems,

each being composed of four petals. The stamens are six in number, and of the familiar type seen in all the cruciferous plants. The pods that succeed the blossoms are a very prominent and noticeable feature; they vary in size from the lowest scale of immature development to two inches or more in length. These pods are stiff and cylindrical, and each contains numerous small brown shining seeds. The mediæval herbalists were profuse in their praises of the medicinal virtues of the garlic-mustard, applying it internally as a sudorific, and externally as an antiseptic, but this faith in its efficacy is, so far as we are aware, now entirely a thing of the past.

BEE ORCHIS.

Ophrys apifera. Nat. Ord., Orchidaceæ.

NATURE contains many curious examples of what has been termed mimicry; the reproduction of a certain form in some wholly different species. In most cases this mimicry is held to be a protective feature, but in others, as in the present case, this theory does not meet the requirements of the case. One can easily understand that the resemblance of the curious clear-winged moths, such as the *Sphecia apiformis*, to bees, wasps, hornets, and such-like well-armed insects, often saves them from being captured, but in the case of the resemblance of our present plant to the insect of which it bears the name this can only be regarded purely and simply as a freak of Nature. The animal and vegetable kingdoms curiously interchange their forms, and while on the one hand we have a plant having its flowers strongly

suggestive of a bee, on the other we find the wonderful leaf-insect of the tropics so similar in its marking to the colouring, veining, form, and texture of some leaves that it becomes extremely difficult to detect its presence when motionless amongst the surrounding foliage. The upper surfaces of the wings of many moths, and the under surfaces of the wings of most butterflies, those parts in fact in each that are most visible when the insect is at rest, are beautifully mottled and shaded with greys and browns resembling the tints of barks and lichens. The Lappet and Bufftip moths afford beautiful illustrations of the mimicry of foliage and dead sticks. Some caterpillars closely resemble twigs, and many of our readers will remember to have seen specimens in our museums of the eccentric stick insects of the Eastern archipelago. It would be easy to multiply to almost any extent additional examples of this curious mimicry, protective or otherwise.

The old poet Langhorne has the following lines on the subject of our illustration :—

"See on that flowret's velvet breast,
How close the busy vagrant lies!
His thin-wrought plume, his downy breast,
The ambrosial gold that swells his thighs.

Perhaps his fragrant load may bind
His limbs; we'll set the captive free;
I sought the living bee to find,
And found the picture of a bee."

The name by which the plant is commonly known is so distinctly appropriate that, with the exception of the old name of "honey-bee flowere," given in some of the old herbals, it has no alternative title, the "dead carkasse of a Bee," to quote Gerarde, being too evidently to the fore to make any name appropriate that ignored so marked a feature

The bee-orchis should be searched for on chalk downs and clayey soils during June and July. Though not by any means a scarce plant in the special localities it favours, it is often almost extirpated in a district by the passion that some botanists and excursionists have for rooting up every specimen they can find, exceeding all bounds of moderation, and selfishly depriving those who come after them of a pleasure they might fairly claim to share. When gathered the flowers preserve their freshness for a long time, the buds continuing to expand.

The tubers of the bee-orchis are of the ordinary type of the genus, two roundish and unequal masses surmounted by a few small fibres. The stem is a foot or so in height. Near its base are several small sheathing leaves, silvery on their under surface and green or brown above. The flowers are large and few in number, about four or five being the ordinary number. From their size and the considerable distance apart at which they are placed they render the flower-spike very noticeable, the upper four to six inches being flower-bearing. The sheathing floral leaves from which the blossoms spring are very large and conspicuous. The lip of the flower is broad and convex, and though lobed at the base appears almost as a simple form from the turning under and back of the parts. In texture it is very smooth and velvet-like, and richly variegated in colour with markings of yellow and brown. The flowers are without the spur that is so characteristic a feature in the butterfly orchis (figured in the present series) and several of the other species. The outer sepals are large and prominent, sometimes pale pink in colour throughout, at other times greenish or white; the inner sepals are similar in tint but very much smaller.

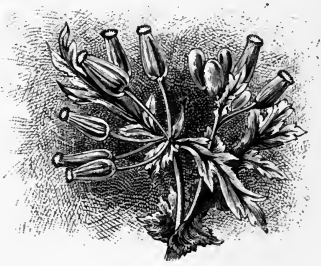
The generic name *Ophrys* is simply the Greek word for eyebrow, while *apifera* signifies bee-bearing. It is not at first sight very evident why our beautiful plant should be branded by botanists as the bee-bearing eyebrow; but we find on turning to Pliny, a great authority on natural history, that the plant was in his time employed by ladies to darken their eyebrows. He tells us that "Lysimachia gives a fair and golden tint to the hair, and hypericon, likewise ophrys, makes it black." From the description which he gives of the plant it is more probable that he had in his mind an allied species, the tway-blade, a very common plant of our woods and moist pastures. The second name was bestowed on the plant by Hudson, a botanist of some repute. The plant was in the catalogue of Linnæus given as the *O. insectifera* or insect-bearing, but as we have other insect forms, as, for example, the butterfly orchis, the more definite and individualised name is clearly an advantage.

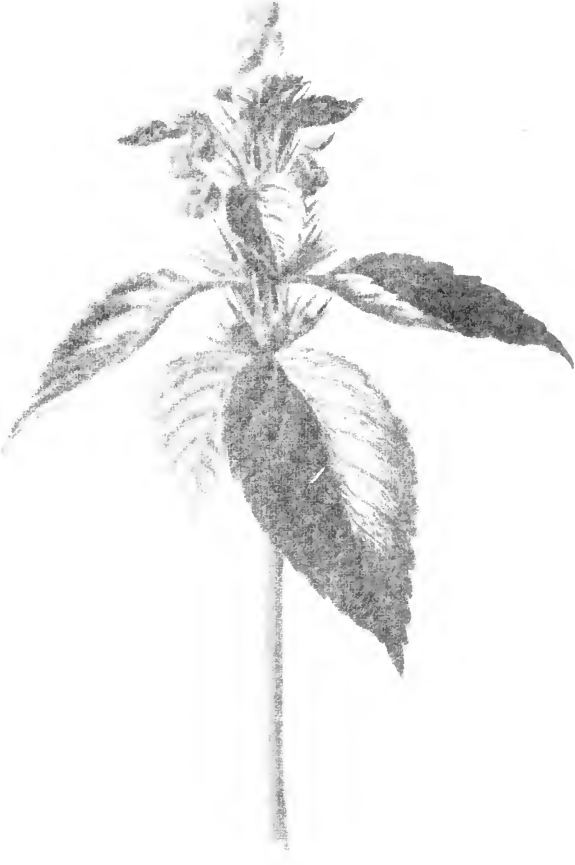
GROUNDSEL.

Senecio vulgaris. Nat. Ord., Compositæ.

AMONGST all familiar wild flowers, perhaps none is more distinctly familiar than the lowly groundsel, the subject of our present illustration. Even the dweller in the town can scarcely be ignorant of it, for, together with the chickweed and the plantain, its sale is one of the recognised street industries amongst the busy haunts of men. It is a very popular food not only with caged birds but with many of our common wild species. Its powers of seeding are something enormous, as any one who has a garden knows to his cost. The plant is an annual, and is pulled up with the greatest ease, as its small fibrous roots have very little hold of the soil. It would appear then that there need be but little difficulty in effecting its final and complete eradication; but the plant seeds so freely, and scatters its multitudinous

the paines. Another as fabulous and ridiculous as that, is this, which some have set downe, that glasse being boyled in the juice of groundsel and the blood of a ramme or goate, will become as soft as wax, fit to be made into any forme, which being put into cold water will come to be harde againe." Could we only believe in the possibility of such a recipe, a fine career of usefulness would be open to both "goates" and groundsel; in the meantime it is a welcome food to small birds, and a source of endless vexation to the generality of mankind.





HEMP-NETTLE.

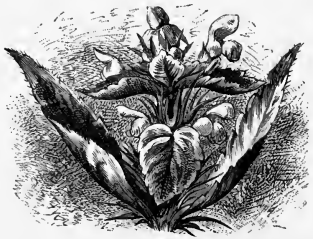
Galeopsis Tetrahit. Nat. Ord., Labiatæ.

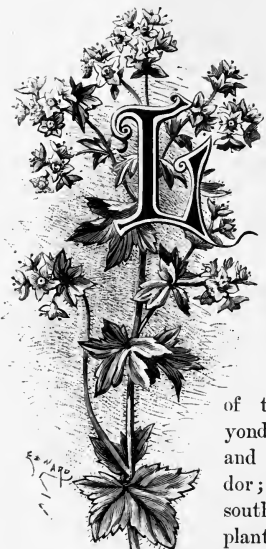
THE hemp-nettle is so called not on account of any botanical affinity with the hemp—for the name was bestowed long before botanical science was out of its infancy—nor even from its sharing the valuable qualities of the hemp as a raw material for fabrics, though doubtless the fibres of many plants could be turned to more account than we find to be the case. The name merely arose from a slight resemblance in the leaves of the two plants. The leaves of the true hemp are composed of some five or seven long, narrow, sharply-serrated leaves, all springing from one point—a beautiful form in itself, and somewhat resembling the leaf of the better known horse-chestnut, except that in the hemp all the leaflets are much narrower in proportion to their length. The leaves of the hemp-nettle have no such

for the most part, or a little pale whayish, which doth plainly express the difference." The old authors often call our species the bastard-hemp.

Critical zoologists have been known to object to the popular name for the common cockroach or black-beetle, on the ground that the creature is not black, and that it is not a beetle; and we may in the same way be allowed to point out that our present plant is neither hemp nor nettle. The true nettles belong to a wholly different order.

The plant "dronken in wine comforteth the hart and driueth away all melancholie and sadnesse." But, as the charge against us as a nation by our foreign critics centuries ago was that we were the victims of phlegm we can only conclude either that our critics were mistaken, or that our forefathers had not the courage of their opinions, and were wanting in the needful faith in this and several other plants that were equally commended as antidotes to the "melancholie."





LADY'S MANTLE.

Alchemilla vulgaris. Nat. Ord., Rosaceæ.

LADY'S MANTLE, the subject of our present illustration, is generally distributed over Britain, but seems more especially at home in the colder regions and on high-lying land. It may also be found in moist pasturage. Wherever we find it, it would appear to select the more bracing climates, being either in an especial degree a plant of the North, freely found beyond the Arctic circle in Europe and Asia, in Greenland and Labrador; or if found in more distinctly southern latitudes, it is only as a plant of such mountain ranges as the Himalayas. It is a perennial, and should be looked for in flower during June, July, and August. From the fact of the whole plant, stems, leaves, and flowers, being clad in green, it must very frequently escape notice, yet we would claim for it our readers' hearty appreciation; the grace of its growth, the rich form of its foliage, and the

beautiful shape of its clustering blossoms are all features which justify us in our own appreciation and in appealing to that of others who may not yet have made an acquaintance with its modest beauties.

The lower leaves of the Lady's mantle are much larger than any of those which our limited space has allowed us to show, being borne on long stalks, fairly circular in general outline, but having their margins cut into seven or nine broad but shallow lobes; the upper leaves are small, and either stalkless or on short stems, and all are acutely notched and toothed. The leaf-like stipules embracing the stem are a noticeable feature. The flowers are small, numerous, and yellowish-green in colour, grouped in clusters at the ends of the freely branching flower-stems. The petals are wanting, the calyx eight-cleft, the four outer and alternating segments being smaller than the others. The stamens are four in number. The whole plant is about a foot in height, and generally more or less clothed with soft hairs.

The plant is the Lady's mantle, not the ladies'-mantle; the point may not appear important, and we find it sometimes given one way and sometimes another; but the first is the true form, and bears record of its association in mediæval times with the Virgin Mary. Other parallel examples are the thrift or Lady's cushion, the dodder or Lady's laces, the Solomon's seal or Lady's seal, the quaking grass or Lady's hair, and several others that we need not stay to particularise. It is in Sweden, too, the Lady's cape, in Germany the Frauenmantel. In France an entirely new idea is introduced, the form of the spreading root-leaves having suggested the name pied-de-lion. It was also called in mediæval Latin the

leontopodium, Anglicised into lion's-paw, and thence modified into bear's-foot. The radiating character of the lower leaves, suggested to others the idea of a star, and procured it the name of stellaria; but this was an unfortunate name, as it had already been bestowed on some three or four other plants.

Tragus seems to have been the original bestower of the generic name on the Lady's mantle, a name that was confirmed by its re-adoption by Linnæus. As probably Tragus is but an empty name to the great majority of our readers, we may perhaps indulge in a brief biographical parenthesis. The so-called Tragus was a German botanist, his real name being Jerome Boch. In accordance with a fashion prevalent amongst the learned in the middle ages, his name, equivalent in English to goat, was Latinised into Tragus, a word of the same signification. Tragus is best known by his History of Plants, published in German in the year 1532, and in a Latin edition in 1552.

The generic title, of the plant, *Alchemilla*, like our English word alchemy, is derived from the Arabic word alkemelych, and was bestowed owing to the wonder-working powers of the plant according to some old writers, though others thought and taught, or at least taught, that the alchemical virtues lay in the subtle influence the foliage imparted to the dewdrops that lay in its furrowed leaves. These dewdrops entered into many a mystic potion.

Horses and sheep are fond of the Lady's mantle, and it has therefore been suggested that it might be profitably used as a fodder-plant; but there is, of course, a wide distinction between observing animals browsing upon a plant on the mountain-sides, and deliberately setting

some few acres of ground with it for forage, and so far as we are able to trace the matter, the scheme seems never to have gone beyond the theoretical stage. It is of course comparatively easy for a botanist to make such a suggestion, but with the farmer who is asked to forego wheat or turnips for a crop of Lady's mantle the matter assumes an entirely different aspect.

The parsley-piert or *Alchemilla arvensis* is an allied species abundantly to be met with growing on the tops of old walls, on waste ground, in gravel-pits, and the like. As this plant is rarely more than four inches high, and has very minute green flowers, it is at best inconspicuous, though its deeply-divided leaves and general growth are by no means unattractive to the lover of natural beauty.

INDEX OF ENGLISH NAMES.

The Roman number refers to the Volume in which an account and figure of the plant may be found, and the Arabic number to the page.

INDEX OF BOTANICAL NAMES.

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