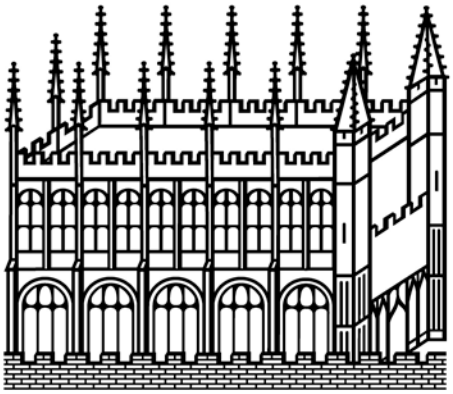

FAMILIAR WILD FLOWERS

FIGURED AND DESCRIBED BY

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

"Nature is but a name for an effect,
Whose cause is God. Not a flower
But shows some touch, in freckle, streak, or stain,
Of his unrivalled pencil. He inspires
Their balmy odours, and imparts their hues,
And bathes their eyes with nectar, and includes,
In grains as countless as the sea-side sands,
The forms with which He sprinkles all the earth."

COWPER.

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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, and other authorities on the subject.*

BINDWEED, *CALYSTEGIA SEPIUM. Nat. Ord., Convolvulaceæ.*—Calyx of five sepals, with two large bracts. Corolla campanulate; pure white. Peduncles single-flowered. Stamens springing from base of corolla. Style simple; stigma two-lobed. Capsule two-valved. Leaves sagittate, entire, lobed at base. Stems long, weak, climbing. Root-stock creeping.—Hedgerows and woods. June, July, August. Perennial.

FLOWERING-RUSH, *BUTOMUS UMBELLATUS. Nat. Ord., Butomaceæ.*—Perianth of six divisions, the three inner ones petaloid in character; pink. Inflorescence umbellate. Stamens nine. Carpels six. Stigmas lateral. Capsules many-seeded. Leaves linear, trigonous, cellular. Stems long, leafless, unbranched.—Ponds and lakes and slowly-running streams. June, July. Perennial.

REST-HARROW, *ONONIS ARVENSIS. Nat. Ord., Leguminosæ.*—Calyx of five narrow segments. Corolla papilionaceous. Standard large and conspicuous; pink. Flowers solitary, on short stalks. Stamens ten. Style simple. Ovary single, one-celled. Fruit a short pod, but few seeds. Stipules leafy. Leaves ternate, lateral leaflets often wanting, serrate. Branches hairy, often spinous, spreading.—Hedge-banks and poor soils. June, July, August. Perennial.

RED-BERRIED BRYONY, *BRYONIA DIOICA. Nat. Ord., Cucurbitaceæ.*—Calyx with five small teeth. Corolla five-cleft, conspicuously reticulated. Flowers dicœcious, racemose, axillary; pale

* See Prefatory Note to the Summary, Vol. I.

whitish green. Stamens five. Style short; stigmas lobed. Ovary globular, one-celled. Fruit a berry. Leaves deeply divided into five or seven lobes, rough, coarsely-serrated. Tendrils. Stems long, climbing, hairy, branched, weak. Root, tuberous, large, often branched; white.—Hedges and copses. All the summer. Perennial.

STORK'S-BILL, *ERODIUM CICUTARIUM. Nat. Ord., Geraniaceæ.* —Calyx of five sepals. Petals five, regular, obovate; pink. Inflorescence umbellate. Stamens ten, five being sterile and rudimentary. Stigmas five. Ovary five-lobed. Carpels awned. Leaves pinnate, having their segments deeply pinnatifid, serrated, stalked, radical. Stems erect, hairy, variable in length.—Waste ground and roadsides. June, July, August, September. Annual.

MULLEIN, *VERBASCUM THAPSUS. Nat. Ord., Scrophulariaceæ.*— Calyx deeply cleft into five. Corolla of five broad, rounded lobes, rotate, irregular; bright yellow. Tube of flower short. Inflorescence a dense raceme. Stamens five, having three of the filaments covered with yellowish soft hairs. Capsule two-celled, septiadal, ovoid opening in two valves. Seeds small, very numerous. Style simple Leaves decurrent, very woolly on both sides, ovate, slightly serrate alternate. Stem simple, or slightly branched below; erect.—Hedge-banks and waste ground. June, July, August. Biennial.

NODDING THISTLE. *CARDUUS NUTANS. Nat Ord., Compositæ.*—Involucre imbricated with spiny scales, outer ones spreading, globular, large, slightly woolly. Florets equal, tubular; crimson. Flower-heads large, drooping, at times solitary; or inflorescence corymbose. Pappus pilose. Leaves deeply pinnatifid, spinous, prickly, decurrent. Stem firm, erect, very slightly branching, more or less covered with cotton-like hairs. Two to three feet high.—Waste ground, in dry and poor soils. All the summer. Biennial.

MEADOW VETCHLING, *LATHYRUS PRATENSIS. Nat. Ord., Leguminosæ.*—Calyx oblique, upper segments shortest. Corolla papilionaceous; yellow. Stamens diadelphous. Inflorescence a raceme. Style one; stigma one. Ovary one-celled. Fruit a pod or legume. two-valved, many-seeded, glabrous. Stipules large, sagittate. Leaflets lanceolate, in pairs. Tendrils long and branched, terminating leaf-stalk. Stem angled, weak, much-branched, climbing.—Hedges, in damp meadows, and low-lying pastures. July, August. Perennial.

PINK PERSICARIA, *POLYGONUM PERSICARIA. Nat. Ord., Polygonaceæ.* — Perianth, five deeply-cut segments; pink. Inflorescence spicate, terminal, compact, cylindrical. Stamens six, inserted into base of perianth. Styles two or three. Stipules sheathing, and fringed with short bristly hairs. Achene wingless, compressed, gibbous. Leaves lanceolate; lower ones on stalks, the upper ones sessile; glabrous, often with dark blotch in centre, entire. Stems smooth, erect, jointed, freely branching, brittle. Root fibrous. —Waste places, moist ground, ditches, and roadsides. July, August, September, Annual.

TORMENTIL, *POTENTILLA TORMENTILLA. Nat. Ord., Rosaceæ.* —Calyx ordinarily eight-cleft, the alternate divisions being smaller. Petals ordinarily four, but occasionally five; bright yellow. Style short, simple. Stamens perygínous; anthers two-celled. Carpels many. Fruit a mass of minute achenes on a common flat receptacle. Lower leaves often stalked; upper ones sessile, digitate; segments lanceolate, deeply serrate, alternate, having stipules. Stems freely forking, procumbent or ascending; peduncles axillary. Root-stock large and woody.—Moors and dry pastures. June, July, August. Perennial.

CINQUEFOIL, *POTENTILLA REPTANS. Nat. Ord., Rosaceæ.*— Calyx ten-cleft, the alternate segments being smaller. Petals broad, five; bright yellow. Flowers singly on long peduncles, axillary. Achenes numerous, small, placed on a flat, dry receptacle. Leaves all stalked, five or seven obovate, coarsely serrated leaflets. Stems rooting at joints, slender, prostrate, freely running. Stipules ovate, entire.—Meadows and hedge-banks, roadsides. June, July, August, September. Perennial.

GREATER WILLOW-HERB, *EPILOBIUM HIRSUTUM. Nat. Ord., Onagraceæ.*—Calyx four-cleft. Petals four, erect at base, notched, spreading, conspicuous; pink. Flowers regular. Stamens eight, inserted in calyx, erect, four longer than the others. Style filiform, erect; stigma deeply cut into four lobes. Pod long, quadrangular, four-celled, many-seeded. Seeds having tuft of silky hairs at one extremity. Leaves partly clasping stem, ovate, lanceolate, hairy, serrate. Stem freely branching, erect, rigid, stout. Root creeping. —Damp low-lying ground, osier-beds, and margins of streams. July, August. Perennial.

HONEYSUCKLE, *LONICERA PERICLYMENUM. Nat. Ord., Caprifoliaceæ.* Calyx globular, having five small teeth. Corolla having

an elongated tube, five-cleft, irregular. Flowers in heads, sessile. Stamens five. Style filiform, and stigma capitate. Fruit a berry, growing in red clusters. Leaves ovate, glabrous above and downy beneath; the lower ones stalked, the upper sessile; in pairs, entire. Stems long, woody, climbing.—Woods and hedges. June, July, August, September. Perennial.

SUCCORY, *CICHORIUM INTYBUS. Nat. Ord., Compositæ.*—All the florets with ligulate corollas, and having both stamens and pistils; light blue. Stamens five. Ovary one. Style one, bifid. Pappus sessile, scaly. Involucre of eight bracts, having at their base a few smaller ones spreading out. Flower-heads in close sessile cluster along the stems. Achenes numerous, slightly ribbed. Leaves very various in form: lower leaves spreading, pinnatifid, runcinate; upper leaves small, embracing stem, entire or slightly serrate. Stems erect, freely branching, rigid, furrowed. Root large.—Dry waste ground, especially on sand or chalk. July, August, September. Perennial.

PIMPERNEL, *ANAGALLIS ARVENSIS. Nat. Ord., Primulaceæ.*—Calyx of five sepals, deeply cleft. Corolla scarlet, rotate, regular, five-lobed. Stamens five, the filaments fringed with short hairs. Pistil filiform, short; and stigma capitate. Capsule superior, opening transversely. Flowers axillary. Leaves in pairs, ovate, sessile, the under surfaces covered with dark spots, entire. Stems much branched, erect or procumbent.—Arable land, gardens, and waste places. May, June, July, August, September, October. Annual.

BROOKLIME, *VERONICA BECCABUNGA. Nat. Ord., Scrophulariaceæ.*—Calyx four-cleft. Corolla monopetalous, four-cleft, rotate, the lower segment much narrower than the others, tube very short, fugacious; bright blue. Stamens two. Stigma two-lobed. Capsule two-celled, shorter than calyx, notched at summit. Inflorescence axillary, racemose. Leaves ovate, subserrate, thick, glossy, stalked. Stems thick, succulent, rooting at the joints, procumbent; flowering stems ascending. The whole plant glabrous.—Water-courses. May, June, July, August, September. Perennial.

SCENTLESS MAYWEED, *MATRICARIA INODORA. Nat. Ord., Compositæ.*—Outer florets ligulate, white; florets of the disk numerous, small, yellow, tubular. Receptacle naked, hemispherical. Flower-heads large, and on long terminal peduncles. Involucre covered with imbricated and scaly bracts. Achene ribbed conspicuously.

Leaves two or three times pinnate, with filiform segments, sessile, shining, alternate. Stems rigid, furrowed, spreading.—Waysides and fields. June, July, August, September, October. Annual.

FORGET-ME-NOT, *MYOSOTIS PALUSTRIS. Nat. Ord., Boraginaceæ.*—Calyx five cleft. Corolla monopetalous, salver-shaped; five obtuse lobes, throat of flower partly closed by scales; bright blue with yellow centre; tube small and straight. Stamens five, inserted in sides of tube. Ovary four-lobed. Nuts smooth and shining. Inflorescence racemose, scorpoid, forked, unilateral. Leaves oblong or ovate, glabrous or slightly downy; no stipules. Stem slender, weak, ascending.—Banks of streams and ditches. June, July, August. Perennial.

BIRD'S-FOOT TREFOIL, *LOTUS CORNICULATUS. Nat. Ord., Leguminosæ.* Calyx five-toothed. Corolla papilionaceous; yellow. Inflorescence umbellate, five to ten flowers on long peduncle. Leaf at base of umbel. Stamens diadelphous. Ovary one-celled. Style one; stigma one. Legume straight, cylindrical, bearing several seeds, Leaves obovate, trifoliate; leafy stipules. Stem slender and herbaceous. Long taproot. — Pastures and hedgerows. July, August. Perennial.

SEA-LAVENDER, *STATICE LIMONIUM. Nat. Ord., Plumbaginaceæ.*—Calyx tubular, expanded at top; five-lobed; dry and membranaceous. Corolla of five petals, united at their bases, and carrying the stamens; petals a bluish purple. Stamens five. Ovary single, one cell. Styles and stigmas five. A small bract below each flower. Inflorescence unilateral, spikes forming paniculate, corymbose masses of blossom. Flower-stem erect, freely branching, leafless. Leaves radical, obovate, lanceolate, on long stalks; dark green, glossy, thick in texture. — Salt marshes and mud-covered shores. July, August, September. Perennial.

PRICKLY-HEADED POPPY, *PAPAVER ARGEMONE. Nat. Ord., Papaveraceæ.* — Calyx of two sepals, falling off on flowering. Corolla of four petals; pale scarlet, and often with a dark spot at base. Stamens very numerous, distinct, dark in colour. Ovary one-celled. Stigma rayed, sessile. Fruit a capsule, oblong, having several short, bristly hairs, especially on upper half. Leaves alternate, pinnatifid. The whole plant somewhat hairy.—Corn-fields and waste ground. May, June, July. Annual.

COMMON MALLOW, *MALVA SYLVESTRIS. Nat. Ord., Malvaceæ.*—Calyx five-cleft; and a three-leaved involucre. Corolla of five petals, regular, obcordate; purplish-red, with darker veins. Flowers clustering at axils. Stamens numerous, monadelphous. Carpels numerous, arranged in ring, single-seeded. Style much divided. Leaves alternate, stipulate, stalked, orbicular, deeply lobed, serrate. Stem erect, branching, hairy.—Roadsides, wastes, and rubbish-heaps. June, July, August. Perennial.

AGRIMONY, *AGRIMONIA EUPATORIA. Nat. Ord., Rosaceæ.*—Calyx furrowed, turbinate, hard, covered at top with hooked and rigid hairs; cleft into five. Corolla of five yellow petals inserted on calyx. Inflorescence a spike, a three-cleft bract at the base of each calyx; after flowering calyx is turned downwards, and becomes more bristly. Stamens few. Style two-cleft. Stem erect, slightly branched, clothed with soft hairs. Leaves interruptedly pinnate, deeply serrate; upper leaves having fewer and smaller leaflets than the lower; harsh in texture, hairy.—Roadsides and waste places. June, July. Perennial.

WOOD-VETCH, *VICIA SYLVATICA. Nat. Ord., Leguminosæ.*—Calyx gibbous at base. Corolla papilionaceous; white, standard veined with violet. Stamens diadelphous, nine together and one separate. Ovary one-celled. Style one, pubescent; stigma one. Flowers in long racemes. Legume one-celled, two-valved, several-seeded. Leaves alternate, pinnate; six to ten pairs of leaflets, the common petiole ending in a long and branching tendril; leaflets oblong or ovate, and notched at top. Stipules deeply cut. Stem long, weak, climbing by aid of the tendrils.—Open woods in hilly and mountainous districts. June, July, August. Perennial.

CORN SOW-THISTLE, *SONCHUS ARVENSIS. Nat. Ord., Compositæ.*—Florets all ligulate and perfect, homochromous. Stamens five; anthers syngenesious. Ovary one. Style one, sheathed by the anther-tube, branched; stigmas forming two rows along the inner surfaces of the branches of the style. Flower-heads large, bright yellow, paniculate. Achene compressed, striated, beakless. Pappus soft and silky, white. Peduncles and involucre glandulose-hispid. Leaves long, pinnatifid; upper leaves clasping the stem; lower leaves stalked; runcinate, all serrate. Root-stock large, creeping.—Corn-fields. August, September. Perennial.

MUSK-MALLOW, *MALVA MOSCHATA. Nat. Ord., Malvaceæ.*—Calyx divided into five broad lobes; a three-leaved involucre.

Petals five, regular, twisted in bud, large, rose-coloured, jagged and concave on outer edge. Flowers on peduncles from axils of the upper leaves, clustering. Stamens indefinite, monadelphous. Ovary one. Stigmas several; style-branches numerous. Fruit a ring of carpels. Stipules simple. Upper leaves deeply divided into three or five wedge-shaped segments, which are again freely subdivided and lobed; lower leaves orbicular, or reniform with broad lobes, serrate. Stem erect, slightly branching; the whole plant hairy.—Hedge-banks and pastures. July, August. Perennial.

AUTUMNAL HAWK-BIT, *APARGIA AUTUMNALIS.* ***Nat. Ord.,*** *Compositæ.*—Florets all ligulate and perfect, bright yellow. Stamens five, their anthers syngenesious. Receptacle naked. Involucre unequally imbricated, bracts closely appressed, tapering. Pappus feathery, without bristles; brown. Summit of peduncle enlarged. Achene beaked. Flower-stems erect, wiry, branching, bearing single flower-heads, slightly hairy. Leaves long, narrow, pinnatifid, lobed.—Meadows and banks. July, August, September. Perennial.

SPEAR-PLUME THISTLE, *CARDUUS (OR CNICUS) LANCEOLATUS.* ***Nat. Ord.,*** *Compositæ.* All the corollas tubular, five-left, homogamous; purple. Stamens five, syngenesious anthers. Ovary one. Style one, sheathed by tube of anthers, branched; stigmas in rows on the style branches. Receptacle bristly. Achenes compressed, glabrous. Pappus plumose, sessile, equal. Involucre imbricated, ovate, scales spreading, prickly. Leaves decurrent, pinnatifid, short lateral lobes and longer terminal, all ending in stiff prickle; under surface grey and cottony. Flower-heads few, standing singly, conspicuous. Stem tall, stout, winged, prickly.—Waysides, hedges, pastures. July, August, September. Biennial.

GREATER CELANDINE, *CHELIDONIUM MAJUS.* ***Nat. Ord.,*** *Papaveraceæ.*—Calyx of two sepals, falling away on expansion of flower. Petals four, oval, bright yellow, crumpled. Stamens numerous. Stigma two-lobed, small. Ovary linear. Pod long and narrow, opening in two valves from the base. Seeds crested. Flowers in umbels on long stalks. Stem and leaves slightly hairy, full of a yellow and very acrid juice: stems brittle. Leaves pinnate, segments ovate, decurrent, coarsely lobed, crenate.—Waste ground and hedge-banks. May, June, July, August. Perennial.

SHINING CRANE'S-BILL, *GERANIUM LUCIDUM.* ***Nat. Ord.,*** *Geraniaceæ.*—Calyx angular, pyramidal, of five sepals. Petals

five, clawed, small; delicate pink. Peduncles two-flowered. Stamens ten—five long, five short; anthers conspicuous, bright yellow. Styles five. Ovary five-lobed, five-celled. Fruit with five lobes, the carpels arranged round central axis, curling upwards when ripening; a long beak. Leaves orbicular, palmately lobed, lobes obtusely notched, on long stalks, opposite, very glossy, often (like the stems) turning a bright red. Stems spreading, glossy, swelling at the joints, brittle.—Rocks, old walls. May, June, July, August. Annual.

RAGGED ROBIN, *LYCHNIS FLOS-CUCULI. Nat. Ord., Caryophyllaceæ.*—Calyx tubular, ribbed, monophyllous, five teeth, brownish-red. Corolla regular, of five petals, very deeply cut into lobes; clawed appendage at base of limb. Petals and stamens hypogynous. Flowers in loose terminal panicle. Stamens ten. Styles five. Ovary one. Capsule stalked, globular, opening by five teeth. Seeds numerous. Leaves few, linear-lanceolate, entire, opposite, exstipulate. Stems erect, slender, swelling at nodes.—Damp meadows, sides of water-courses. May, June. Perennial.

WATER-RAGWORT, *SENECIO AQUATICUS. Nat. Ord., Compositæ.*—Involucre hemispherical, bracts linear. Florets of the ray spreading and conspicuous, bright yellow, ligulate, often rolled back. All florets perfect. Stamens five, having their anthers syngenesious and without bristles at base. Style one, little longer than corolla, sheathed by anther-tube; stigmas in two rows on bifid style. Flower-heads large, on long stalks, loosely corymbose. Achenes terete, glabrous. Pappus pilose. Leaves lyrate, pinnatifid, serrate, the lower ones undivided; alternate. Stems herbaceous, freely branching.—Damp meadows, sides of water-courses. July, August. Perennial.

NIPPLEWORT, *LAPSANA COMMUNIS. Nat. Ord., Compositæ.*—All the florets ligulate and perfect, rather pale yellow, small. Stamens five, their anthers syngenesious. Ovary one. Style one, sheathed by tube of anthers; stigmas in two rows on bifid style. Fruit an achene, slightly compressed, striate. Pappus wanting. Receptacle naked. The involucre small, of about eight or nine nearly equal scales arranged in a single row, and a few much smaller at base, angular. Inflorescence loosely paniculate or corymbose. Leaves few, thin in texture; upper ones small, narrow, sessile, entire or slightly toothed; lower ones larger, slightly lobed, stalked, coarsely serrate, lyrate; all somewhat hairy. Stems erect, stiff, slightly branching.—Waste ground and gardens. July, August, September. Annual.

CORN-COCKLE, *AGROSTEMMA GITHAGO.* ***Nat. Ord.,*** ***Caryophyllaceæ.***—Calyx tubular, monophyllous, the five linear lobes projecting very conspicuously beyond the corolla; coriaceous, deeply furrowed, hairy. Corolla regular; petals large, broad, undivided, purplish-red, without scales, clawed. Flowers on long peduncles, growing singly from axils of leaves. Stamens ten. Petals and stamens hypogynous. Ovary one. Styles five. Capsule one-celled, opening in five teeth. Leaves opposite, entire, narrow, hairy. Stems tall, erect, very slightly branching, hairy, swollen at nodes.—Corn-fields. June, July, August. Perennial.

YELLOW DEAD-NETTLE, *GALEOBDOLON LUTEUM.* ***Nat. Ord., Labiatæ.***—Calyx tubular, campanulate, five-cleft. Corolla monopetalous, hypogynous, irregular, bright yellow; upper lip long and arching, lower lip divided into three nearly equal segments, spotted with orange. Stamens four, didynamous, longer than tube of corolla; two longer than the other two; anthers glabrous. Ovary one, four-lobed. Stigma two-lobed. Achenes four, truncate at end, three-angled. Stems hairy, square. Leaves in pairs, ovate-acuminate, large and bold serrations, on petioles. Flowers in whorls in the axils of the leaves.—Woods and shady hedgerows. April, May, June. Perennial.

STITCHWORT, *STELLARIA HOLOSTEA.* ***Nat. Ord., Caryophyllaceæ.***—Calyx of five petals, narrow and very deeply cut. Corolla regular; petals five, white, deeply cloven. Stamens ten, inserted on fleshy disk; anthers large and conspicuous, opening longitudinally. Ovary one, capsule one-celled, sessile. Seeds numerous. Inflorescence paniculate, numerous leafy bracts. Leaves opposite, entire, exstipulate, lanceolate, sessile, ciliate. Stem brittle at nodes, four-angled. Creeping root-stock.—Hedges and woods. April, May, June. Perennial.

BRAMBLE, *RUBUS FRUTICOSUS.* ***Nat. Ord., Rosaceæ.*** Calyx five-lobed, free. Petals five, crumpled, perigynous, equal; lilac-pink. Stamens numerous, perigynous; anthers two-celled. Style short. Fruit an aggregation of succulent carpels round the dry receptacle, purplish-black, without bloom. Inflorescence paniculate. Stipules linear. Leaves of three or five leaflets, large, coarse, the leaflets ovate, serrate, downy beneath, veins prominent, midribs and stalks with small hook-like prickles. Stem long, arching, rooting, five-angled, armed with large prickles.—Hedges, commons, and thickets. July, August. Perennial.

HEART'S-EASE, or PANSY, *VIOLA TRICOLOR. Nat. Ord., Violaceæ.*—Calyx of five sepals, produced at base. Petals five, unequal, the lowest produced into a spur; very variable in colour. Stamens five, filaments very short; anthers connate, two of them spurred, on inner broad surface of filaments. Style single, clavate; stigma large, capitate. Ovary one-celled, with three parietal placentas. Fruit capsular, three-valved. Stipules very large, foliaceous, deeply divided into linear lobes, crenate. Leaves oblong, deeply crenate. Stem weak, angled, branching freely.—Cultivated fields and waste ground. May, June, July, August, September. Annual or biennial. Very variable.

YARROW, *ACHILLEA MILLEFOLIUM. Nat. Ord., Compositæ.*—Outer florets few in number, with an obcordate ray. Central florets tubular; all either white or rose-coloured. Stamens five, syngenesious; anthers linear, and united in a sheath round the style. Style one, branched at top, and having stigmas on the inner surface of the upper part. Ovary one. Fruit an achene, without pappus. Receptacle flat. Involucre ovoid, imbricate. Inflorescence dense, corymbose. Stems erect, furrowed, slightly branched. Leaves deeply cut into very numerous bipinnatifid linear segments.—Roadsides, meadows, rubbish-heaps. June, July, August, September. Perennial.

SNOWDROP, *GALANTHUS NIVALIS. Nat. Ord., Amaryllidaceæ.*—Perianth in six divisions, the three inner being shorter than the alternate three; outer ones white, oval, spreading; inner ones pendant, emarginate, white tipped with green. All the segments quite distinct down to the ovary. Stamens six; filaments very short, inserted at the base of the segments; anthers opening at the top. Style one; stigma three-lobed. Ovary three-celled. Fruit a capsule, three-valved, numerous seeds. Flowers spring from a spathe, singly. Leaves radical, two, linear, parallel-veined, short and erect at flowering-season, but afterwards growing considerably, and becoming drooping. Bulbous root.—Woods, orchards, hedges. February, March. Perennial.

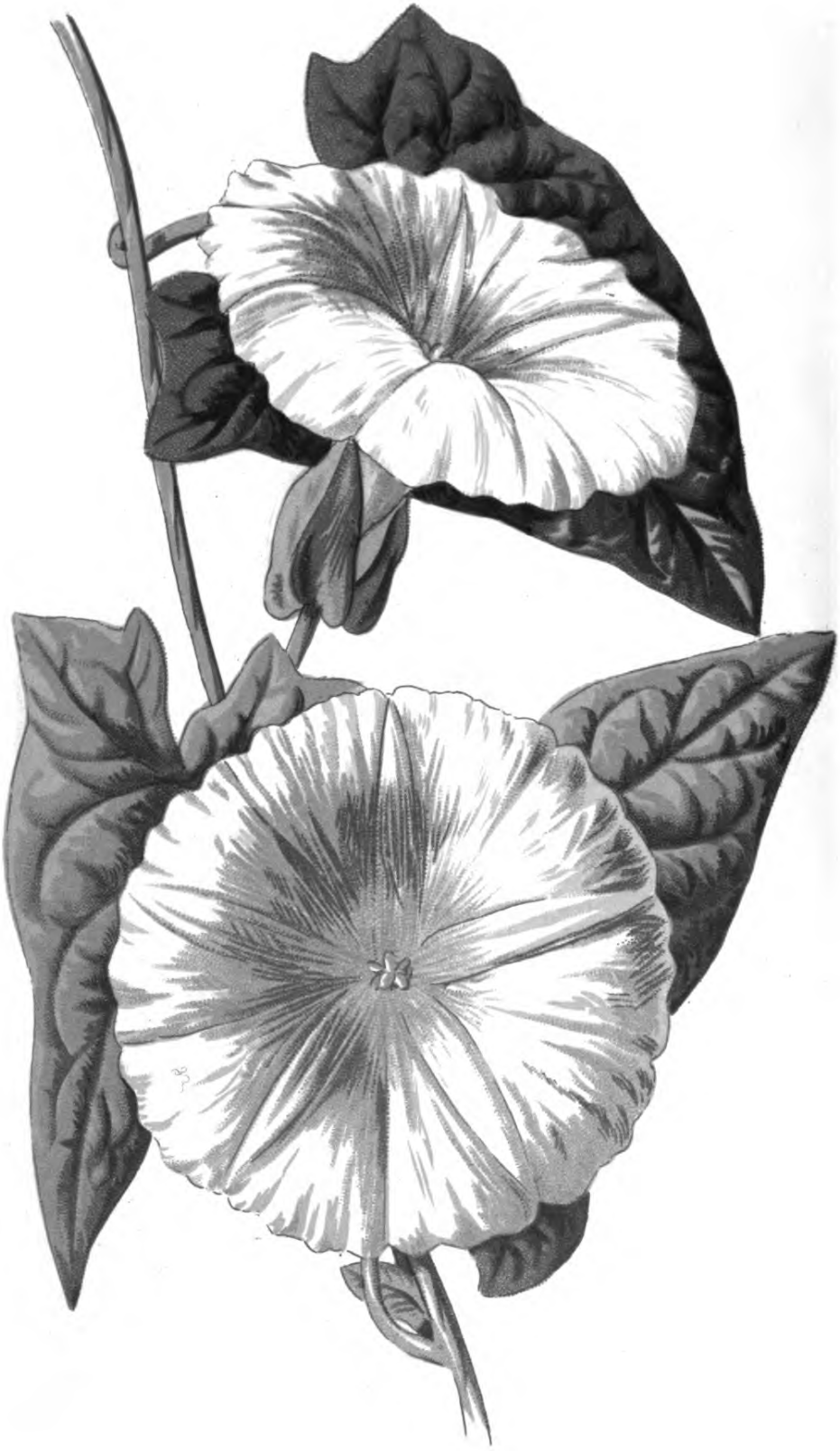
SNOWFLAKE, *LEUCOJUM ÆSTIVUM. Nat. Ord., Amaryllidaceæ.*—Perianth in six nearly equal segments, campanulate, drooping, pure white tipped with green, ovate, broad. Stamens six, inserted in base of segments; anthers large, opening inwards near the apex. Style one, club-shaped; stigma three-lobed. Ovary three-celled. Fruit a capsule. Scape flattened in cross-section. Inflorescence, four or five flowers springing from a spathe. Leaves long, linear, parallel-

veined, all radical, fleshy, keeled.—Root bulbous. Moist meadows. April, May. Perennial.

COMMON AVENS, *GEUM URBANUM, Nat. Ord., Rosaceæ.* Calyx of ten segments, alternate and outer ones very small. Corolla of five equal spreading petals, perigynous, small; bright yellow. Stamens numerous, perigynous; anthers two-celled. Styles terminal. Carpels numerous, in a compact head, ending in long awns, which are hooked at tip. Stem-leaves sessile, ternate; radical leaves stalked, interruptedly pinnate; all coarsely serrate. Stem erect, slightly branching, stipules large, foliaceous, serrate. Root-stock short, slightly creeping, aromatic.—Hedges, woods, shady banks. June, July, August. Perennial.

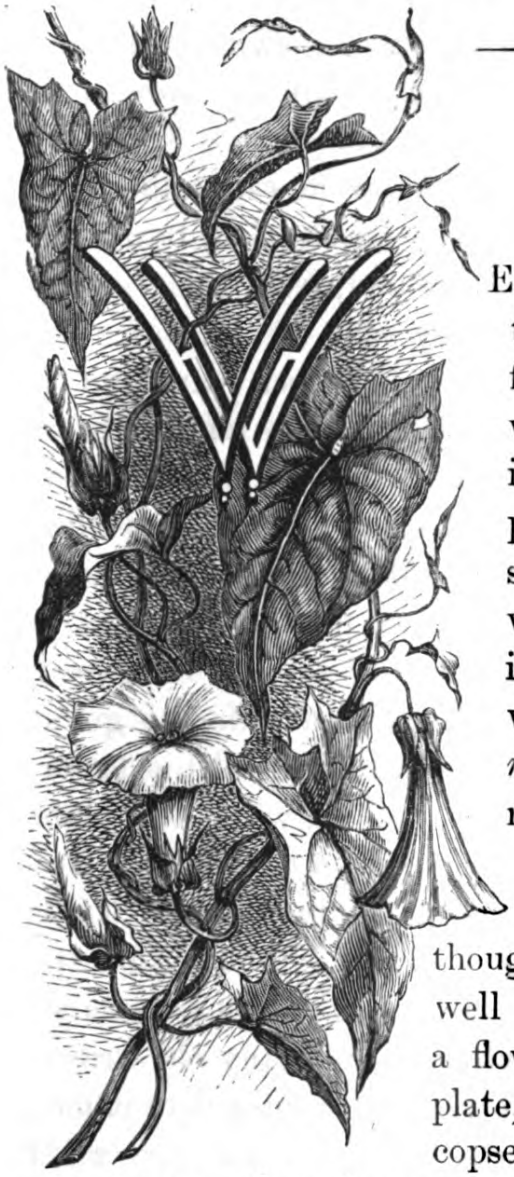
LARGER KNAPWEED, *CENTAUREA SCABIOSA. Nat. Ord., Compositæ.* Florets of the disk perfect; florets of the ray large, funnel-shaped, spreading, irregular, neuter; all the florets purple. Involucre large, ovate, imbricated, the scales green, with a very conspicuous black fringe. Receptacle bristly. Stamens five; anthers large, purple, syngenesious. Style one, sheathed by the anthers, filiform, bifid at apex; stigmas on inner surface of bifid style. Achenes glabrous; short pappus. Stem strong, wiry, freely branching. Leaves long, deeply pinnatifid; lobes lanceolate, coarsely serrate.—Roadsides and poor pastures. July, August, September. Perennial.

COMMON SOW-THISTLE, *SONCHUS OLERACEUS. Nat. Ord., Compositæ.*—Florets all ligulate, perfect; pale yellow. Receptacle naked. Involucre imbricated with two or more rows of unequal scales, tumid, drum-shaped before flowering, conical afterwards, glabrous. Stamens five; anthers syngenesious. Ovary one. Style one, sheathed by the anthers, filiform, bifid at apex; stigmas on inner surface of bifid style. Achene much compressed, beakless. Pappus soft, filiform. Inflorescence a corymbose panicle. Stems thick, hollow, tall. Lower leaves pinnatifid, with large terminal lobe; upper leaves narrow, lanceolate, slightly lobed, stalkless, clasping stem, all serrate. A variable plant; very freely seeding.—Gardens, rubbish-heaps, waste ground. June, July, August. Annual.



BINDWEED.

FAMILIAR WILD FLOWERS.



THE BINDWEED.

Calystegia sepium. Nat. Ord., Convolvulaceæ.

WE have already given some details of the growth, &c., of the field convolvulus, or small bindweed, the subject of a former illustration. In the present plate we have represented the second common species of convolvulus, or bindweed. There is a third species, the sea convolvulus—the *Calystegia Soldanella* of the botanist—that is not at all rare on sandy shores. It has large rose-coloured flowers. It is, however, though common, naturally not so well known to most persons as a flower like that on the present plate, which is found in almost every copse and hedge, and on almost every piece of waste ground throughout the country. The bindweed is abundant throughout England and Ireland, but

appears to be of but local occurrence in Scotland. Like the common species already referred to, it is, in spite of its delicate beauty, a great nuisance to the farmer and gardener, as its roots are very long and fragile, while its twining stems travel in great masses for many feet over plants which, in the gardener's eyes, are of considerably higher value. The leaves of the bindweed are large, but somewhat thin and delicate in texture; like the foliage of all the species of the genus, they are found singly on the stem. From the axil of the leaf springs the peduncle, or flower-stalk; each stalk, as may be clearly seen in the illustration, bears but one blossom. The flowers are large and, from their snowy whiteness, very conspicuous. They vary at times, we are told, to a slight shade of pink; but such variation is exceedingly uncommon. The plant has been familiar to us for over a quarter of a century, and we have never found it bearing other than white blossoms of a perfectly unsullied purity. The calyx is completely hidden by the two large heart-shaped bracts that enclose it—a feature that has to some botanists suggested the name of hooded bindweed, and which has led to its being placed in a different genus to the smaller bindweed, or field convolvulus. This latter, we have seen, is the *Convolvulus arvensis*, while the plant we now illustrate is, botanically, the *Calystegia sepium*—the generic name being derived from two Greek words signifying "beautiful covering"—a name bestowed on the plant from these large bracteal envelopes of the true calyx which is within them. The plant is by many old writers called the hedge-bell, a descriptive and appropriate name; it is often, too, in the works of these authors called the withwind, a name still in use in many country districts, and which refers to the lightness of its large

graceful flowers as they wave on their long stems at every breeze. The specific name merely refers to one of its favourite spots of growth, being derived from the Latin word for hedge.

During a recent examination of some students in botany, the meaning of this specific title came into question. One candidate boldly asserted in his paper that it meant seven; while another, recalling to his mind the pure white of the blossoms, thought he saw therein the clue to the mystery, declaring that it was a freak of the botanists, *sepium* being evidently derived from sepia, a dark brown colour approaching black. The botanists are, however, in this case, honourably acquitted of endeavouring to trifle with our feelings by such ponderous joking, *sepes*, a hedge, being, as we have seen, the root from which the word is derived.

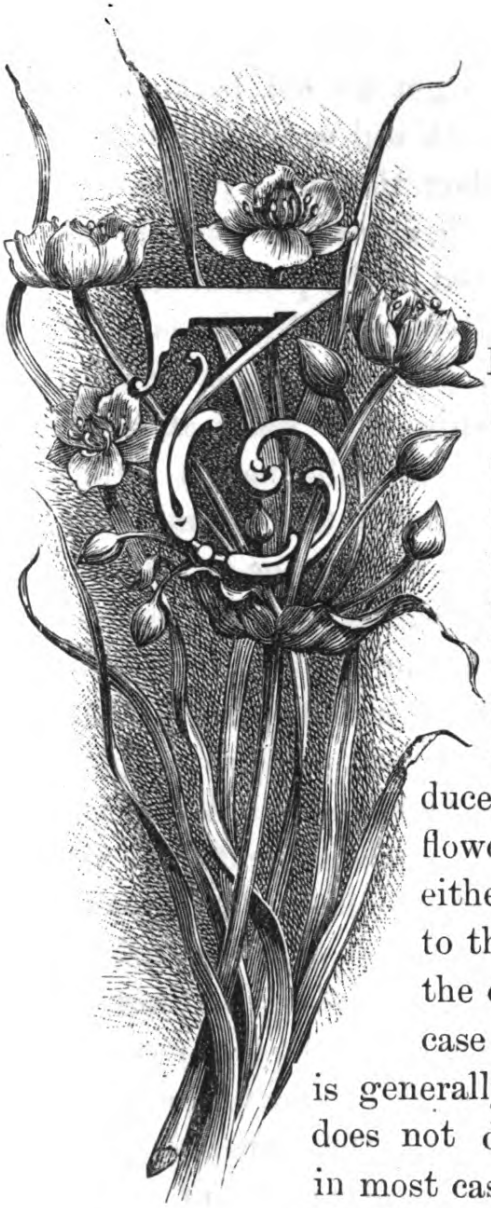
The order to which the plant belongs contains many beautiful and useful species. The plants that figure in the seedsman's catalogues as the *Convolvulus major* and the *Convolvulus minor* and that are such very popular flowers in most gardens, may very well be instanced as examples of the beauty of the plants of the order; while many of the tropical species produce drugs of great medicinal value. The *C. major* is, according to the more rigid nomenclature of the botanist, the *Ipomæa purpurea*. Like all the other species, its blossoms expand beneath the life-giving rays of the sun, and remain closed when its beams are withheld. The plant is widely spread over a large area of the tropical and sub-tropical regions, and thrives well even in these northern latitudes. The smaller garden convolvulus, which with its deep blue flowers makes so gay a show in the garden, is found in a wild

state so near us as the south of Europe, for it is a plant of the Mediterranean flora.

The *Ipomæa purga* supplies the jalap of the medical prescriptions. Though a native of Mexico, the plant is freely grown out of doors, both on the continent of Europe and in the garden of the Society of Apothecaries in England. Like the small bindweed, its peduncles are two-flowered; and of these one expands before the other. The corolla is crimson in colour. The root of the plant is the part of officinal value.

Scammony, another drug in the *Materia Medica*, is a gummy or resinous exudation from the roots of the *Convolvulus scammonia*, a species having its flowers of a very delicate tint of sulphur yellow. Several other species yield useful products.

FLOWERING RUSH.



THE FLOWERING-RUSH.

Butomus umbellatus. *Nat. Ord.*, *Butomaceæ.*

THE beautiful plant figured in the present plate is so unlike any other, that there can be no difficulty in its identification when seen. It grows freely over the whole of England and Ireland, but is only found in some few situations in Scotland, and those only where it has been introduced by the hand of man. The flowering-rush is ordinarily found either in ponds or canals; it appears to thrive best in still water, or where the current is very slight, as in the case of lock-guarded streams, and it is generally found near the banks, as it does not do well in deep water; though in most cases, as we know from experience, he who will gather its beautiful blossoms must not mind a little wading for them. As the flower is a perennial, it will, if once introduced into a lake or other suitable piece of water, continue to throw up its bunches of pink flowers year after year without any

further trouble on the part of the possessor. The best way, we may just remark in passing, to plant such flowers as the flowering-rush, the water-lily, or any other aquatic species we may wish to rear, is to get an old basket, not too coarse in its webbing, fill it with soil well saturated in water, and place the roots of the plant therein. The basket should then be either weighted with stones, or surrounded with stones built around it in the bed of the pond or stream, to prevent its being shifted or overturned by the current or any other disturbing influence. A sediment is quickly deposited around; the plant speedily finds itself at home in its new quarters, and in a short time the basket either falls to pieces, or at least so far yields to the unkindly conditions in which it is placed as to be little or no impediment to the spreading roots. The basket should be rather a fine one, or else the dirt in which the plant is set will be washed out, and the trouble will then all have been taken in vain. Many of the London florists and seedsmen supply the roots of the white water-lily, but whether the flowering-rush is also procurable at those establishments we are unable to say; a little trouble at the beginning would, however, be soon forgotten in the subsequent pleasure, if the experiment turned out well. As short a time as possible should elapse between the removal of any water plant from its old home to its new one; and where some little time must of necessity intervene, the roots should be kept damp, either by immersion in some convenient vessel, or by being surrounded by damp moss, until they can be replanted.

All the leaves of the flowering-rush are radical, that is to say, they spring directly from the thick rootstock of the plant. Though broad and sheath-like at their bases,

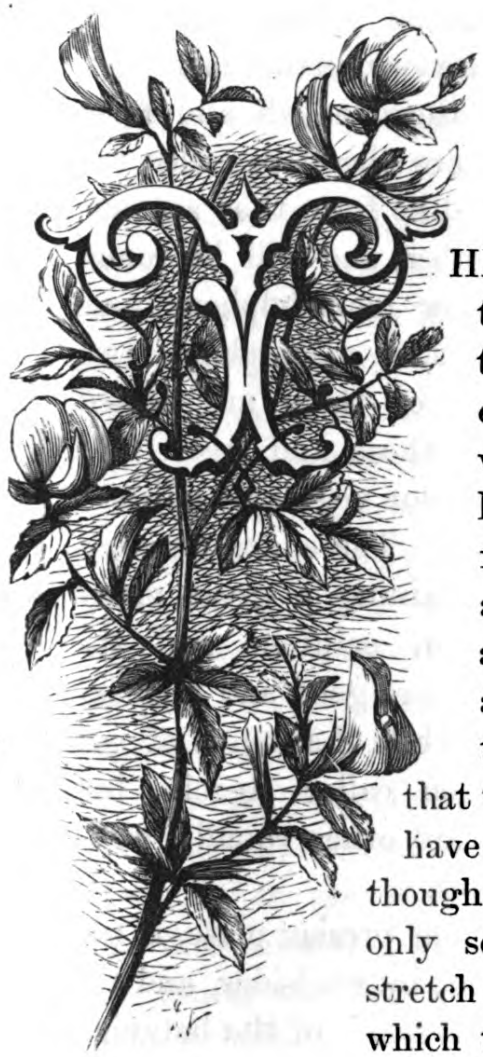
they are in general character long and narrow, and when cut across their length are seen to be triangular in form. It will readily be noticed that the stems or leaves of almost all water-plants are either very flattened in form or else triangular, as these two forms offer least resistance to the water. When the leaves are flattened, the edge only is presented to the current, which glides harmlessly by their broad sides; while, in the case of triangular leaves, the apex of one angle will be found in like manner pointed in the direction from which the stream flows. On the same principle, the engineer presents an angle to the current in the piers of his bridges, to break its force, and to offer less resistance to its steady flow. The leaves of aquatic plants are, from a similar reason, very simple in form, as they thus offer less opposition to the passage of the water than they would do if composed of large and spreading lobes. All floating leaves are of this character, while submerged leaves are ordinarily very finely cut, almost thread-like in form, as may be seen in the leaves of the water-buttercup, a plant we have already represented. It is clearly the best form for the situation in which it is found, as it turns readily with the current, and offers but little surface for the stream to act upon.

The perianth of the flowering-rush is composed of six parts. The flowers grow in an umbel, each flower being borne on a pedicel some three or four inches in length. These pedicels spread boldly out in all directions, like the ribs of a fan, and are often twenty or more in number. The example we have figured was, from the exigencies of space at command, necessarily a small one. At the base of the umbel are three thin and papery-looking bracts. The scapes, or flowering-stalks, that bear these umbels of

blossoms are longer than the leaves, often three to four feet high, and are entirely leafless.

The botanical name of the flowering-rush is the *Butomus umbellatus*, a name bestowed on the plant by Linnæus, and which it has borne ever since. The plant, unlike many that have come before us, is very distinctive, and could not possibly, when in blossom, be mistaken for anything else; and it is also very constant in itself, and does not vary from the well-recognised type-form; there has, therefore, been no question of species or sub-species arising to affect the original name. The specific name clearly refers to its umbellate inflorescence, while the generic name is compounded of two Greek words signifying "ox," and "to cut," because its sharp-edged leaves offer so little temptation to cattle to meddle with them, when the heat of summer has driven the herd to stand in the cool stream beneath some far-spreading tree.

REST-HARROW.



THE REST-HARROW.

Ononis arvensis. Nat. Ord., Leguminosæ.

THE rest-harrow, like the bush-vetch, the subject of a previous illustration, is one of the numerous examples that may be met with of what are termed botanically papilionaceous flowers. The term is derived from the Latin word *papilio*, a butterfly, since the blossoms of all these plants have an upright and often gaily-coloured petal at the upper portion of each flower that to some people, at least, appears to have suggested one of these insects, though probably most of our readers will only see in this a very considerable stretch of the imagination. The order to which the rest-harrow belongs is a very natural one, as the plants composing it possess several marked characteristics in common that unite them to each other and sever them from other flowers. All the British species have flowers of the butterfly type, and in these the sepals are always so united as to form a calyx that seems like a deep cup; from this springs the corolla, very irregular in form, and consisting of five petals. The upper one of these in the expanded flower,

and that which in the bud covers all the others, is named the standard; it is generally by far the largest of the five. Beneath this spring two lateral forms, ordinarily called wings. Within these, again, are two smaller members, which often unite in a portion of their length and form a V-shaped base to the flower, and are therefore called the keel of the blossom, from the boat-like form they assume. The stamens are always ten in number, and will be found on dissecting the flower to be either monadelphous (one brotherhood) all united into one mass, or diadelphous (two brotherhoods), in which case nine of them are united together while the tenth is above these and free. The fruit is a pod; the peas and beans of our vegetable gardens are a ready illustration of the form. There are nineteen English genera, many of them containing a great many distinct species. The furze, broom, sainfoin, and the different kinds of vetches and clover are good and familiar examples amongst our wild plants, while the lupins of our flower gardens, and the trees often called Acacia, but which are more properly Robinia, are other equally well-known and easily accessible examples.

The rest-harrow, the subject of our present plate, is not uncommonly met with on poor land, by roadsides, and the borders of fields. It is the *Ononis arvensis* of the botanist. It is a plant that is subject to a considerable variation of form; in growth sometimes erect, sometimes weak and trailing; very variable, too, in the spinous character of the stem, as in some plants this is a marked feature, while others are almost unarmed.

The blossoms are generally a delicate rose colour, but may at times be found pure white. On the strength of some of the more marked of these differences, some

botanists have established a second species, but there seems but little justification for doing so, as the differences, even in their extreme form are but slight after all, and intermediate forms between the extremes that have been taken as specific forms are not at all uncommonly found. A true second species is the small rest-harrow, the *Ononis reclinata ;* it is, however, an exceedingly rare species here, though very common in many parts of Europe, and need not therefore claim more than this passing remark.

The flowers of the rest-harrow rise singly from the axils of the leaves, a somewhat peculiar feature, as in most of the pea-flowers they are grouped together either into globular heads, as in the clover, or arranged in long racemes as in the wood-vetch. The stamens are monadelphous; that is to say, they form one united brotherhood. The leaves are either simple, or, more ordinarily, composed of three leaflets, two laterals and a terminal member, as in the leaf of the common white clover. The pod is very small, and hardly protrudes beyond the enclosing calyx.

The rest-harrow derives its generic name from the Greek word for an ass, because it is said that the plant is eaten by that animal. The idea is very far-fetched, for even assuming the fact to be so, there are many other plants which, from their greater abundance and known attractiveness to the asinine palate, have a far greater claim to the name. We, however, go so far as to dispute the fact *in toto*, for, as our home circle includes one of those useful and much-abused quadrupeds, we several times attempted to get the plant tasted, but though proffered time after time with every blandishment, it was merely sniffed at and declined. It owes its common English name to its toughness, from a belief that when, during the preparation of the field, the

harrow arrives at its wiry and rooting stems it must perforce suffer a check that causes it to rest awhile before the obstacle is overcome. It is only fair here to observe that in some old books it is called the wrest-harrow; the idea involved is, however, much the same—that the toughness of its stems wrests the harrow from its course. It is also called cammock—a name that we cannot at all explain—and wild liquorice. This latter is a book name, not one in popular use. The true liquorice (*Glycyrrhiza glabra*) belongs to the same order; it has pale lilac flowers. It is a native of the south of Europe, but grows freely in the herb-gardens at Mitcham and elsewhere in England.

RED-BERRIED BRYONY.

THE RED-BERRIED BRYONY.

Bryonia dioica. Nat. Ord., Cucurbitaceæ.

BRYONY in popular parlance is a name bestowed equally on two very distinct species—the plant we have here figured, and a second plant which appears on another of our plates. The only point in common is found in the fact that both are hedge-creepers; in every other respect they are completely unlike; there is no botanical affinity, no outward semblance. The present plant is sometimes called the white bryony, so as to make a more emphatic distinction between it and the other plant referred to—the black bryony. The name is not, however, at all a good one, for while the berries of the black bryony are, from their deep purple-black, a sufficient justification of its name, there is no especial propriety in the name white bryony as applied to the present species. Its ordinary name, that with which we head our remarks, is in every way the most expressive. It is also called wild vine, wood-vine, or hedge-vine by old writers, and these names, all pointing to its resemblance to the

true vine of our gardens and hot-houses, are not by any means bad ones, as its large leaves, insignificant flowers, tendrils, and clusters of red berries, are all features in which it more or less resembles the grape-vine.

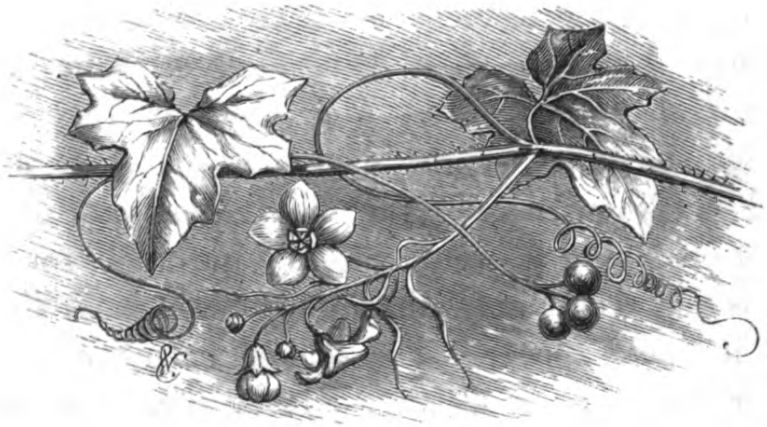
The root of the red-berried bryony is tuberous in form, white, and very large, often branched or forked. The root-stock is perennial. The branches thrown off die down annually; they grow with great rapidity and stretch to a long distance, enfolding the hedge over which they climb in a mass of beautiful foliage. These stems branch a good deal, are very rough in texture, and angular in section; they are, however, very weak, and need almost continuous support. On breaking them they are found to be full of an acrid and very ill-smelling juice. The tendrils with which the plant is liberally provided as a means of attachment to sturdier neighbours are either simple or branched, of a considerable length, and ordinarily wound up tightly in a spiral form, fold after fold wrapping round any convenient object within reach, and giving so firm a hold that nothing but downright violence will suffice to part them from their point of attachment. The flowers are dicœcious, *i.e.*, the male and female blossoms are on different plants. In most plants, we need scarcely say, each flower is complete in itself. If we pick a poppy, for example, we find a central organ, or stigma, surrounded by its ring of stamens, and any one flower selected from such plant will show all the floral parts or organs. In the bryony all the flowers upon a certain given plant will either be pistil-bearing solely, or they will all be exclusively stamen-bearing. Both kinds of blossom are of a pale and rather sickly shade of green, veined over rather prominently with lines of dark green in a kind of rough reticulation. The male, or staminiferous,

flowers grow several together in a racemose inflorescence; the female, or pistilliferous, flowers ordinarily grow in twos or threes. These latter are much smaller, and of a somewhat different form from the others. In each case the calyx and corolla are both divided into five parts. The foliage is a rich green, rather coarse in appearance, and very rough to the touch. The forms of the leaves are, however, very graceful, and rendered the plant one of the favourite subjects of the carver in mediæval times. It will be found introduced in many works of the Gothic period. The leaves are divided into five or seven large lobes, the central one being always considerably the largest, and there is a certain quaint angularity of form that is very pleasing. The berries, which will only be found on the plants having pistillate flowers, are first green, then yellow, next orange, and end by being a beautifully bright red. Berries of all these tints may be found at the same time in close companionship, and as the plant dies away as the berries ripen, long festoons of these brilliantly-coloured fruits may be met with hanging on what appears to be a thin brown line. The effect is very curious, and would be in no slight degree puzzling to any one who did not know more of the plant than such an opportunity of observing it would afford him. The red-berried bryony is very commonly distributed throughout England, though it would appear to be seldom or never met with in either Scotland or Ireland. It flowers from May to September.

The botanical name of the plant is the *Bryonia dioica*. The first of these names is derived from a Greek word signifying to shoot out, and is bestowed on the plant in allusion to the rapidity of its growth. The second, or specific,

name points to the dicœcious character of its blossoms. The red-berried bryony is not only the sole species indigenous to England of the genus, but this genus is the only one having a British representative in the order *Cucurbitaceæ*, an order that is chiefly tropical in its range. Most of the plants of the order are African in their habitat, but it includes such well-known cultivated species as the various forms of cucumber, gourd, melon, and pumpkin. Almost all the species abound in a bitter and laxative principle.

The berries of the bryony are poisonous, and although the plant has been at one time a good deal used in rustic medicinal practice, it is a dangerous thing to meddle with. Its violent and powerful action has caused it in France to receive the name of *Navet du diable*, a sufficiently expressive indication of the peril of having any dealings with it.



STORK'S-BILL.

THE STORK'S-BILL.

Erodium cicutarium. Nat. Ord., Geraniaceæ.

SAYING to heart the fact that comparisons are proverbially odious, and ordinarily very inadvisable, we think, nevertheless, we may be justified in saying that amongst the many beautiful little blossoms scattered around us few are more graceful and attractive than the stork's-bill. Whether we look at the beautiful richness of form of the foliage, a feature that is especially rich when the leaves are seen in a mass, or turn to the delicate colour and form of the blossom, or the quaint rigidity of the beak-like fruit—using the term simply as a convenient word to express that which follows the flower—all alike are equally attractive. The truth is, possibly, that a large number of our little plants are so pleasing in themselves, that almost any one that comes uppermost possesses many features that are interesting and beautiful to a lover of these lowly forms, and it is quite possible that had the subject before us been a primrose or herb-robert, a piece

of bugloss, or any other of fifty different flowers, we should have felt little difficulty in persuading ourselves, in full view of its charms, that, if not absolutely the most attractive of our plants, it was at least fully entitled to a place in the front rank.

The common stork's-bill, or *Erodium cicutarium*, as it is termed in the nomenclature of science, derives both its common and generic name from the likeness—a somewhat fanciful one, surely—of the long and pointed form of the fruit to the bill of a bird; hence, too, while the present species is called the stork's-bill, an allied genus is composed of plants that, from the great similarity in form of the corresponding part, are called crane's-bills. Of this latter we have figured the herb-robert crane's-bill and the meadow crane's-bill. The generic name of the crane's-bills is *Geranium*, a word derived from the Greek *geranos*, a crane, and in like manner the generic name of the present species, *Erodium*, is taken from the Greek word for a stork. The specific name (*cicutarium*) of the stork's-bill is derived from the Latin word for the hemlock plant, *cicuta*, and is bestowed on this plant from a certain resemblance between the forms of the leaves of the stork's-bill and those of the hemlock. The resemblance is, however, a somewhat superficial one, and points of difference are at once apparent on any real investigation and comparison. *Cicuta* is the classic name for the hemlock, not the scientific one; botanically it is the *Conium*, a name of very fanciful origin. The plant was thus named by Theophrastus from the Greek word for a cone or top, the whirling motion of which latter object was supposed to indicate something of the giddiness that seized those who were so imprudent as thoughtlessly to taste this

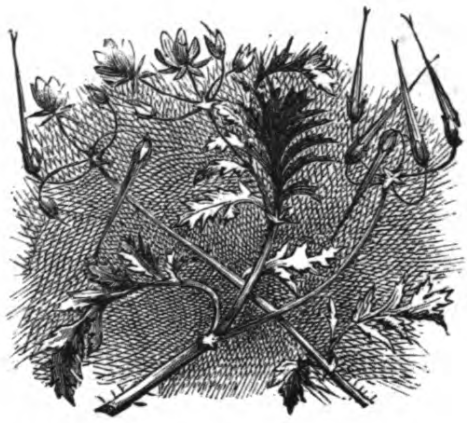
poisonous plant, or so unfortunate as to find in it their death penalty for treason to the State.

The stork's-bill is very generally distributed, though in some localities it is much more common than in others. It should be looked for on rather dry waste ground, or mingling with the crops in cultivated fields. A variety of the plant, that by some botanists has been classed as a separate species, is sometimes found near the sea-coast. When elevated to specific rank it is the *Erodium hirtum*. Many plants vary considerably from the type form when found in a maritime district. We are not ourselves acquainted with this variety, and can therefore express no opinion, but it is ordinarily regarded as but a variation from the type, and not of sufficient distinctness to be recognised as an independent species.

The stork's-bill flowers throughout the summer. The main stems are ordinarily about a foot in length, but as the general growth of the plant is not so erect as in many other species, it does not quite attain to that height, and sometimes the plant rises no more than six inches from the ground. From the free branching of the stems it is a somewhat bushy-looking herb. Most of the leaves spring directly from the root, and they are very deeply cut, and are borne on long stalks; those on the stems have shorter stalks than the radical leaves. Both stems and leaves are covered with short hairs. The flowers spring in an umbel from the summit of the flower-stalk, or peduncle. The flowers, though generally pink, are sometimes purple or white. The stamens are ten in number, but only five of these are truly developed the alternating forms being sterile and rudimentary.

The genus includes two other species, though these are

both rare. The musky stork's-bill, or *Erodium moschatum*, so-called from the strong musk-like odour of the foliage, is a much larger plant than the common species. The leaves are less finely divided, and the blossoms are of a bluish tint of purple. It is found on waste land, but is very seldom seen. The remaining species is the sea stork's-bill, or *E. maritimum*. In this the leaves are simple in form, the flowers growing singly or in pairs, and purple in colour. The whole plant is hairy. It is occasionally found on sandy sea-coasts, but it is only recorded from a few localities. It is a very small plant, and one that unless really searched for, would scarcely command attention, even if it caught the eye.



GREAT MULLEIN

THE MULLEIN.

Verbascum Thapsus. Nat. Ord., Scrophulariaceæ.

WANDERERS by the hedgerows in the early spring may frequently find a large tuft of leaves that bear a very considerable resemblance to those of the foxglove, and are only distinguishable from these by a slightly more woolly texture. We have more than once known the plant on the strength of this resemblance carefully dug up and carried off in triumph to the garden borders, to be summarily ejected at a later period. It is, however, rather hard on the mullein to treat it in this way because it is not something else, and we venture to say that if only the would-be possessor of a foxglove would allow the plant to develop its true and proper individuality he would have little cause to be dissatisfied. Its long line of yellow flowers would make a sufficiently striking ornament to the border or shrubbery to be in great measure at least an equivalent for the stately foxglove; we have in fact seen it freely intro-

duced in the flower-beds in one of the London parks. The mullein may be very commonly met with throughout Britain (except in the extreme north of Scotland) on hedge-banks, by roadsides, and other waste ground, and more particularly on gravel, sand, or chalk. It will ordinarily be found in flower during June, July, and August.

The plant figured in our illustration is the common, or great, mullein, the *Verbascum Thapsus* of the botanist. The name was bestowed on the genus and species by Linnæus. Six other species of mullein, though none of them as common as the present plant, may be met with in Britain. Several of these, indeed, are very local, and therefore hardly likely to come under the observation of many of our readers.

The generic name, we are told, is a corruption from an older form of the word, *Barbascum*, and this in turn is derived from the Latin *barba*, a beard—a word suggested, it is said, by the rough and shaggy nature of the plant. To ourselves, however, this derivation, even if it be the right one, does not appear very happy. The similitude is not altogether a good one, as the texture of the leaves could scarcely be called rough and shaggy. They are densely covered with long soft hairs, that give to the eye the appearance, and to the hand the feeling, of some rich velvet—a property that is far better expressed in its common English name, mullein, a word derived from the Latin *mollis*, soft. The specific name is said to be derived from Thapsus, a place in Africa, in the neighbourhood of which it was said to have been exceedingly common. This sounds exceedingly mythical, but it is certainly true that there was not only a town of that name in Sicily, mentioned both by Virgil and Ovid,

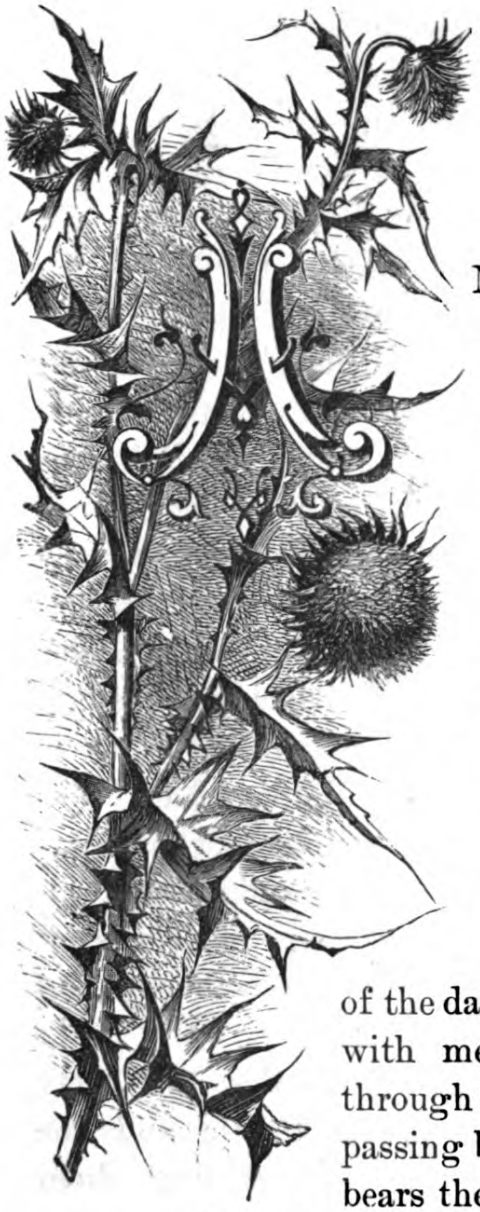
but another also in Byzacena, in Africa Propria, referred to by Livy. What authority the great Swedish botanist had for affixing this name to the mullein it is now impossible to say. The plant is common all over Europe, and if the name be really derived from one of these two sources, the less out-of-the-way place in Sicily would probably afford the origin. The mullein is in some parts of the country termed the high-taper, a name which is erroneously explained as arising from its resemblance to the tall candles which, in the mediæval and pre-Reformation days, formed a conspicuous part of the decking of the altar. In old books it is, however, spelled hig-taper, and the words mean really the tall and tapering plant that grows in the hedge. Another old English name, agg-leaf, is clearly very similar in general meaning—the big leafy plant of the hedge-row. *Hæge* or *haga* was the Anglo-Saxon word for hedge.

The common, or great, mullein is a biennial. It throws up in the second year a stem that is little if at all branched, and that attains to a height of some four or five feet. The leaves at the base of the stem are large and numerous, but become smaller as they ascend the stem. They are alternate in arrangement, broad and simple in form, outline a good deal waved, and their bases produced some distance down the stem, as in the comfrey and some few other plants. Both leaves and stem are thickly covered with the soft mass of hairs to which we have already referred. This downy covering was at one time used as a substitute for cotton for lamp-wicks; the plant is hence in some old books called candle-wick. The leaves, owing to this covering, are very thick to the touch. The flowers are densely packed together at the end of the

stem, the line of buds and blossoms being often a foot or more in length. The flowers are of a brilliant yellow, the corolla irregular in form. Three of the stamens have their filaments—the little thread-like parts that support the anthers, or heads—covered with whitish woolly hairs; the remaining two are somewhat longer and free from this woolly or hairy covering.

The mullein, like most other plants, was, in the Middle Ages, credited with very considerable curative powers. It was believed in the time of Gerarde, a great herbalist in Elizabeth's reign, that the mere carrying of the leaves about one's person, if they had been gathered when the sun was in Virgo and the moon in Aries, was a specific against the falling sickness. A small decoction of the root was used for cramps and convulsion. Toothache, too, was supposed to yield to its power. Distilled water prepared from the flowers was an antidote for gout. The dried flowers in like manner had their especial virtues, while the seed boiled in wine, by some potent influence drew forth thorns and splinters from the flesh. In many parts, both of Europe and Asia, a still more subtle influence, the power of driving away evil spirits, is ascribed to it.

NODDING THISTLE



THE NODDING THISTLE.

Carduus nutans. *Nat. Ord., Compositæ.*

ANY one who has been in the habit of observing the plants of any rural district through which he has been passing, or in which it may have been his lot to live, will scarcely have failed to notice not only how very numerous the thistles are everywhere, but also how considerable is the variety of form that may be noticed amongst them. Their commonness arises from the fact that each of the very numerous flower-heads they bear produces an enormous number of seeds, and these, like those of the dandelion or groundsel, are furnished with means that enable them to float through the air for long distances. Every passing breeze liberates them in scores, and bears them far and wide. It is therefore a most difficult class of plants to keep in check, and it is unfortunately not only the careless agriculturist himself who suffers through the choking of his crops by the vigorous

growth of these usurpers, but his apathy inflicts no less serious damage on his luckless neighbours. All such plants should be carefully cut down and removed before the seeds develop. In old times many severe laws were passed requiring all such things to be rigorously extirpated, and it would surely even now be no less an advantage to more painstaking and careful landholders, if some similar check were in force. There is in some country districts an old proverb, often quoted, "One year's seeding makes seven years of weeding;" and we recall to mind at this present time as we write, a small plot of ground near to us, that in the hands of a careless farmer has been allowed to produce a vast crop of hurtful plants that will make their influence felt all round the district for years to come. Thorns and thistles are by many good people regarded as a necessary curse, associated with the first fall from primeval innocence, but there is certainly no warrant for any listless folding of the hands. Undoubtedly they contribute their share to the necessity for labour, but good wholesome work is very far from being a curse. All possibility of evil lies in wait for the idle; a boundless possibility of blessing awaits those who follow the Divine law, and become in some humble but true sort fellow-workers of Those of whom it is written, "My Father worketh hitherto, and I work."

Amongst the numerous kinds of thistles that may readily be met with, the spear plume thistle and the present species are perhaps the finest, regarding them simply as ornamental plants. In each species the general growth is bold and vigorous, the flower-heads large and rich in colour, and when seen in a situation where the circumstances of growth are propitious to them, they

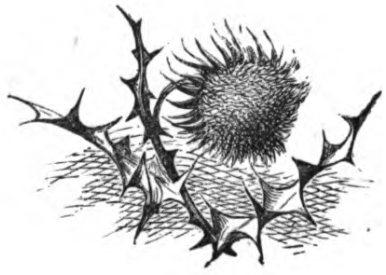
form somewhat striking plants as they tower above their lowlier neighbours.

The nodding thistle, or musk thistle, as it is sometimes called, is more especially found on wide open wastes, on bleak stony moorlands, or the broad expanses of chalk downs of the south and west of England. Almost all lovers of plants will recall with pleasure the occasion when they first made the acquaintance of some new species, or saw some old favourite under exceptionally favourable conditions. To ourselves, the sight of the white water-lily especially recalls the memory of a quiet pool on the Wey, where, fringed all round with dark solemn firs, the stream itself was one mass of the large floating leaves and creamy white cups of this lovely flower. Meyringen is ever in our mind a key-word to recall the boundless profusion in its mountain pastures of the gay meadow saffron; and the present plant is a pleasant memory of a long walk once taken through a district that for miles was full of this stately thistle and that culminated in our first sight of Stonehenge.

The nodding thistle is the *Carduus nutans* of science. It has been suggested that the generic name is derived from the Celtic *card*, the spiny points of some of the flower heads of the thistle having possibly been used as a means of carding wool; or that it is a corruption from the Celtic *ard*, a sharp point, a feature that the thistles certainly possess to a somewhat painful degree. Neither of these derivations, we confess, appears to us quite satisfactory; but we are unable to suggest a better, and must perforce leave the question in the hands of our philological readers. The specific term *nutans* simply means nodding. Our English name for the various plants

of the genus is almost literally the same as that used by our Anglo-Saxon forefathers, *thistel*. The flowers of the present species have a very peculiar but fragrant scent, though we should hardly have thought of comparing it ourselves to musk, or calling the plant the musk thistle, on the strength of the resemblance in odour.

The nodding thistle is a biennial, and will ordinarily be found in blossom from about the end of May to the beginning of October. The plant grows from two to three feet high; the stems are stout and but little branched, and give the thistle a sturdy self-assertive appearance, that is no doubt really the result of the necessities of its position, as no plant of feeble growth could stand against the force of the winds as they sweep across the open moorland. The leaves are long and very deeply cut, their bases are prolonged some little distance down the stem, giving it a very prickly character. The flower-heads are large, the largest of all our thistle blooms, and very handsome both in form and colour. The involucre from which they spring—the part corresponding in position to the calyx in flowers of simpler type—is very large and prickly, and has a peculiar webbing of hairy or woolly lines.



MEADOW-VETCHLING.

THE MEADOW VETCHLING.

Lathyrus pratensis. Nat. Ord., Leguminosæ.

ALTHOUGH the plant here figured has full claim to rank with our commonest species, it will probably have scarcely received at the hands of many of our readers the full attention that it deserves, belonging as it does to a very numerous order of plants, the Leguminosæ, and being therefore often merely noticed as "some sort of wild pea or vetch, you know." The richness of the colour of the blossoms and the quaint forms of the leaves are, however, points of detail that amply repay a closer inspection, while its luxuriant growth as it trails over and amongst the other plants of the hedgerow, renders it a beautiful and conspicuous addition to the flora of the country lane. Though called the meadow vetchling, it would, perhaps, could the past be effaced, be more appropriately called the hedge-pea, since it cannot really be considered a meadow plant in any true sense—in the sense, for instance, that the

cowslip, the buttercup, or the daisy are. Its true habitat is the hedgerow, where it can find the support that it needs. Almost all these plant names, however, have received the sanction of so many writers, and have been in use for so many years—in some cases centuries—that any attempt, however desirable it might appear in certain instances to effect a change, would be but useless labour; while in most cases it would be not useless merely, but eminently undesirable, introducing an element of confusion into botanical nomenclature, and destroying at the same time many literary associations. The scientific name of the plant is the *Lathyrus pratensis*. The generic name is derived from the name bestowed on this or some kindred plant by Theophrastus, the disciple and successor of Aristotle. The specific name merely refers to the habitat of the plant, from the Latin *pratensis*, that which grows in, or pertains to, a meadow. These names were first definitely assigned to the plant by Linnæus. A very numerous and appropriate class of plant names arises from the allusion to the place where the plant may be found; of these we need only indicate some instances. Amongst the specific names of systematic nomenclature we get, for example, not only the *pratensis* that has led us to point out this feature, but many others, such as *arvensis*, *aquatilis*, *sylvestris*, *fluitans*, while the familiar English names, water-buttercup, cliff-poppy, pond-weed, wall-flower, rock-rose, corn-marigold, marsh-mallow, bog-pimpernel, house-leek, wood-sage, and many others, carry their meaning so obviously to the mind that any explanation of terms so palpable in their origin is altogether superfluous. There are some few names which owe their origin to the locality in which the plants may be found,

no less than those we have just instanced, but which do not at first so clearly convey their meaning; bulrush is an example of this, for it was originally written pool-rush; the modern name is but a corruption. The common brake also in like manner owes its name to the locality in which it flourishes, the derivation lying doubtfully between *brake*, the German and old English word for underwood, and *brach*, uncultivated ground; but in either case suggestive of the home of the plant.

The meadow vetchling will ordinarily be found in flower by the second or third week in May, and once in blossom continues throughout the entire summer, and indeed far on into the autumn, as the plant may very frequently be met with in blossom right up to September, and even, though more scantily, in the beginning of October. Though so beautiful and graceful in itself, the old adage, "Handsome is that handsome does" is herein to some degree borne out, for an old writer, Parkinson, tells us that it was called in his day the "ramping wild vetch" by the country people, "because it is the most pernicious herbe that can grow on earth, killing and strangling corne or any other good herbe it shall grow by."

The plant is a perennial, and from its weak and straggling nature, and from the freedom with which it branches and develops into a rather thick and tangled mass, does probably cause some appreciable degree of injury, more especially when it springs up amidst a growing crop, and mats it together with its clinging tendrils. The flowers, bright yellow in colour, grow on a long peduncle, and vary in number in each bunch, from about six in feeble plants to about twice that number when the plant is found under favouring circumstances, moist

pastures and hedgerows being the spots where it more especially flourishes. The stipules, the leaf-like bodies at the base of the leaf, the point at which it springs from the stem, are arrow-headed in form, the lower segments of each pair being often curiously crossed and locked together. From these stipules rise branched tendrils, each tendril before it branches throwing off a pair of very long and narrow leaflets. The pods, or legumes, that succeed the blossoms are green in colour, and each contains several seeds.

The broad-leaved everlasting pea, a well-known favourite in cottage gardens, belongs to the same genus, and so too does the narrow-leaved. The first of these, though at times met with apparently wild, has no real claim to a place in our indigenous flora, but the second, the *Lathyrus sylvestris*, is a true native.

PINK PERSICARIA

THE PINK PERSICARIA.

Polygonum Persicaria. Nat. Ord., Polygonaceæ.

THE *Polygonum Persicaria*, pink persicaria, or, as it is sometimes called, the spotted persicaria, is very frequently met with on waste ground, in gardens, and by the roadside, and is more particularly abundant when such localities are somewhat damp and low-lying. It is an annual, but seeds freely, and our readers will have but little difficulty in finding specimens. Its small and insignificant-looking blossoms are met with from July to October. Eleven to fifteen species of polygonum are reckoned as indigenous to Britain, the difference in the number being, as we have seen in the case of several other plants, the result of the greater or less importance attributed to certain modifications and differences of structures—differences that appear to some botanists sufficiently distinct and permanent to justify their giving them

specific value, while other botanists, less convinced of the reality and permanency of the modification, regard it merely as a variation more or less fleeting and valueless, and consider the plant thus distinguished as but a sub-species at most, or a variety from the true typical form. We may see this very plainly in some other cases; the number of species of roses, brambles, or willows, for example, differs most widely according as the classification of one or another authority is taken up and adhered to.

The pink persicaria has long fibrous roots. The stems are numerous, in general growth erect, but freely branching, sometimes indeed so freely as to give the plant a rambling and spreading appearance, though more ordinarily the general growth has a decidedly upward tendency, as we have indicated in our drawing. The stems are often more or less reddish in tint, and at the points where a lateral stem branches off swell very considerably, hence the generic name, derived from two Greek words, signifying many knees or joints, the expansion of the stem and the angle it makes at each point of branching being very suggestive of the knee-joint. At these points the plant is particularly brittle, and snaps very readily. The leaves are lanceolate in form, the lower ones stalked, the upper ones springing direct from the stem, and having at their bases sheathing stipules. The foliage is generally glabrous, *i.e.*, without hairs of any kind, but a variety with hairy leaves is occasionally met with, which has been by some writers elevated to the dignity of a distinct species, under the name of *Polygonum incanum*. The leaves are very frequently marked with a large dark spot or blotch of purplish-black in their centres, a feature that has procured for the plant its name of spotted persicaria. The numerous little blossoms,

inconspicuous in themselves, are arranged in a dense spike at the termination of the various branches. These spikes are cylindrical in form, about an inch or so in length, and have often a small subordinate mass of blossoms at some little distance below them, though this is not by any means a constant feature. The general tint of the spike is ordinarily a greenish red, as the general mass is a dull green in colour, but the tips of the flowers are of a clear but light rose tint; colours that at a little distance blend together into a somewhat dull tint, inclining more or less towards green or red, according to the development or non-development of the blossoms. The perianth is composed of five segments, while the styles are usually two in number, and the stamens six, a somewhat unusual numerical combination. At times the styles vary to three —in either case, however, in numerical proportion with the stamens, but out of harmony with the five segments of the perianth.

The persicaria is a plant subject to very considerable variations, though these variations, consisting as they generally do in the greater or less density of the blossoms on the spikes, their more or less pink colour, and the degree of development of the stems, or their ruddiness of hue are, after all, of a nature that need scarcely puzzle even the novice in his attempt to name the plant.

Of the other species of the genus we need refer but to a few. The knot grass (*P. aviculare*) is a small plant, often trailing, but at times erect, the little pink flowers in clusters in the axils of the leaves, the leaves an inch or so in length. It is an abundant plant in corn-fields and on waste land. The climbing buckwheat (*P. convolvulus*) is another very common species; its long stems, encircling

the other plants of the hedgerow, or running up dahlia or raspberry stakes in the garden, are a very characteristic feature. The amphibious persicaria (*P. amphibium*) is another species of frequent occurrence. It is ordinarily found near the margins of lakes or ditches; its floating leaves and spikes of bright rose-coloured blossoms are features that will aid in its identification. The water-pepper (*P. hydropiper*), so called from its acrid taste, is frequently to be met with by the side of water; though very similar to the common species, the plant figured in our plate, it is considerably more slender-looking, and smaller in all its parts.

TORMENTIL AND CINQUEFOIL

THE TORMENTIL AND CINQUEFOIL.

Potentilla Tormentilla ; P. reptans.

Nat. Ord., Rosaceæ.

IN all probability the two very similar plants herewith figured will be familiar to most dwellers in the country, for insignificant as they may appear in comparison with the lordly foxglove, the long, trailing, flower-covered stems of the wild rose, or the rich masses of hawthorn bloom, plants that must be known to every one, they yet, by their wonderful profusion, and the large surface of ground they ordinarily cover, compel in the aggregate the attention that would hardly be given to an isolated specimen. Few hedgerow banks in the spring are not brightened by the large yellow flowers of the cinquefoil, or tapestried over with its masses of beautiful leaves, while the more open ground, the common, or the moor, is equally abundantly decked with the little golden blossoms of the tormentil.

The cinquefoil, the plant in our plate with the larger

flowers and leaves, is, botanically, the *Potentilla reptans*. The generic title is derived from the Latin *potens*, powerful, several plants of the genus being, in the Middle Ages, accredited with potent medicinal properties. If these properties ever had any real existence the plants yielding them have now given place to others that possess the needed qualifications in a higher degree. The spread of knowledge and the greater opportunities of travel and research have rendered available to us many foreign plants that, in most cases, can more effectually serve the needs of suffering humanity or the requirements of commerce than our indigenous plants. We need only, in passing, just mention quinine and indigo as examples of this patent fact. The "happy medium" is no doubt the right view to take in this as in so many other cases, for while, on the one hand, we can scarcely appreciate the zeal with which, in the Middle Ages, almost any common plant was credited with healing virtue for nearly every ailment, it is no less true, on the other part, that in these later days the study of the economic and medicinal value of our native flora has been too much neglected. The specific name, *reptans*, is from a Latin verb, and refers to the creeping nature of the plant. The name cinquefoil, we need scarcely say, means five-leaved, and refers to the form of the leaf, composed, as it ordinarily is, of five leaflets, though, in rich soil, the leaflets are often seven in number. It is in some old herbals called the five-leaved grass, and five-fingers. The plant was formerly much used as a remedy for the ague. According to Dioscorides in a quartan ague the leaves of four stalks should be taken, in a tertian three, and in a quotidian the leaves of one. The plant was also employed for cancer, quinsy, jaundice, toothache, hoarseness,

palsy, gout, sciatica, and many other ailments. The cinquefoil has a long, trailing or creeping stem, which roots at intervals, like the runners from the strawberry plant, and enables it to take possession very rapidly of a considerable share of the hedgerow. All the leaves are on long stalks, and are coarsely serrate in outline. The flowers are borne singly on long stems, which rise from the axil of the leaves. These flower-stalks are ordinarily longer than those that bear the leaves. The cinquefoil is a perennial, and flowers from June to September. Even when not in blossom the plant is attractive from the beautiful form of the foliage. We for some time used it as a bordering in part of our garden, and a very beautiful wreath-like line of flower and leaf it made; the only objection to its use will be found in the vigour with which it throws out its long spreading stems, an energy that makes it somewhat difficult to keep it quite within due bounds. The petals of the cinquefoil are five in number ordinarily, though under special circumstances a greater number may at times be met with, in the same way that we have seen that the normal five segments of the leaf may at times be exceeded. Out of one hundred blossoms that we picked as a test, eighty had the parts of the corolla, calyx, and epicalyx in fives, while the remaining twenty were in sixes.

The tormentil, *Potentilla Tormentilla*, the second plant represented on the plate, is in its typical state sufficiently distinct from the cinquefoil, though from the occurrence from time to time of intermediate forms some botanists have been inclined to regard the two plants as really only two well-marked varieties of the one species. As these intermediate links are not commonly met with, while the

two strongly-divergent types may be found almost anywhere, we may safely, in the present pages at least, regard them as specifically distinct. In the tormentil the stem-leaves are stalkless; the flowers, though of the same colour, are ordinarily much smaller than in the cinquefoil; in the latter plant, as we have seen, the parts of the blossom are normally in fives, while in the tormentil the petals are but four in number. The stems of the tormentil are much more erect than those of the cinquefoil. The tormentil root is so astringent in character, and contains so much tannin, that it has been largely used in the place of oak-bark in tanning, and *decoctum tormentillæ* still figures as an astringent lotion in the modern pharmacopœia. Its root also yields a red dye. The plant is a perennial, and flowers from about the first or second week in May until late in the autumn. Besides the tormentil, the cinquefoil, and the silver-weed (*Potentilla anserina*)—which we have figured—there are nine other species of *Potentilla;* most of these are, however, so rare or so local in their occurrence as to be beyond the scope of our work.

GREATER WILLOW-HERB.

THE GREATER WILLOW-HERB.

Epilobium hirsutum. Nat. Ord., Onagraceæ.

NO less than ten species of willow-herb are found in Britain, most of them being fairly commonly distributed. The species figured in our illustration will probably be the best known of these, not that it is commoner than any of the others, but because, while as freely met with as any of them, its large size tends to make it a conspicuous feature in the localities it favours. It is abundant over almost the whole of England by the sides of streams, in osier beds, and low-lying damp ground; but is in Scotland one of the scarcer plants of the Caledonian flora, which, in many respects, as we have seen from time to time in our descriptions of the plants before us, differs from that of England.

The greater willow-herb is the *Epilobium hirsutum* of the systematic botanist. The generic name *Epilobium* is derived from two Greek words signifying upon a pod,

a name bestowed on the genus from one very characteristic feature found in all the species—the long, narrow seed-vessel, crowned by the blossom, a feature that may be very clearly seen in our illustration, and that will greatly tend to aid in the identification of the other species, so far, at least, as to make it highly probable that the unknown plant found is, if it has anything resembling this arrangement, some kind of willow-herb. The specific title is from the Latin word for rough or hairy, and is applied to the plant because the stems and leaves are covered with soft, short hairs; it therefore is, on this account, also known as the great hairy willow-herb. The plant is in some country districts called "codlins-and-cream;" why so named we are unable to say. It is suggested by some writers that the name is given from the odour of the flowers or of its fresh shoots, or, again, from the smell of the leaves when bruised, but none of these suggestions appear particularly satisfactory. The more common name, willow-herb, is clearly applied from the resemblance of the leaves of all the species to the foliage of the willow. Many of the older names of our plants are based on the comparison of the plant named with some other plant, ordinarily one that was better known and readily available for reference and observation, though this was not necessarily so. We may instance the ivy-leaved speedwell, carnation-grass, grape-hyacinth, and grass-vetch, or the maritime plant which, from its resemblance to the holly of the gardens, is known as sea-holly, though botanically it has no affinity to it. In the same way the *Alisma plantago*, or great water-plantain, bears an allusion, both in its specific and vulgar names, to a plant which it somewhat resembles, but which is in no way connected with it.

The greater willow-herb has a perennial root; the stems thrown up from it are strong and stout, and branch freely, frequently attaining to a height of four feet, and at times exceeding it. The leaves are long and narrow, finely serrated at their edges, and having their bases partially clasping the stem. The flowers, from their large size, are a striking feature. The petals are four in number. The calyx is cleft into four segments. The style, in the centre of the flower, is prominent, and divides at its extremity into four stigmas. The stamens are eight in number. The capsule that contains the seeds is very long, roughly quadrangular when cut across, hairy, and divides, as the seeds ripen, into four long strips that curl back towards the base. The seeds have each a hairy tuft at one extremity, a peculiarity that is very noticeable as the valves of the capsules are just beginning to come apart, and the interior is seen filled with this mass of fluffy white hair. The greater willow-herb may be found in blossom during the months of July and August, and from the rich masses of pink blossoms and the profusion with which the plant is found in its appropriate localities, it often becomes a striking object in the general landscape, as it towers above the reeds and the luxuriance of the smaller and equally beautiful forms that fringe the winding margins of our inland streams.

Amongst the allied species the rose-bay, or *E. augustifolium*, is one of the most beautiful. The flowers are much larger than the present species, of a deeper colour, and arranged in long racemes. The plant is about four feet high. Though widely distributed, it is nowhere common; it is more frequent, however, in Scotland than in England. It is generally found in moist woods, though we have seen it growing on a high bank by the roadside, with little or

no shelter. In all the other species of willow-herb the flowers are regular, all four petals being alike in form and size; but in the rose-bay they are slightly irregular, a feature that will, therefore, in itself be sufficient to identify the species. It is a doubtful native, but its root is very brittle, and as every little piece will grow it may easily get accidentally spread, while the tufted seeds of this, as of all the other species, are scattered far and wide by the passing breeze.

Other common species are the small-flowered hairy willow-herb (*E. parviflorum*), and the broad smooth-leaved willow-herb (*E. montanum*). The first of these is ordinarily found in moist situations, the second on dry banks, old walls, the thatch of cottage roofs. Both flower as summer passes into autumn. The square-stalked willow-herb (*E. tetragonum*) is frequently found in moist situations. All the willow-herbs have their blossoms of a more or less deep tint of red.

HONEY SUCKLE

THE HONEYSUCKLE.

Lonicera Periclymenum. Nat. Ord., Caprifoliaceæ.

WE have in Britain three species of honeysuckles—the perfoliate honeysuckle, the fly honeysuckle, and the present species, which is much the commonest of the three. It may very frequently be met with in all parts of the country, in the woods and trailing over the hedge-rows. It flowers from June until the end of September. Its beauty, as it hangs in graceful festoons from the tree-trunks, or drapes the shrubs in the coppice or hedge, has made it at all times a favourite. Milton and Shakespeare, to say nothing of many of the lesser lights of poesy, have sung its praises in appreciative strains. Both with the poets and the old herbalists the plant is often called the woodbine; either name seemed to be equally common. Shakespeare, in the *Midsummer Night's Dream*, calls it "the woodbine, the sweet honeysuckle," and in another passage it is the "caprifole," a name that is also given to it by Spenser. This latter name is used

botanically for another of our English species, though, from the rare occurrence of the plant, we can hardly conclude that it was this rather than the very common species that our two poets intended to introduce.

The species represented in our illustration is botanically the *Lonicera Periclymenum*. The generic name was bestowed upon these plants by the great master of natural science, Linnæus, in honour of a fellow botanist, Adam Lonicer, a German, a custom at one time very prevalent, and which is still, to a certain degree, in vogue. The genera *Sherardia*, *Frankenia*, and *Knautia* of our English flora are thus named in honour respectively of James Sherard, an English botanist; of John Franken, a Swede, Professor of Medicine and Botany in the University of Upsal, where he died in 1661; and of Christopher Knaut, a great Saxon botanist of the seventeenth century. *Bartsia*, *Hutchinsia*, *Mertensia*, *Sibthorpia*, and many others may also be met with in our lists. In some few cases the name of a plant has been given to it from some more or less fanciful analogy; thus the *Bauhinia* was so called in honourable remembrance of Caspar and John Bauhin, the deeply two-lobed leaves of the genus suggesting these plants as being most appropriate to bear the fame of the two brothers to posterity. Though all the examples given hitherto have been of a pleasant nature, there are some, though these are happily few in number, in which a little malice has been exercised in the choice of a name, but of these we need give but one illustration. The *Hernandia* was thus called from a man whose botanical pretensions at one time placed him in a position of considerable pecuniary responsibility, but whose discoveries were by no means an equivalent for the support afforded

him, the point of the sarcasm being that the plant selected to bear his name throws up a conspicuous mass of foliage, while the flower and fruit are, when produced, very small in proportion to what might be anticipated.

The common name honeysuckle clearly points to its sweetness and melliferous qualities; while woodbine, though endeared to us by poetical associations, does but express its binding hold on the trees to which it owes its support. Its long woody boughs exercise a considerable restriction on the growth of young wood; we have often seen young hazels deeply furrowed in spiral lines by the tightness of its hold, and in such a case it cannot but be injurious.

The branches of the honeysuckle stretch for long distances over the hedgerow, and reach to a very considerable height up any trees that may be available for their support. Few can have wandered down some lane in the summer-time without noticing the long lines of the honeysuckle stems running up the tree-trunks, or waving in the wind from amidst their lower branches; tossing their graceful clusters of blossom to the breeze, and filling the air with their fragrant odour—an odour that often reveals its presence before the eye is caught by the masses of delicate blossoms. The leaves always grow in pairs, and are somewhat pointed and egg-shaped. The flowers grow in large bunches, all springing from one point at the extremities of the branches. The blossoms vary very considerably in colour, some being almost white, others decidedly pink, while others again are a deep warm tint of yellow. The form of the blossom, with its elongated tube and widely-extended mouth, the far-protruding stamens and the quaint curls and twists assumed by the lips, is very pleasing, as may be seen in our plate, and the forms of the buds before opening

are equally striking. The stamens are five in number, and the long central style will be seen like a thread issuing from their midst. The clusters of berries that succeed the flowers are of a deep crimson colour.

The perfoliate honeysuckle (*L. caprifolium*) may, at rare intervals, be met with in a wild state; it is very common in old-fashioned gardens, and at times, as a cast-away, gets established, though it is not truly indigenous. It may at once be known by the bases of the pairs of leaves growing together, so that the stem appears to penetrate through the centre of a double leaf. The flowers are very similar to those of the common kind. The fly-honeysuckle (*L. Xylosteum*) is so rare in a wild state that it is altogether beyond our scope to give particulars of a plant that none of our readers may probably find, and that in any case has no claim to be considered indigenous.

SUCCORY.

THE SUCCORY.

Cichorium Intybus. Nat. Ord., Compositæ.

THE succory, or chicory, is a plant belonging to the same great natural group as the dandelion, the ox-eye, the corn sow-thistle, and the nipplewort. The general form of the flower, it will readily be noticed, is very similar in all of these. It is the *Cichorium Intybus* of botanical nomenclature. Though the plant is perhaps more commonly known as the succory than the chicory, we never remember to have seen any explanation of this common name; we would therefore venture to suggest a derivation—the Latin word *succurrere*, signifying to run under. Many of our common names have descended to us either from the monks or other herbalists of the Middle Ages; the terms used, therefore, are generally either corruptions of the old Latin names or terms based on some old English word, and in either case the allusion is often either to the actual properties of the plant or else to the peculiarity of growth

in some organ of the plant that is of most economic or medicinal value. In the case of the present plant we could well imagine that the long tapering root, a feature conspicuous in itself, and a part of the plant of considerable value, would influence the choice of a name for the herb. The other name, chicory, is, under one modification or another, of widespread range. We see this in its Latin name *cichorium;* in France it is *chicorée;* in Spain, *achicoria;* in Portugal, *chicoria;* in Italy, *cicorea;* in Germany, *chicorie;* in Holland, *cichorei;* in Sweden, *cikorie;* in Russia, *tsikorei;* in Denmark, *cicorie.* These names are curious not only for their similarity but also for their dissimilarity—all are so very much alike in general character, and yet no two of them are the same. It has been suggested that the root of all these names will be found in the Arabic word for the plant, *chikouryeh;* and this may very possibly be the case, as at one time the Arabian physicians and writers were men of great repute, and through the conquest of European Turkey and the occupation of Granada, their works exercised a far more than merely local influence. The specific name, *Intybus,* is a modification of another Eastern name for the plant, *hendibeh;* and the endive of the garden, the *C. endivia* of science, an allied but foreign species, derives both its common and specific names from the same word. The endive is a plant of Southern Asia. The endive and the succory are the only two species in the genus *Cichorium.*

The succory is a perennial. The stems attain to a height of some three feet or so. The lateral branches are numerous and spreading; they are given off at a very considerable angle from the central stem, so that the general effect of the plant, though spreading, is not rich and full, since the

branches stretch out to some distance in each direction, and are but sparsely clothed with leaves of any considerable size. The stems, however, bear leaves and flower-heads in great profusion; the spaces of clear stems are very small. The general aspect of the plant is somewhat stiff and angular. The lower leaves of the plant are large and spreading, thickly covered with hairs, and something like the form of the dandelion leaf, except that the numerous lateral segments, or lobes, are, in general direction, about at a right angle with the central stem instead of pointing downwards, as is often the case in the similar portions of the leaf of the dandelion. The terminal piece is large in proportion to the others, and all the segments, terminal and lateral, are coarsely serrated. The upper leaves are very much smaller, much less divided, and are what is termed botanically amplexicaul, a term used when the base of the leaf clasps the stem and partially surrounds it. The flower-heads are very numerous, nestling in the axils of the leaves, and ordinarily in a little cluster of two or three. The flowers are rather large, very fully expanded, and of a delicate tint of blue. The involucres from which they spring have two rings of bracts—an inner one composed of eight parts, and a smaller, outer, and more spreading ring of five parts. The involucre is the part that in a composite flower corresponds to the calyx in flowers of simpler construction. It is composed of a ring of leaf-like forms termed bracts, that, as in the sepals of the ordinary calyx, protect the inner and more delicate parts from injury.

The succory is not uncommonly met with in many parts of England and Ireland, though it is by no means a common plant in Scotland. It is more especially common on the gravel or chalk, and in places where the soil is of a

light and sandy nature. It may in such localities be freely met with on waste land, open borders of fields, and perhaps more commonly than anywhere else, by the roadside, a feature that will probably have brought it under the notice of many of our readers who have little time or opportunity to wander far into the wilder haunts of many of our plants. We have in Surrey seen the succory in lavish abundance on a road that commanded a full view of St. Paul's Cathedral, only some six or seven miles distant.

The leaves of the succory when blanched form a very pleasant salad, and are largely used as such on the Continent. The roots, when dried and ground, furnish the chicory of commerce. It is in Belgium and Germany a rather important field crop, and most of the supply for the English market is derived from thence. The plant is also largely cultivated abroad as fodder for cattle and sheep.

PIMPERNEL.

THE PIMPERNEL.

Anagallis arvensis. Nat. Ord., Primulaceæ.

IN the colour alone of this little flower will be found almost a sufficient guide to its identification, as there is no other indigenous flower, no other wild blossom, just of this tint—a pale scarlet or very deep salmon red. While we have yellow flowers in abundance, as the silverweed, the iris, the buttercup, the cowslip; while we have pink flowers not a few—the campion, the dog-rose, the rest-harrow; while white flowers are common, as the hawthorn, the bindweed, the strawberry; while the various shades of blue are fairly well represented by the forget-me-not, the borage, and the hyacinth, and while purple is seen in the blossoms of the violet and the woody nightshade, purely red flowers are rare indeed. The intense scarlet of the corn-poppy, the duller reds of the other poppies, and the pale scarlet of the pimpernel, are the only examples that can be instanced. Flowers wherein the red inclines towards yellow,

making the tint called orange, are very rare—perhaps the two species of wild balsam are the best examples; while flowers wherein the red inclines towards blue, making the tint called purple, are very common.

The little pimpernel, like the sow-thistle and many other plants, is a weed of cultivation; though it may at times be seen expanding its delicate blossoms by the hard and dusty highway, or on some waste plot of ground, it is more commonly found in corn-fields and in gardens. It is almost cosmopolitan, and is as well known at the Antipodes as in any of our English shires. There are two species of pimpernel—the present plant, or *Anagallis arvensis*, and the bog pimpernel, or *Anagallis tenella* of the botanist. The generic name is a somewhat fanciful one; it is derived from two Greek words signifying "again" and "to adorn," because year after year these little blossoms spring up to beautify the waste places by their grace and delicacy of form and colour. The name appears somewhat far-fetched and slightly inappropriate, not because the little plant does not thus year by year adorn the fields, but because, while doing so, it is, after all, only doing what many other equally welcome flowers are doing no less and getting no especial credit for. Perhaps its universality may be pleaded in its favour, and its attachment to man, whose footsteps it has followed, as we have seen, the wide world over, may have earned for it some little return. We find it mentioned in the lists of plants of places so scattered as Persia, Nepaul, China, New Holland, Mauritius, Cape of Good Hope, Japan, Egypt, Abyssinia, United States, Mexico, and Chili. It is to be found in all the temperate regions in both hemispheres, but shuns the Arctic cold and hardly bears more than sub-tropical heat. In England it is often called the

shepherd's weather-glass, because its blossoms only expand in fine weather, a fact alluded to by several of our poets.

The common pimpernel is one of our smaller plants. Its slight stems rarely attain to more than a height of some six or eight inches, but branch a great deal. These branches are procumbent. The leaves are bold and simple in outline, have no leaf-stalks, but spring at once in pairs from the main stems. On turning them over the under surface will be found to be thickly covered with small dull purple spots. The little stems that rise from the axils of the leaves and bear the blossoms are, during the time of the expansion of the flowers, ascending in direction; but as the capsules that succeed the flowers ripen, these stems roll back, in the quaint way that may be more readily gathered from an inspection of our illustration than by any attempt at verbal explanation. The wood loose-strife, or *Lysimachia nemorum*, a plant that is sometimes called the yellow pimpernel, from its strong general resemblance to the true species of that name, exhibits the same peculiarity. The corolla of the pimpernel is five-cleft, and when fully expanded is an almost flat disk. The stamens also are five in number, and the calyx is deeply cut into five long and narrow segments, their pointed ends being seen between the divisions of the corolla. Though the colour of the flower of the pimpernel is normally red, bright blue flowers are sometimes met with. The plants bearing these have, by some observers, been made into a distinct species, and called *A. cærulea*, while others affirm that they are but a variety. More rarely the pimpernel varies with flesh-coloured or pure white blossoms.

The common pimpernel is an annual; the bog pimpernel, our second British species, is a perennial. The localities that should be searched for this latter species are

sufficiently indicated by its name. It is a very graceful and beautiful little plant, rarely more than four inches long, its stems creeping on the swampy ground; leaves in pairs, small, but closely succeeding each other on the stem; flowers rising up on rather long pedicles; the corolla divided into five lobes, a beautiful rose-colour, bell-shaped, but the widest part uppermost, not drooping, as in the hare-bell and most other campanulate flowers. It blossoms during July and August. Like most bog and aquatic plants, its beauty soon fades when the plant is gathered. It must be viewed *in situ*.

BROOKLIME.

THE BROOKLIME.

Veronica Beccabunga. Nat. Ord., Scrophulariaceæ.

MIDST the rank and luxuriant vegetation fringing the side of most country streams will not unfrequently be found the brooklime, the plant represented in our illustration; though its mode of growth and inconspicuous blossoms are very likely to cause it to pass unnoticed amidst the towering bulrushes, the great sword-like leaves of the iris, and the other herbage that finds in the soft bank or oozy bed of the stream and in the congenial moisture conditions most favourable to its development. Even when found it is too often cast aside in disappointment, because at first sight frequently taken for a forget-me-not; and as it has not the charms and associations of that flower, its own especial beauty is slighted and ignored.

The brooklime is the *Veronica Beccabunga* of botanical classification. We have already figured another member

of the genus, the *V. Chamædrys* or germander speedwell, and any of our readers taking the trouble to compare the two plates will at once see a strong family resemblance in the shape of the blossoms, the arrangement of the leaves in pairs, and several other minor points. We have already, in our comments on the germander speedwell, thrown as much light on the generic title *Veronica* as the case will permit, and it now only remains to us to see what rays can be brought to bear on the somewhat peculiar-looking specific name *Beccabunga*. Any attempt to resolve it into any Greek or Latin root is hopeless, but we must not, therefore, either in this or in any other floral name, assume that it is merely an arbitrary title—a title possessing no inherent fitness to justify its application to the special plant to which it is united, a name conveying in itself no increase of knowledge, nor any hint of suggestive association, but merely distinctive of a particular species by general usage and adoption. Examples of this class of name are not numerous, and even when we encounter a word that after long investigation baffles all our efforts to arrive at a satisfactory conclusion, we must not forget that though the great majority of the scientific terms employed are Latin or Greek in their origin, others are Celtic, Scandinavian, or Oriental; while even amongst the more familiar English names some are obsolete, refer to customs long gone by, or have lost their original meaning through ignorant and careless repetition and modification. *Datura*, the generic name of the thorn-apple, tried by any classical standard, will be pronounced meaningless, its derivation really being from the Arab name *Tatorah;* and in the same way *Nuphar*, the generic name of the yellow water-lily, is derived from the Arabic word *Naufar*. Other examples are *Betula*,

derived from the Celtic word *betu*, the birch; and *Alisma*, the water-plantain, from the Celtic *alis*, water. In the same way some of the words which we ordinarily use and accept as English are, except by their continued usage, not so at all; tobacco, for example, was adopted from the word found in use amongst the American Indians; so also was tomato, while *lilac* is the Persian name introduced together with the shrub thus called. Our English word potato is but a corruption from the Spanish *patata*, which was in turn corrupted from the Indian name for the plant. The plant we term samphire was originally, from its love of the sea-shore, dedicated to St. Peter, the fisherman of Galilee, and is still known amongst the French as the *St. Pierre*, and by the Italians as the *Herba di San Pietro*. The interest of the subject will, we trust, be sufficient excuse for this wandering from our immediate point, the derivation of *Beccabunga*. The name is Flemish in its origin, *beck-pungen* meaning "mouth-smart," a name suggested by the pungency of its leaves, which were formerly eaten in salads. We have thus tried them ourselves, but did not find them sufficiently tempting to care to repeat the experiment.

The stems of the brooklime trail, and throw out bunches of rootlets from their lower portions, while at intervals the flowering stems ascend. The leaves are stalked, slightly toothed on their margins, and thick and leathery in texture. The flowers are arranged in long racemes, the flower-stems being given off in pairs from the axils of the leaves. In the germander speedwell it will be noticed that only one flower-stem rises from each pair of leaves. A variety of the brooklime is sometimes met with having pink blossoms, but only one or two stations are recorded, and our readers

will therefore probably never come across it. The whole plant is very smooth and shining in appearance, and, like many other water-plants, very succulent. It is a perennial, and will ordinarily be found in flower by about the middle of May, lasting more or less freely in blossom until late in the autumn.

The brooklime was at one time in great favour as an anti-scorbutic. It was generally taken in combination with the watercress, but such a use for it seems now wholly a thing of the past.

The genus to which the brooklime belongs is represented in Britain by sixteen species, and of these our readers may fairly hope to find twelve. The peculiar form of the blossom, the monopetalous corolla cut into a cross-like form, but having the lower segment always smaller than any of the others, its fugacious character, and the two stamens, are all points in common, and will greatly tend to aid the identification of any of the other speedwells. Most of the species have either entirely blue or blue-and-white flowers, though in a few cases they are pinkish.

SCENTLESS MAYWEED.

THE SCENTLESS MAYWEED.

Matricaria inodora. *Nat. Ord., Compositæ.*

WE have in Britain several species of the great composite family all of which bear a certain general similarity to the plant figured in our present illustration, though a very slight amount of investigation and comparison will, we do not doubt, suffice to enable our readers to decide accurately as to the probable identity of any likely-looking plant with the subject of our plate. In some of these allied plants the foliage is much fuller in character than that of the present species; in others, the large yellow disk is not so convex and ball-like; in some, again, the white rays are more erect; while in others a strong scent, sometimes pleasant, but more ordinarily disagreeable, makes itself very perceptible.

The scentless mayweed may be very commonly met with in fields, by the way-sides, and springing up freely amidst rubbish-heaps and on any patch of waste ground. It flowers throughout the whole summer and late into the

autumn months. The plant is an annual, very spreading and branching in its growth, and attaining ordinarily to about a foot in height, though, like most way-side plants, it varies a good deal in this respect, according to the poorness of the soil, the absence of moisture, and several other conditions that are powerful either to aid or mar its development. The leaves are pinnate, or feather-like in character, and many of the segments have smaller lateral segments given off from them; a form known botanically as bi-pinnate, or twice pinnate. All the divisions of the leaf are very narrow in proportion to their length, and cross and recross in such appearance of inextricable confusion, that it is only by isolating a few from the mass of foliage that the plant bears that their true form can be satisfactorily identified. The leaves spring directly from the main stems; there is no intervening leaf-stalk. The flower-heads are larger than in many of the plants of which we have spoken as bearing some little resemblance to the present species, and are borne singly at the ends of long terminal flower-stems, or peduncles. The central part, composed of the florets of the disk, is a deep yellow in colour, hemispherical in form, and very prominent. The outer florets have very conspicuous white rays, these being much larger in proportion to the disk than in most of the allied species, and lack somewhat of the firmness of appearance that is seen in the corresponding part in the feverfew, for example, where the rays are much broader as compared with their length, and stand around the disk with an appearance of vigour that the present species appears somewhat to want. A rather marked variety of the plant is sometimes found by the sea-shore, and especially in the north; in this the leaves are somewhat broader and fleshy, and succulent in appearance,

and the flower-heads smaller. From the locality in which it is found it is either considered as *Matricaria inodora, var. maritima,* or by other botanists, who raise it to the rank of an independent species, it is called *Matricaria maritima.*

The scentless mayweed owes its generic name, *Matricaria,* to its reputed medicinal properties, while the specific name, *inodora,* signifies scentless. Though, compared with several of its allies, it may almost be termed scentless, the term is not strictly appropriate, as a slightly aromatic odour is yielded, while the name mayweed is equally inaccurate if really criticised. It appears to us at least somewhat of a misnomer to call a plant that yields some little aroma, and that may be met with in flower throughout the whole of the summer and autumn, the scentless mayweed. The plant is by some botanists called the *Chrysanthemum inodorum,* by others the *Pyrethrum inodorum,* names that in themselves sufficiently indicate the slight points of difference between this and some few other species, and that lead botanists therefore to place it sometimes in one genus, sometimes in another.

The medicinal properties of the present plant seem to be of a very slight character. An allied species, the *Matricaria Parthenium,* possesses a certain bitter and tonic principle that has been at times pressed into the service of the healing art, while its common English name, the feverfew, points to the old belief in its efficacy; the significance being that fever patients need be but few in number were the virtues of this plant sufficiently appreciated and utilised. The little crimson-tipped daisy and the ox-eye are very near relations, as the general appearance of the plants would lead one readily to suppose, and the milfoil,

or yarrow, is another close connection, as the form of its flower-heads equally clearly testifies.

One of the plants that most strongly resembles this may be readily distinguished by its odour, which is so strong as to have procured the plant the name of the stinking mayweed. It is botanically the *Anthemis Cotula;* it flowers as freely and as long and in the same localities as the scentless mayweed. The true camomile, or *Anthemis nobilis*, is another very similar-looking herb. Its intensely bitter taste and highly aromatic odour will amply suffice to identify it. It is a plant still held in medicinal repute; it may often be found in dry, gravelly pastures, and on heaths and other open waste spaces in England; it is less common in Ireland and Scotland.

FORGET-ME-NOT.

THE FORGET-ME-NOT.

Myosotis palustris. Nat. Ord., Boraginaceæ.

PROBABLY but few of our readers are unacquainted with the beautiful little flower that forms the subject of the present illustration. It is not only a plant that has a considerable amount of legendary and poetical association gathered round it, but its own inherent charms also should, in any case, endear it to all true lovers of nature. Into the pleasant region of legend and poetry connected with the forget-me-not we do not here propose to diverge, interesting though the subject would be; we shall therefore confine our attention purely to going into the botanical side of the question, dwelling on the beauties that are inherent by nature, and foregoing all that is extraneous.

The forget-me-not that we have figured is the com-

monest, and at the same time most strikingly beautiful species of a genus that includes several common and graceful forms. How many species we really have is a point on which considerable difference of opinion exists. One botanist will elevate to the rank of a species what another prefers to consider but a variation more or less permanent from some specific type. Bentham, an authority of no mean weight, admits four definitely, and a fifth dubiously; while Hooker, an authority no less reliable, describes eight species. Of these forms the greater number are common, though one or two are by no means generally distributed.

The plant represented in our illustration is the forget-me-not *par excellence*, the plant which, as it shoots forth its tender green leaves and flowers of purest blue, is so beautiful a feature amidst the rank vegetation that lines the edges of the stream. There is no other flower at all like it in a like situation, so that any error in identification is impossible. The brooklime most resembles it; but anything but the most cursory inspection would at once suffice to distinguish it. We need but mention one point: in the brooklime the corolla is composed of four segments, of which one is considerably smaller than any of the remaining three, while in the forget-me-not the corolla is divided into five similar parts. Many other points of difference are readily apparent, but the distinction we have named in the forms of the blossoms will be amply sufficient to prevent possibility of error.

The *Myosotis palustris*, as our species is termed botanically, is abundantly met with almost everywhere throughout Britain. It begins flowering in June and lasts in blossom all through the summer and autumn. The stem is somewhat weak and succulent, rising generally to about a foot

in height. The leaves and stem are ordinarily very smooth, though at times they may be found thickly covered with small hairs. The lower leaves are much broader and not so long as those of the stem: they are on short stems too, while those that ordinarily meet the eye spring directly from the main stem. The flowers are much larger than in most of the other species. The Chinese ceramic artists have introduced in some of their vases a highly-prized colour, which, in their treatises, they call "the sky after rain." The flowers of the forget-me-not are of this pure and delicate tint—the clear azure of the sky, the delicate colour of the turquoise. The centre of the flower is a clear yellow. The buds and opening flowers of the plant are often distinctly pink, no shade whatever of blue in them, and at times this tint remains even when the blossoms are fully expanded. The bugloss, borage, and several other plants have this same curious difference of colour between their buds and blossoms.

The generic name is derived from two Greek words signifying mouse-ear; the leaves of one of the species, the *M. arvenis*, are somewhat like the ear of a mouse, both in the form and in the soft hairy texture. The leaves of the present species are too long and narrow in form, and too smooth in texture to make the name appropriate in its special case. The specific name is simply an indication of the marshy soil in which it thrives best. All the species are often called scorpion-grass, an old name bestowed upon them from the rolling round of the flower-stem towards its extremity, a form of inflorescence that botanically is said to be scorpoid, the allusion in either case being to the tail of the scorpion, which this manner of growth dimly resembles. The suggestion appears to us decidedly far-fetched and ill-

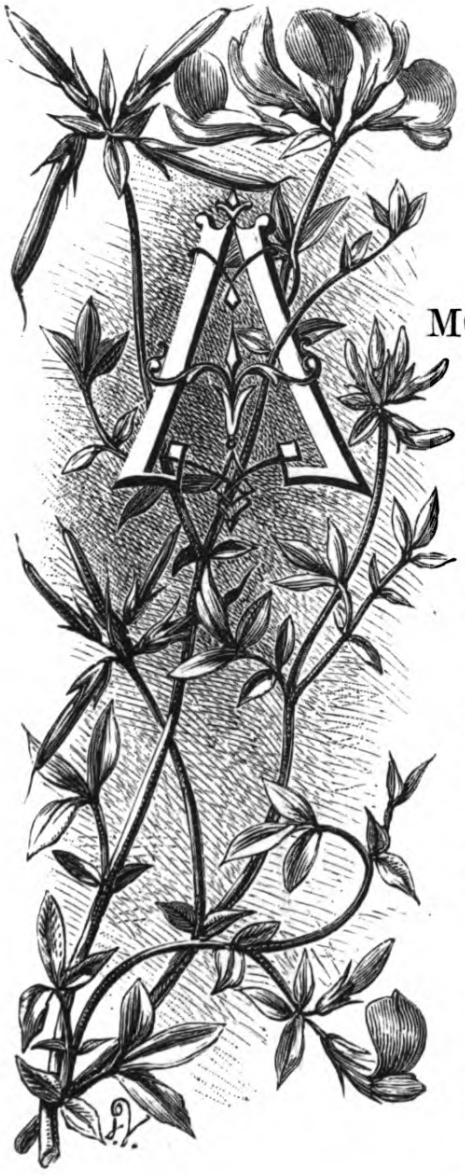
judged; the beautiful gradation of the buds, and the graceful spiral form of the stem that bears them, have little in common with the poisonous sting of a creature that is as repulsive in general form as these are elegant.

The forget-me-not varies a good deal; three recognised types may be found, and though these run a good deal into each other by a series of intermediate forms, they are by some writers classed as distinct species.

The wood scorpion-grass (*M. sylvatica*) is a very handsome allied species. It is not very common, and only occurs in a wild state in any abundance in Scotland and the north of England. The flowers are large and the plant blossoms very freely, so that it has been somewhat extensively used by gardeners as a plant for the flower-border.

The mouse-ear scorpion-grass, already referred to, is very common throughout Britain in fields, hedges, &c. Though much smaller than the *M. palustris*, it is sufficiently like it to make it easily recognisable as a near relation. It flowers throughout the summer and autumn.

BIRDSFOOT TREFOIL.



THE BIRD'S-FOOT TREFOIL.

Lotus corniculatus. Nat. Ord., Leguminosæ.

AMONGST the many species of trefoils which adorn our meadows and hedgerows there are few, if any, more strikingly beautiful than the bird's-foot trefoil, the subject of our present illustration. The pure rich yellow of its clustering blossoms, the beautiful curves and proportions of the leaflets composing its foliage, the quaint form assumed by the head of pods, and the general grace and delicacy of the whole, combine to render it one of our most attractive plants: one that the eye always welcomes in the early summer and rests on with pleasure. It is the *Lotus corniculatus* of botanical science.

The bird's-foot trefoil is ordinarily met with in flower by the middle of May, and may be found until the beginning of October, though it may be considered at its best only in May and June, as later on it is not

so freely seen, and the sultry heat of the summer and autumn months gives a different character to the plant, a hard, parched, and wiry look taking the place of the soft and tender growth of the early summer days. The bird's-foot trefoil is a perennial; the plant is ordinarily about a foot high, though in this respect a considerable difference may be noted, some specimens being barely half this height, while under certain circumstances plants may be found almost as high again. The leaves have three leaflets at their apex and two others at their base, at the point of springing from the stem. The flower-stalks are of considerable length, and bear at their extremity a cluster of bright yellow flowers, from two or three to ten or twelve in number; a small leaf will always be found at the point where the umbel of flowers is given off from the peduncle, or flower-stem. The buds before their full expansion are often a deep red in colour, and plants may occasionally be found where this red tinge is sufficiently perceptible throughout the whole period of flowering to become a very marked and noticeable feature. The pods that succeed the flowers are cylindrical in form and about an inch in length, and as they are all nearly horizontal in direction, and spring from the same level, they bear a very good resemblance to the foot of a bird—hence the common name of the plant. "This small herb groweth not above a span high, with many branches spread upon the ground, set with many wings of small leaves. The flowers grow upon the branches, many small ones being set a head together, which afterwards turneth into small jointed cods, well resembling the claws of small birds, whence it took its name." The specific name, *Corniculatus*, is derived from the Latin *cornicula*, a little crow, the diminutive form of

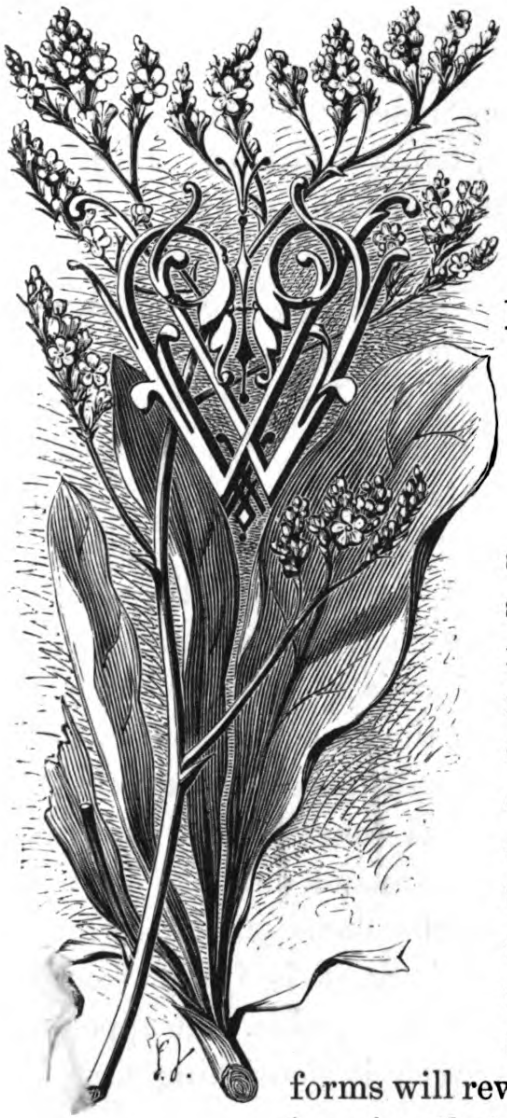
cornix, in allusion again to this resemblance of the pods to a bird's foot; while the generic title, *Lotus*, is given to it from a belief that it may possibly be one of these species on which the ancient Greeks bestowed that name.

The bird's-foot trefoil is subject to considerable variations of form, these modifications of the type being either considered as mere varieties, more or less permanent, or elevated to the rank of distinct species, according to the amount of variation and the frame of mind of the observer. Botanists have been colloquially divided into two great classes—the "splitters" and the "massers"; the first of these make the most of every little divergence from the type, and split up each species into several sub-species, while the latter ignore all these minor points as being, if not altogether immaterial, at least insufficient to found anything like permanent and specific distinctions upon. Four very distinct forms of bird's-foot trefoil may, however, be noticed, though, as many intermediate forms may also be met with, they can perhaps scarcely be considered more than modifications, owing to various external circumstances, of the original and typical form. The greater lotus, which has, perhaps, the best title to an independent specific rank, and as such is by some botanists called the *Lotus major*, has all its parts larger than in the more strictly typical plant; but as it is found more especially in moist meadow-land and by the sides of ditches, it is quite open to question whether this dampness of situation may not go very far in creating the richer development. The hairy lotus and the narrow-leaved lotus are two other forms. The first, the *Lotus villosus* of the "splitters," is very similar to the common plant, except that the calyx, stems, and leaves are covered with long and spreading hairs; it is a species or

variety not often met with. The second, the *Lotus tenuis*, or *tenuifolius*, is a lighter and more delicate plant than the type form, and is chiefly conspicuous from the narrowness of the leaflets; like the former, it is not a common form.

The slender bird's-foot trefoil, the *Lotus angustissimus* of botanical nomenclature, has an undoubted claim to rank as an independent species; its flowers are ordinarily in pairs, the blossoms are much smaller than in the common species, and as the pods are of necessity only in pairs as well the resemblance to a bird's foot is by no means so clear. Unlike the *Lotus corniculatus*, it is a very rare plant.

SEA LAVENDER.



THE SEA-LAVENDER.

Statice Limonium. Nat. Ord., Plumbaginaceæ.

WHILE the botanist and the lover of plants who makes no pretension to scientific study alike delight to wander by the hedgerows, to follow the source of some of our winding streams, to search amidst the ripening grain in our cornfields, to peer in the nooks and crannies of some old ruin or of some weather-beaten cliff, or to lose themselves amidst the far-stretching shelter of some noble forest, sure that in all these varying circumstances some interesting and beautiful forms will reward their search, we can readily imagine that the botanist alone would ordinarily turn his steps to the low-lying and dreary-looking salt marshes, or search the shingle along the sea-coast. Yet these bleak and unpromising-looking spots have a flora of their own: one by no means so extensive as that of many of the localities we have above enumerated—one that

contains few forms that can vie in grace with those of the hedgerow, the forest, or the stream, but which is, nevertheless, far richer than many who had never explored its unpromising stretches would imagine, and that contains many quaint and beautiful forms that can be seen in such situations alone. The hard conditions under which these plants have to grow gives them often, too, a weird and angular individuality that is very curious; something like that of trees growing near some open coast which show clearly how hard the struggle for existence has been; the branches seem blown landward, and the whole form is crippled and bereft of its natural appearance in the hard fight against the bleak salt-laden winds that roar at times with an almost resistless fury over the inhospitable shore.

We have already represented the yellow horned-poppy, one of the most striking plants of the maritime flora, and the present illustration gives us another, the sea-lavender.

The sea-lavender, or *Statice Limonium* of the systematic botanist, is frequently met with on the muddy shores at the mouth of some river, and in the salt-marshes that fringe the sea in many places. It is less common, however, in Scotland than in either England or Ireland, only one or two localities being given for it in the floras of the former country, while in England especially it is freely found where the conditions of growth are favourable. It appears to bear removal well; we have seen it flourishing and a perfect mass of bloom in gardens some distance from the sea. July, August, and September are the months in which it will ordinarily be found in flower.

The stock of the root of the sea-lavender is perennial, and from this rise the tufts of large radical leaves. These leaves are dark green in colour, glossy in surface, somewhat

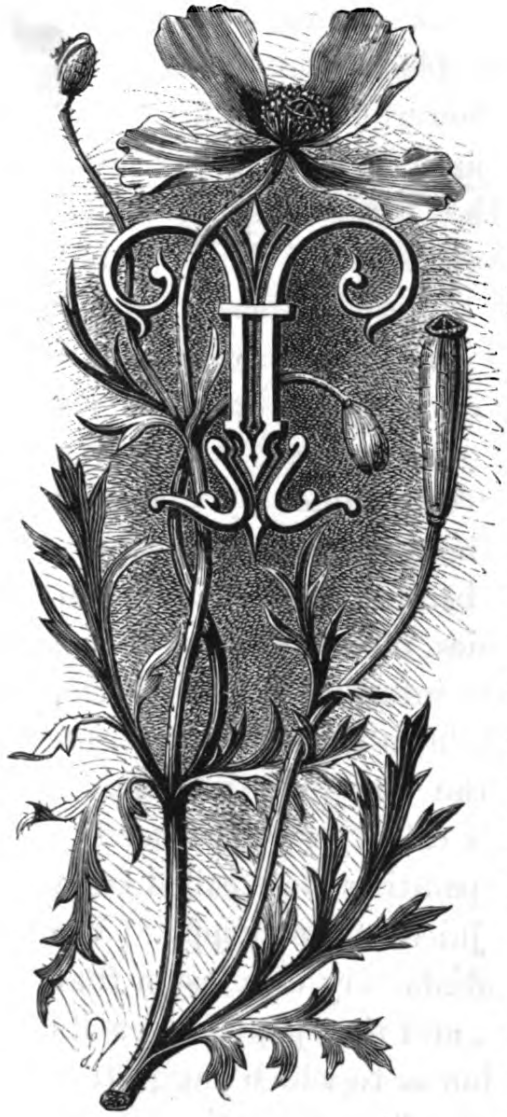
thick in texture, and from four to eight inches in length. The form is very simple, somewhat egg-shaped, but having a pointed apex, while the base of the leaf passes almost imperceptibly into the lines of the long stalk that bears it. The veining, owing to the texture of the leaf, is very indistinct, and but little more than the mid-rib of each leaf is noticeable. From this large and conspicuous rosette of leaves rise the flower-stalks. These are leafless and fork very freely; and from the general lightness of the effect, the absence of leaves and the small size of the blossoms, they present a great contrast to the heavy-looking mass of foliage from whence they spring. The flowering-stalks are some eighteen inches or so in height, and the numerous divisions into which they fork spread and curve boldly outwards. Towards the ends of these branches the numerous flowers are found growing in closely-packed spikes. The calyx is, in its upper part, purple, in its lower part green. The spikes of flowers are unilateral, *i.e.*, all the flowers are thrown off from one side, the upper in this case; there is, therefore, the same general direction in them all, and while in one spike the eye sees all the blossoms in side view, in another spike, owing to a twist in the stem or some other cause, one sees nothing but a long line of little circular blossoms all fully displayed. The flowers are of a bluish purple or lavender colour (hence its common name), and have five petals. The plant is very astringent in its nature, and has been advantageously used where medicines of that quality are desirable, a fact alluded to in its generic name, a title derived from the Greek verb *to stop*.

A variety of the plant, similar in its habitat, but smaller and less densely flowered, is frequently met with. Though

the differences are so slight as often to make it doubtful whether the plant be a variation at all, or merely an imperfectly nourished and developed plant, that would otherwise have been of the typical form, attempts have been made to give it an independent specific position, under the title of *S. rariflora,* or *S. Bahusiensis.*

Two or three other species of *Statice* are found around our shores, but as they are not by any means so common as the species we have figured, we need do little else than merely state the fact, leaving any of our readers who care to do so to turn to the description of them in any British flora, if they are so fortunate as to find a plant that is so far like our illustration as to lead them to think it some allied species.

PRICKLY HEADED POPPY.



THE PRICKLY-HEADED POPPY.

Papaver Argemone. Nat. Ord., Papaveraceæ.

THE common scarlet poppy we have already figured, and the subject of the present illustration, though one of our common British poppies, affords a marked contrast to that fine species. The prickly-headed poppy is the weakest in growth, and ordinarily the smallest of all our poppies. Though not unfrequently met with in cornfields and on waste ground, it is scarcely so common as the *Papaver Rhœas*, while it does not by any means force our attention to it by its brilliancy, as that species does. The prickly-headed poppy is an annual. The foliage is scanty, the leaves much simpler in form than in the common species, the segments into which they are cut being few in number. The flowers have four petals, and these, from their great length in proportion to their breadth, give the flower a very decided

cross-like form, instead of the circular form that, from the greater breadth of the petals, is seen in the other species of the genus. The red is by no means so intense as in the *P. Rhœas*, and each petal has ordinarily a rather large and conspicuous dark, almost black, spot at its base. The capsule that succeeds the flower, and contains the seeds, is long and cylindrical, and has its upper half studded with bristly hairs. The plant will generally be found in flower during the months of May, June, and July. The botanical name of the prickly-headed poppy is *Papaver Argemone*. The generic name is open to a certain amount of uncertainty. It was first bestowed on the genus by Linnæus, and in many cases the motive that led to the adoption of the various names by the older botanists is now obscure. It has been suggested, however, that the plants were so named because, from a certain narcotic quality that all the poppies, more or less, possess, the seeds were administered in the infantile pap, in Celtic, *papa*, as a provocative of sleep, while on the other hand, on searching out the derivation of the name of this simple food, we find it suggested that it is called *papa*, because the thick and milky nature of the preparation is so called from its resemblance to the milk-like juice of the poppy. We have arrived therefore at the unsatisfactory conclusion that poppy derives its name from pap, and that pap derives its name from poppy, and have no clue as to which suggestion should claim priority, although the first derivation seems to be the least unsatisfactory of the two. Another curious instance of the ambiguity that often manifests itself directly we attempt to analyse the meaning of these old terms is seen in the specific name of another member of the genus, the *P. Rhœas* already referred to. It is

derived from the Greek word *rhoua*, a pomegranate, we are told by one authority; it is from the Greek verb *rheo*, I flow, or fall, in allusion to the perishable and fugitive nature of the flower, another writer tells us; while a third accepts the verb, but draws a different conclusion, affirming that it is so called because when bruised, a red juice exudes from the petals.

The genus *Papaver* contains five English representatives, of these we have figured two, the present plant, and the scarlet poppy, or red-weed. As we may have no other chance of doing so, we avail ourselves of the present opportunity of referring to the other members of the genus, as they are sufficiently common to render a brief account of them not misplaced.

The remaining three are called, respectively, the round rough-headed poppy, the long smooth-headed poppy, and the white poppy. The plant we have figured in our present illustration has points of resemblance and of difference to the first two of these. It may, for a moment, be confounded in name, or in looking at illustrations merely, with the round rough-headed poppy, but it will be noticed that its head, or capsule, though rough with bristly hairs, is not round; or it may be likewise mistaken for the long smooth-headed poppy, but it will be seen that its head, though long in form, is not smooth in surface.

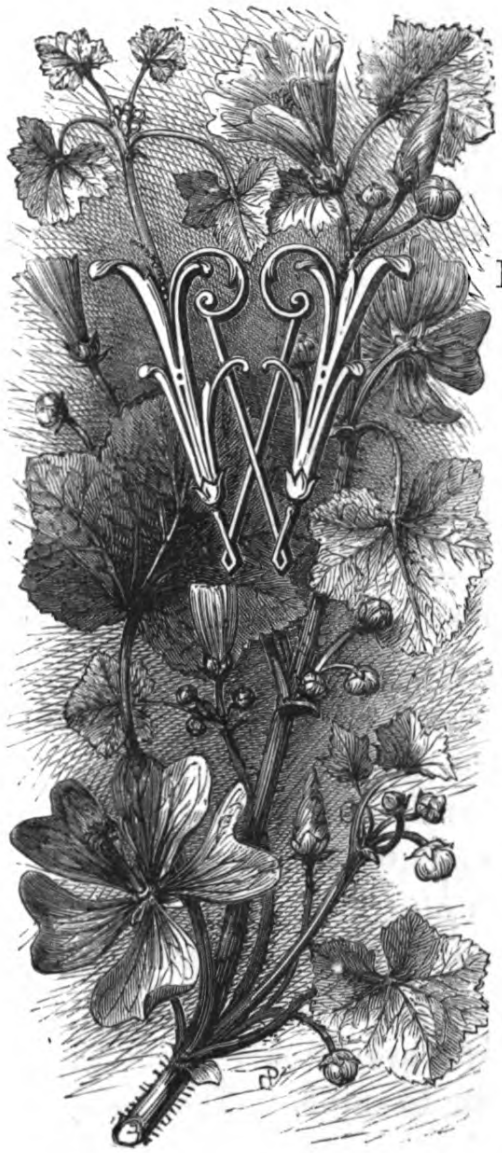
The round rough-headed poppy, or *P. hybridum*, is the rarest of our British poppies, it is much more local than the others, and seems to more especially favour a sandy or chalky soil. The flowers are rather purplish in colour, and the capsule, as the name of the plant implies, is globose in form, and thickly studded over with thick bristly hairs.

The long smooth-headed poppy (*P. dubium*) is not

unfrequently met with in cornfields; it bears a strong general resemblance to the common scarlet poppy, but is altogether smaller in its parts, and the flowers are not so deep a scarlet in colour. The capsule, though very similar in form to that of the prickly-headed poppy, is without the characteristic bristles, and the petals are much broader in proportion to their length than in that species.

The only plant remaining to be noticed is the *P. somniferum*, or white poppy. The petals, though ordinarily white, with a purple spot at their base, vary a good deal, and are often found of various shades of violet and red. It is the species that produces the poppy-heads and opium of the pharmacopœia. Though in the first place an escape from cultivation, it appears in several districts of England to have thoroughly established itself.

COMMON MALLOW.



THE COMMON MALLOW.

Malva sylvestris. Nat. Ord., Malvaeeæ.

WE have some six or seven plants called mallows, indigenous to Britain, but of these the plant represented is by far the most common in almost all localities. It appears to thrive equally well in all geological formations, and throughout England and Ireland is of very frequent occurrence, few waste places or wayside banks being unclothed with its large masses of foliage. In Scotland it is, however, by no means common, and in the northern part is almost if not quite unknown. It will ordinarily be found in flower by about the beginning of June, after which date it may be met with in profusion until the end of September, and isolated specimens will be occasionally met with even up till December if the season be mild.

All our mallows agree in several conspicuous points, and

to these points we may at once call attention. All are herbs, soft in texture, and making no solid wood, though the stems are somewhat rough and fibrous. The leaves are always arranged alternately on the stems, and are furnished at their bases with stipulate forms ; the leaves, too, are always broad and rounded in general outline, the veins all radiating from one point at their base like the spokes of a wheel or the folds of a fan. The flowers are always regular in form—that is to say, they are made up of a circular series of similar forms, and are therefore multi-symmetrical (not bi-symmetrical, or having only their halves alike, as in the pansy or ground ivy blossoms) when looked down upon in plan view. The calyx is composed of five parts, arranged in a valvate manner in the unopened bud, their margins being in contact, while the parts do not overlap at all. The term is derived from the Latin *valvæ,* folding-doors, as the parts of the calyx all fit each regularly into their allotted spaces, like the leaves of a folding-door. At the base, or some other point on the outer surface of the calyx, three or more little leaf-like bodies called bracts will be found, forming a sort of subordinate or outer calyx, though as they are not in contact with each other, it is rather to be considered as a suggestion of a second ring, than an actual development. In most of our species these little bracts on the exterior of the true calyx are three in number, but in two they vary from six to nine. The petals are five in number, curiously twisted into a spiral before expansion, as may clearly be seen in the half-opened buds and flowers in our illustration. The stamens are very numerous, and bound together at their bases, and throughout a good portion of their length, into a pillar-like

form. This is a very characteristic feature of all members of the mallow family. The arrangement is called monadelphous, from two Greek words signifying one brotherhood. The style is either composed of one or more members having several stigmata. The fruit is a capsule made up of several parts arranged in a ring round the base of the style. By country children they are often called "cheeses," from their circular yet flattened form, and are freely eaten by them. They are quite harmless, and any number apparently may be eaten with impunity. The hollyhock of our gardens is a cultivated species of mallow, and all the points we have above referred to may be well seen in it, as its size makes it an easy matter to detect the various features of growth we have endeavoured to elucidate. The cotton-plant is another well-known species of mallow. The common mallow is botanically known as the *Malva sylvestris.* The genus was so named by Linnæus, in allusion to the soothing effect and valuable mucilaginous nature of the species, almost all of which possess emollient qualities of distinct value in the healing art. The word *malva* is derived from a Greek word signifying soft. The specific name refers to the places where the plant may often be found, and is a term of not unfrequent occurrence in botanical nomenclature. We meet with it, for instance, in the scientific name of the horse-mint, *Mentha sylvestris,* and several other plants. The plant was by the Anglo-Saxons called *Malu* or *Medlwe.* It is the *Malve* of the Germans, the *Mauve* of the French.

The common mallow is a perennial. It attains to a height of some three feet, or even more, on waste land, though by the roadside it may often be seen

in vigorous life and covered with blossoms, and barely a foot high altogether. The stems and leaves are often thickly clothed with soft hair. The leaves are all borne on long stalks, and are divided into five or seven broad and rounded lobes. The outline is serrate. The flowers grow in clusters of half a dozen or so from the axils of the leaves. The petals are heart-shaped, reddish-purple in colour, and veined by two or three rather conspicuous lines of a darker tint of the same colour. The flowers vary somewhat in strength of colour; in some plants the tint is much deeper than in others, but beyond this the plant is very little subject to any great variation, and no difficulty, we imagine, will ever be felt by any of our readers in its identification. The plant is often called the marsh mallow in country districts. The marsh mallow is, however, another and much less common plant, and we can only conclude that "apt alliteration's artful aid" has exercised a certain fascination, and has in this case, at least, proved a snare.

AGRIMONY.

THE AGRIMONY.

Agrimonia Eupatoria. Nat. Ord., Rosaceæ.

THE agrimony is one of the most graceful in general growth of our smaller herbs, and the nearer inspection of its parts confirms the favourable impression made on us by a first glance. The long flowering-stems rise to a height of some two feet or so, and terminate in a long spike of yellow blossoms. As we have not had occasion to use the term before, we may mention that the inflorescence of a plant is said to be a spike when a series of stemless flowers spring from the one central stalk that is common to them all. The flowers are in this case said to be sessile, a term meaning sitting. The spicate inflorescence is not often found, as in most cases the flowers that spring from such central stem are not adherent, but are borne on short stems of their own, as we see in

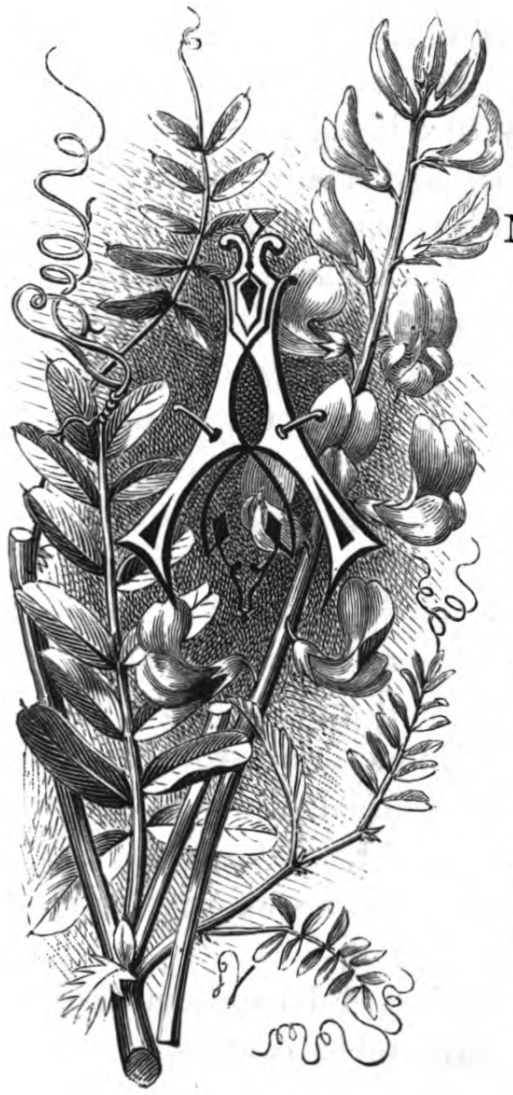
the wild hyacinth, and many other flowers. At the base of each flower in the agrimony we find a small bract cleft into three acute segments. The flowers have five conspicuous and spreading petals, which are somewhat narrow in proportion to their length, and of a bright yellow colour. The flowers face boldly outwards and upwards towards the light, but after these have withered the calyx points downwards, and becomes thickly covered around its extremity with a mass of small bristly hairs that spread and develop into a burr-like form. The leaves are very rich in outline; those near the ground are often seven or eight inches long, while the upper leaves will generally be only about three inches in length. A very beautiful gradation both in the size and richness of the leaves is readily noticeable. All the leaves are very similar in general character, but the upper leaves have far fewer leaflets than the lower, and such leaflets as there are, are less cut into segments, and have altogether a simpler outline. These leaflets, as may readily be seen in the illustration, vary very considerably in size, as besides the six or eight large lateral leaflets and the terminal one—those that at once catch the eye—the stem is fringed with several others that are very much smaller than these, and ranged in the intervals between them. The form is a very beautiful one, and may be very well seen in several other plants besides the agrimony. The silverweed and the common avens are good examples, and easily to be procured for comparison.

The agrimony is very commonly found throughout England and Ireland. In Scotland it is much more local, and does not penetrate very far northward. It must be looked for on hedge-banks, roadsides, and on patches

of waste ground. The plant is perennial, and flowers from the middle of June to about the end of August. It is the *Agrimonia Eupatoria* of the botanist. It is a plant that is subject to a very considerable amount of variation, some specimens being far larger than others, much more clothed with hair, and presenting many other differences. It has therefore by some writers been divided into two species, but it is now very fairly established by general consent that the division can scarcely be maintained. As one of the features that accompanies the fuller development of the parts is a greater fragrance, one of the species was named *A. odorata.* The generic title is corrupted from the word *argemone,* a name given by the early Greek writers to a plant held in great repute for the cure of cataract. There is very little proof forthcoming that this is the plant these old writers referred to, but like most other plants, it had in the Middle Ages, various virtues assigned to it, virtues into which we need not here go, as many of them are too palpably out of all reason to make it worth while even to enumerate them; curiously enough, however, amidst the numerous ailments the agrimony was reported to cure, we find no mention of an eye affection, cataract or any other. The plant would really appear to be in some slight degree febrifugal and tonic in its operation. It is one of the plants that in some districts form what is called "spring drink," a compound made by an infusion of several herbs, and drunk, as the name implies, in the spring-time, as a purifier of the blood. It is also said by some writers that the agrimony yields a good yellow dye. How far this may be the case we are unable to say, as we have no personal knowledge; but we do know that many such

statements are not altogether trustworthy. An old writer affirms some such property, and the statement is copied without question into one book after another, no one apparently caring to take the trouble to verify it. Our experience of the reputed fondness of the ass for the rest-harrow we have already referred to, and some few other such experiences have made us somewhat sceptical. We remember, for example, reading that the juice of the berry of the dwale, or deadly-nightshade, would stain paper a beautiful and permanent purple. We tried it; the beauty was even at first by no means apparent, and the dull and dingy colour of the paper in a day or two's time afforded an effectual answer as to the question of the permanency of the dye.

WOOD-VETCH.



THE WOOD-VETCH.

Vicia sylvatica. Nat. Ord., Leguminosæ.

ANY of our readers who have taken such an interest in plants as to care to collect them, or at least to observe them, will no doubt have readily detected that certain plants are always found under certain conditions, and that beyond the pale imposed by these conditions, all search is fruitless and disappointing. A plant may therefore be either very rare or very common—very common if searched for in the right place, and at the proper season; very rare if searched for amidst uncongenial surroundings. The common and the open moorland, the stream, the sea-beach, the woodland glade, have each their appropriate flora, and it is only by visiting all these that one gets a fair idea of the rich variety of our wild plants. The heaths, the golden broom, and prickly furze, are all in an especial degree plants of

the open waste. The flowering rush, the arrowhead, the white and yellow water-lilies, are the treasures of the stream; the bleak sea-beach has no less its special plants—the purple sea-lavender, the crimson thrift, the golden blossoms and long waving pods of the horned poppy, the quaint foliage of the sea-holly. In like manner our woods and forests have their characteristic blossoms—the golden daffodils, the purple hyacinths, and many others: the wood-vetch, the plant represented, is one of these.

Though in some places common enough, it is one of our more local plants, as it has nothing like the universal range of many of our flowers. It is more especially a northern plant, and seems to delight particularly in open woods on the mountain-sides. It is not at all an uncommon plant in Scotland and the northern counties of England, and it also occurs from time to time in hilly and woodland districts in many other parts of England. The specimen from which our illustration was copied was found in a wood in Wiltshire, where it may be met with in abundance, and it has even been found in a locality so far removed from the district of its especial choice as Kent. Wherever found, it is always, however, what—if we may borrow a term from our railway engineers—we may call a "high-level" plant.

The wood-vetch is a very striking and handsome-looking plant when found under favourable conditions. It frequently attains to a height of some five or six feet, or even more, its long stems trailing over the bushes and undergrowth, climbing and supporting themselves by means of the long and branching tendrils with which they are abundantly furnished. The form of the leaf is similar to that of the tufted vetch (*Vicia cracca*) and other equally

commonly distributed species of the genus, but it is larger in size. It is composed of a great number of leaflets, ranged in two rows up the stem; eight or ten pairs of these leaflets would be about the average number in each leaf. The leaf does not terminate in a leaflet, as in the ash, the elder, and many other leaves of this type, but the central stem is elongated to some distance beyond the last pair of leaflets into a thin tendril that often has lateral tendril-forms given off from it. These tendrils are very strong, and give the plant a great power of grasping and holding on to any convenient point of support, a very needful feature in the economy of the plant, as it is itself quite destitute of the strength that would enable it to stand alone, and make its own way in the world. The leaves have at their bases broad stipules deeply toothed, and altogether very different in form from the members composing the true leaf. The flowers are large and very numerous, pure white, and freely streaked with purplish-blue veins. The stems or peduncles that bear these are of considerable size, ordinarily longer than the leaves; the flowers spring from these in a long line of beautiful forms, and as they are not so densely crowded on the flower-stem as in some of the other species, the grace of the form and the delicacy of the colouring are easily perceived and duly appreciated. The inflorescence is racemose—that is to say, each flower is borne on a small stem of its own that springs from the common flowering stem. It is a very common form of inflorescence, and may be readily seen in the hyacinth, the mignonette, and many other well-known flowers. The pods succeeding the blossoms are about an inch long, and rather broad in proportion to their length, as compared with those of many other species of the great pea-flower family.

The scientific name of the wood-vetch is *Vicia sylvatica.* The generic name is open to a certain amount of doubt, though possibly it may be derived from the Celtic word *gwig,* from whence spring in turn the German *wichen,* and the English word vetch. The specific name is sufficiently indicative of the sylvan shades in which the plant delights to need no lengthy explanation. The wood-vetch is a perennial. It may be met with in flower by about the middle of June, and lasts in flower from that time until well into August.

CORN SOWTHISTLE.

THE CORN SOW-THISTLE.

Sonchus arvensis. Nat. Ord., Compositæ.

LIKE the poppy, the corn-marigold, and the blue-bottle, the corn sow-thistle is one of the characteristic plants of cultivation, and may frequently be met with in cornfields almost throughout the whole of Britain. The plant is a perennial, and may be found in flower during August and September. Our readers will be careful to bear in mind the broad distinction between a perennial plant and what is popularly called an evergreen. The corn sow-thistle is the former, but certainly not the latter, as it is the root-stock only in this and in so many other plants that survives from year to year. Each year new shoots arise, blossom, scatter their seed, and decay, leaving no apparent trace behind them of their existence.

The present species is the *Sonchus arvensis*. The

specific name, as we have already seen in several instances, the *Convolvulus arvensis*, &c., refers to the favourite locality of the plant, and only the generic name therefore calls for any comment. The word is derived from the name bestowed on this or some similar species by the ancient Greek writers, which name was in turn, it was conjectured, derived from the Greek word for hollow, this species, like all the other members of the genus, having thick succulent stems, that, like a pipe, have a hollow space running down their centres. The name sow-thistle was bestowed on the various species of this genus because, though somewhat like a thistle, they were not really thistles after all, and such a prefix as sow, horse, or hog, is frequently in popular nomenclature put before the name to indicate that the plant is spurious and worthless. The case of the sow-thistle is a somewhat hard one, for it clearly is no more like a thistle than a thistle is like it; and it is at least as useful a plant as a thistle, and therefore deserves no such opprobrium. Pigs are particularly fond of the succulent leaves and stems of the sow-thistle, and it has therefore been suggested that the popular name in all good faith bears testimony to this liking on their part; but the analogy between this and the structure of several other old plant-names leads us to conclude that the first explanation of the name is the true one. We have gone into this question at some little length in our remarks on the dog-rose, and to those we would now invite any who feel an interest in the question to turn back.

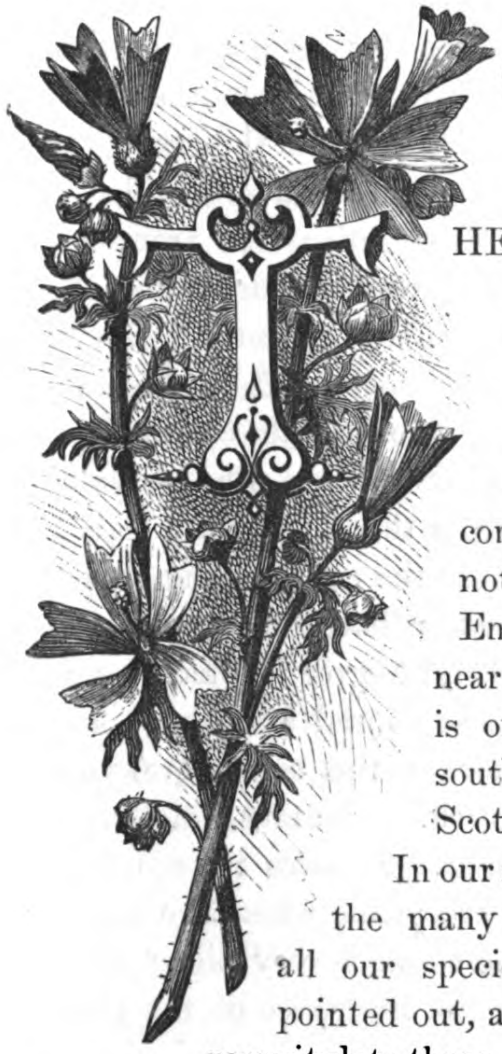
The root-stock of the corn sow-thistle is large, and creeps almost horizontally some little distance. The stems that rise from it are often three or even four feet high; the

plant, therefore, where it occurs at all, cannot well escape being seen both on account of its fine size and of the large and brilliant yellow flowers it bears. The leaves are large, and, as will be seen in our illustration, are somewhat long and narrow. The numerous lateral lobes stand boldly out from the central line, and are either at about right angles with it, or at other times point downwards towards the base of the leaf, as we see the very similar segments of the dandelion leaf do. At other times the lobes are not so clearly developed; in this case the outline of the leaf is what is termed botanically sinuate—that is to say, irregularly waved. Whatever the form of the leaf, its edges are thickly covered with small but very sharply-pointed teeth. The upper leaves of the plant are much smaller and much simpler in form than the lower. All the leaves, whatever their position on the stem, clasp it at their bases. The lower leaves are stalked, the upper spring directly from the stem. The flower-heads are very large and conspicuous, and the form of what for convenience sake we may call the bud is curiously square, a feature that is readily noticed again in the common sow-thistle, a plant figured in another of our illustrations. The so-called bud is really the involucre or mass of bracts from which the composite flower-head springs. After flowering the drum-like form is lost, the form becoming conical: this may be well seen in the illustration, just referred to, of the other species of sow-thistle figured in our series. In the present plate, with one exception, all the blossoms have yet to expand; the plant was sketched in an early stage of its flowering. The inflorescence is by some authorities said to be paniculate, by others corymbose. The nature of a corymb will be found defined in our remarks on the yarrow, a

particularly good example of the corymbose arrangement. The inflorescence is said to be racemose when, as in the hyacinth, a number of flowers supported on small stems are given off at intervals from the main stem that bears them all. If, however, these subordinate stems of the raceme branch and bear more than one blossom the result is a panicle, a term usually applied to any loose racemose inflorescence in which the stalks are irregularly elongated and branched. The inflorescence of the corn sow-thistle is certainly rather paniculate than corymbose.

The curious little glandular hairs, looking very like little pins stuck all over the stems and involucres, will not escape notice; they may also be very well seen in the *Sonchus oleraceus*, the common sow-thistle.

MUSK- MALLOW.



THE MUSK-MALLOW.

Malva moschata. Nat. Ord., Malvaceæ.

THE musk-mallow, the subject of our present illustration, while not so abundantly and generally found as the plant elsewhere figured, and which by pre-eminent right is called the common mallow, is nevertheless not uncommonly met with in England and Ireland. Like its near ally the common mallow, it is only found in Scotland in the south; in the northern counties of Scotland it is wholly unknown.

In our remarks on the common mallow the many features that are common to all our species in the order *Malvaceæ* are pointed out, and we need not, therefore, here recapitulate them. The musk-mallow is a perennial. From its root proceed several light and delicate-looking stems, erect in general direction, very slightly branching, and covered frequently with numerous hairs. The plant is ordinarily from one to two feet high; it may at times be found even higher, but this is exceptional, and will generally

be found to be the result of being drawn up from want of air and light, or some other disturbing cause, as it is on the average a decidedly smaller plant than the commoner species. The leaves vary a good deal in form according to their position on the plant. The lower leaves are reniform and divided into five or seven broad lobes that do not penetrate very deeply into the body of the leaf; those on the stem, on the contrary, are very deeply divided, and the segments are themselves narrow and much cut into and subdivided, a feature that at once serves to distinguish this from our other indigenous species. The flowers are large, and the form of the petals is rather peculiar, appearing almost as though the end of each had been bitten off in a somewhat ragged and deeply curved line. The colour is a delicate pink, varying at times to pure white. The blossoms spring either singly or in pairs from the axils of the leaves, but occur almost entirely at or near the ends of the stems, so that the general effect produced is that of a stem clothed with graceful and finely-cut bright green foliage, and crowned with a mass of large rose-coloured blossoms. The involucral bracts on the exterior of the calyx are very narrow in proportion to their length. The musk-mallow is the *Malva moschata* of the botanist. It owes its name to a slightly musky smell that is perceptible when the leaves are passed through the hand; the odour is very slight, however, and suggests but little of the fragrance of the plant after which it is called. The plant may be found in flower during July and August, and should be looked for in pasture-land and roadside wastes and hedgerows. Its masses of delicate pink blossoms, and their large size, are sufficient to make it very conspicuous, but it is much more commonly found in some districts than others.

The tree-mallow, or *Lavatera arborea*, is a fine allied species. The stems are often five feet high; the blossoms are large and of a rich purplish-rose colour. It is only found on maritime and insulated rocks, and is very local even under these limited circumstances. The name was given to the plant in honour of the two Lavaters, men of note in the scientific world as botanists in the earlier days of the science.

The dwarf mallow, or *Malva rotundifolia*, is very commonly met with by the roadside and other waste ground. It is altogether a much more diminutive plant than the common mallow, though in most other respects it is very similar to it. It was by the older botanists called the *M. vulgaris* or *M. neglecta*, names that need no translation, and amply testify alike to its commonness, and the ordinary consequences thereof in accordance with the old wise saw that so closely links together familiarity and contempt.

The marsh-mallow is the only remaining species on which we need dwell at all, as the hispid mallow is too rarely met with to be at all likely to come within the reach of any of our plant-seekers: it has been carried into some few places among other seeds, and appears to have fairly established itself in one or two places in Kent, but it has not the slightest claim really to a place in our flora. The marsh-mallow is the *Althæa officinalis* of science. It is often in common parlance confused with the musk-mallow, from a certain resemblance in the names. The generic name is from the Greek verb signifying to cure, while the specific name in like manner alludes to its officinal value. It flowers during August and September with a pale rose-coloured blossom, and must be looked for in marshy districts, not far removed from the sea. The plant grows

some three feet high or so, and is covered all over with a velvety down. The marsh-mallow has long been valued as affording a desirable remedial agent. Classic, mediæval, and modern authorities are unanimous in extolling it. The roots abound in a mucilaginous matter that is of great service in pectoral complaints; they are thick and fleshy, and much resemble those of the parsnip, and yield nearly half their weight of this valuable mucilage. Preparations of the marsh-mallow are included in our pharmacopœia, and instructions are therein given for the preparation of decoctions, syrups, and lozenges from the plant. Their action is demulcent and emollient.

Some of our readers may recall a passage in the book of Job, where it speaks of those who through want were fain to flee into the wilderness and cut up mallows for their support. It is always open to question in such matters how far our translators have correctly divined the herb intended, but we have good authority for saying that the poor in Palestine, in the present day, largely use a plant of this genus to eke out their scanty diet. The leaves of the common kind are at times used in our own country districts as an article of food.

AUTUMNAL HAWKBIT.

Ben George

THE AUTUMNAL HAWK-BIT.

Apargia autumnalis. *Nat. Ord., Compositæ.*

THE plant we have here figured is one of the most common of several very similar-looking herbs. It is a perennial, and abundantly distributed throughout Britain in meadow land, and on commons and other such waste spaces of ground. It flowers about August.

The autumnal hawk-bit has several long and spreading radical leaves that are divided into more or less regular lateral lobes, and are sometimes thickly covered with stiff hairs, that, from their number and grey colour, give a kind of bloom to the leaf, though at other times the leaves are almost or entirely destitute of them. From this ring of leaves the flower-stems rise boldly up, and then presently branch off into two or three peduncles that bear the flower-heads. These are ordinarily quite destitute of hairs, but have at intervals

several scales placed singly; these are long and narrow, and pointing upwards. The summit of the peduncle, where it joins the involucre, is enlarged and swollen-looking. The flower-heads themselves are rather large, and of a brilliant yellow, and form by far the most noticeable part of the plant, as, when seen growing, its small leaves are lost in the surrounding herbage, and its fine stems do not catch the eye at all.

The autumnal hawk-bit is by some botanists placed in the genus *Leontodon*, and called the *L. autumnalis*, while others place it in *Apargia*, and called it *A. autumnalis*. The generic name *Leontodon* is derived from two Greek words signifying lion-tooth: the reason for this will be found in our remarks on the dandelion. *Apargia* is derived from the name bestowed by the Greeks on this or some similar plant, this name being taken from the two Greek words meaning from idleness; the implication being that it is nothing but the idleness of the agriculturist that allows such plants to spring up in his ground. The specific name, it will be seen, in each case is the same; it is too evident in meaning to call for any remark. Two or three varieties of this species are recognised, and one or more species have been included in the genus. The plant was at one time placed in the genus *Hieracium*, a name, Greek in its origin, which refers to an ancient belief that hawks eat these plants to sharpen their sight, a belief that is also indicated in the names hawk-bit or hawk-weed. There are, as we have already said, several plants that strongly resemble the present species, and they have consequently given a great deal of trouble to classify. Of the hawk-weeds alone there are, according to one writer, seven species, while according to another there are thirty-three. Some

observers attach importance to features which seem to others comparatively worthless, hence, not only the species, but even the genera in which they are to be placed are by no means definitely accepted. The subject is one with which amateurs can scarcely deal, and we only refer to the difficulties at all, because in so doing we thus account for the various names that the plant has borne at one period or another, or in the system of classification of one or other observer.

As this is a very fairly typical composite flower, a few words on the family to which it belongs will not be out of place. The *Compositæ* family of flowering plants, from the striking and exclusive features they possess in common are at once readily distinguished from all others, but are on the same account very difficult to deal with so as to discriminate properly between them. In every case the florets are collected into heads on the summit of the stalk, and these at their base are surrounded by the involucre, a cup-like form composed of rings of bracts. The style of the pistil is divided at the top into two parts, which curl downwards in a scroll form: they may be clearly seen in the succory. The corolla of each floret is either tubular and regular in form, or else this tube is split down nearly to its base and then flattened into a ribbon-like form. In some of these plants all the florets are tubular: the thistles may be taken as a good example of this section. The nodding thistle, the spear-plume thistle, and the burdock may be referred to as illustrations.

A second section is composed of plants in which all the florets are ligulate, that is to say of the long strap or ribbon-like form. Examples of these may be seen in the dandelion, the succory, the corn sow-thistle, the common

sow-thistle, the subject of the present plate, and the nipplewort.

The third great section is that wherein each flower-head contains both types of flower. In this case the tubular flowers are always in the centre, and are called the florets of the disk, while the ribbon-like forms constitute the outer ring, and are called the florets of the ray. For examples of this type the reader may turn to the daisy, the ox-eye, the rag-wort, the mayweed, or the yarrow.

In the first of these divisions the florets are generally purple, in the second they are almost always yellow, while in the third the disk is ordinarily yellow, and the rays white.

SPEAR-PLUME THISTLE.

THE SPEAR-PLUME THISTLE.

Cnicus lanceolatus. Nat. Ord., Compositæ.

WE have already figured one species of our numerous indigenous thistles, the nodding or musk thistle, and in our present illustration represent another, which is perhaps equally striking in form, and is of even more common occurrence, for there are few hedgerows and wayside wastes in which it may not be encountered in more or less abundance. The musk thistle is exceedingly common in its special localities, and so, too, is the spear-plume in its favourite places of growth; but as the former is a lover of the bleak moorland or open down, while the other is in almost every hedgeside, the profusion of the latter, though perhaps not actually greater, is at least more immediately noticeable by the ordinary observer.

The spear-plume thistle is the *Cnicus lanceolatus* of

botanical classification. The generic name is derived from a Greek verb, signifying to pierce or wound, and is sufficiently expressive of the prickly character of the plants. It may be good policy to grasp your nettle boldly, but the thistle seems to necessitate another treatment altogether, or a sharp repentance of a step too rashly bold will give marked emphasis to the point of the derivation. The specific name, signifying *like a lance-head*, is bestowed on the plant from the form of its foliage. Its familiar English name was no doubt given to it from its sturdy upright growth and the sharp points with which it is armed, while the tufted crimson-purple blossoms with which it is crowned may not inaptly represent the warrior's plume.

The plant is a biennial. Its stems are stout and strong, and attain to a height of some three or four feet. The leaves, as we have seen, are lanceolate in shape, deeply cut, each lobe terminating in a long and very acute prickle. The leaves are on their upper surface of a rather dark green colour and covered with spinous hairs, while the lower surface is lighter in colour and covered with a downy or cottony substance. Like those of the nodding thistle or the comfrey, the leaves of the spear-plume are continued some distance down the stem from which they spring. The flower-heads stand singly (in some species of thistle, as in the marsh thistle, *Cnicus palustris*, they grow in a dense cluster), and are large and conspicuous. Like all the other thistles, the flowers are succeeded by the feathery seeds, which, when ripe, are wafted on the breeze over the whole country side. The various species of thistle not unfrequently vary from the normal colour of their flowers to pure white, and to this the spear-plume is no exception. It may perhaps be

advisable to take this opportunity of briefly describing the commoner species of this genus. We must, however, refer, in passing, to the milk thistle (*Carduus marianus*), a plant which is by no means common, but which may be at times found, and which is so strikingly beautiful that we cannot well pass it by unmentioned. It may at once be known by the large white veins which reticulate so conspicuously over its glossy dark green leaves; the flowers, too, are very large and handsome in form and colour.

There are thirteen or fourteen indigenous species of thistle, but it would be impossible to convey a true idea of their peculiarities by a mere description, without going into technicalities that would be quite beyond our present scope. A further difficulty in indentifying the various species is found in the fact that besides the recognised specific forms, many of the species hybridise freely, and thus a series of intermediate forms of more or less permanence and distinctness of character is created. The only other species which we need here refer to are the marsh thistle and the dwarf thistle, both sufficiently distinctive forms to render our remarks intelligible and, we trust, serviceable.

The marsh-thistle, *C. palustris* (Lat. *palus*, a marsh), throws up a long stiff stem; it is scarcely branched at all, and is often from five to six feet high. These stems bristle throughout their entire length with closely-set and peculiarly pointed spines. The leaves are narrow and long, much narrower in proportion to their length than those of the spear-plume thistle, and run for a considerable distance down the stem. The flower-heads are small in themselves, but are grouped together into large clusters, a feature that tends

to distinguish it from most of our thistles, though one or two others exhibit the same characteristic in a minor degree. The marsh-thistle flowers by about the end of June, and lasts some considerable time in blossom. It is abundantly met with in moist low-lying meadows throughout Britain. The dwarf thistle, *Cnicus acaulis*, or stalkless thistle, is a species of very common occurrence in the south and some central districts of England, but is not freely found elsewhere in our islands. It is abundantly met with on dry pasturage, and more especially on gravel and chalk. It is at once distinguished from all our other species by the absence of a stem. Its numerous small and very prickly leaves spread out in a circle close to the turf, and from the centre rises one or more flower-heads, the entire plant being thus only three or four inches high. The flowers are rather large and of a deep purple colour, and have a somewhat quaint effect as they are seen just emerging from the short springy grass on the face of some great swelling down. The plant is a perennial, and flowers during July, August, and September.

CELANDINE.

THE CELANDINE.

Chelidonium majus. Nat. Ord., Papaveraceæ.

WE have already seen, in our comments on the lady's-smock, that a considerable amount of ambiguity and difficulty has arisen from the fact that that and one or two other plants flowering at about the same time are all called cuckoo flowers, and a very similar difficulty has arisen in the present case. The word celandine is derived from the Greek word for a swallow, because the flower is supposed to come into blossom about the same time that the swallows return to us in each recurring spring; and as several other plants are then flowering as well as this, the name has not been confined to the present species. One of the earlier buttercups, a plant we have already figured, though more correctly called the pile-wort is almost as well-known by the name of celandine. The pile-wort is ordinarily called the lesser celandine as a

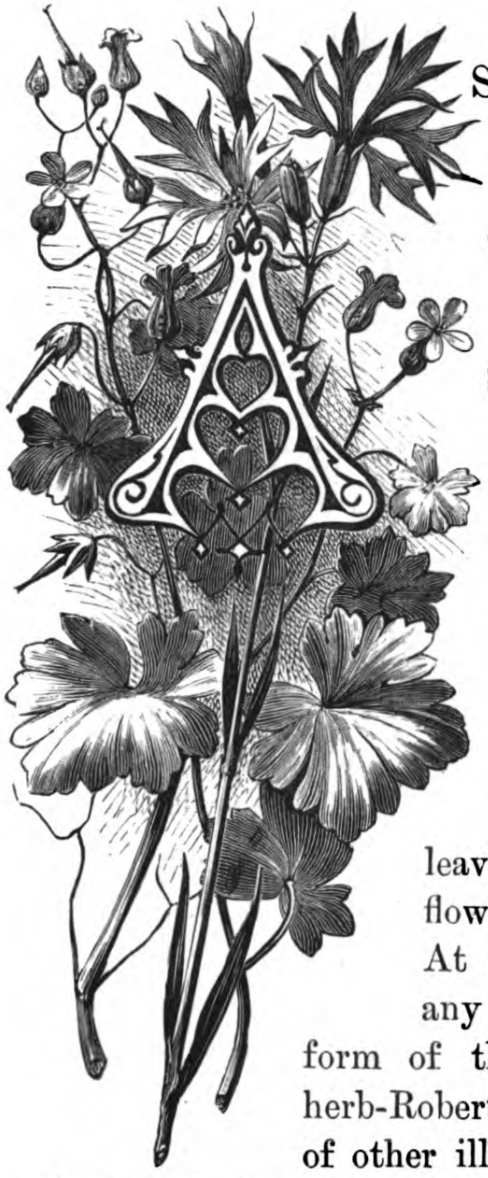
distinction, but in any case confusion is caused—a confusion that, had more care been taken in floral nomenclature in the olden time, need never have arisen, as the names are the only common point of resemblance between the two plants. The true celandine, the subject of our present illustration, is known botanically as the *Chelidonium majus*—*Chelidonium* having the same derivation and significance as celandine. On this account, too, the plant is sometimes in old herbals called the swallow-wort. Some writers go so far as to assert that the celandine not only arrives, but departs with the swallow; naturally such a statement can only be an approximation to the truth, as so many climatic and other influences arise with potent force to set aside the old theory. The celandine will ordinarily be found in flower by the third week in April, and lasts in blossom throughout the summer; some few specimens being occasionally met with up to the middle of October. The swallows, should the season be mild and open, will ordinarily arrive in the second week in April, and they leave us again about the middle of September, though some few may often be found for almost a month after the departure of the main body. The dates, therefore, sufficiently coincide to satisfy the not too exacting requirements of popular belief. The idea has arisen in our minds, and, so far as we are aware, it has never been pointed out before, that a further point of resemblance, that would have been at least confirmatory to the minds of the older writers, if not in itself sufficient to build a name on, may be found in the fact that both bird and plant seem to have an especial liking for the company of man. The swallow builds fearlessly and confidingly beneath the eaves of the cottage roof, and the

celandine, difficult as it is to account for the fact, is rarely, if ever, found away from the neighbourhood of man; its favourite spots being the cottage hedgerow or the waste ground around farm and other buildings.

The celandine belongs to the same natural order of plants, the *Papaveraceæ*, as the poppies. The plant is a perennial. The general growth of the plant is erect, its stems tender and delicate-looking, branching a good deal, and attaining to a height of from one to two feet. At the various points at which branches are given off the stem is swollen and jointed, and breaks very easily. The whole plant, but especially the stem, is full of a bright orange juice, that issues immediately and in considerable quantity directly the stems are anywhere broken across. This juice stains the hands a good deal, and if the tip of the tongue be placed in contact with it, the taste is not only exceedingly acrid and nauseous, but lasts a long time in the mouth. The tender nature of the plant was very well impressed on ourselves personally, as the sketch from which the present illustration was copied was made from the fourth handful of the plant we brought home with us; in three preceding attempts the plant withered before we were able to make any use of it. The leaves are very thin in texture, and droop almost directly they are gathered. The leaf is composed of a terminal leaflet and several laterals, and is of a very unusual and beautiful form. The flowers are small and very fugacious, though, as a set-off to the disappointment of finding on arriving home with a specimen that all its blossoms have disappeared, the buds will, if the plant be placed in water, readily expand. The blossoms have four bright yellow petals arranged in the form of a cross, and the novice might possibly at first assign the plant a

place amongst the crucifers, but the dense mass of stamens, a feature never seen in the *Cruciferæ*, would in itself be sufficient to demonstrate that the plant has no such affinity. The inflorescence is umbellate, *i.e.*, all the little stems of the flowers in each bunch spring from one common point, as in the flowering rush and the numerous plants, such as the carrot, hemlock, parsley, water-dropwort, fennel, and chervil, that form, with many others, the great natural order of the *Umbelliferæ*, an order so-called from this form of inflorescence being common to all the species. The inflorescence of the celandine, of the cherry, and of the flowering rush, is in each case in like manner umbellate, but they all differ from each other, and from the hemlock or carrot, in so many respects that each belongs to a distinct order, the many points of divergence being much more marked than the one point of resemblance. On the fall of the flower of the celandine it is succeeded by a pod about two inches in length. As the plant remains in blossom for a very considerable time, the bud, the fully expanded flower, and well-developed pod, may often all be seen together in one umbel.

SHINING-CRANES-BILL & RAGGED-ROBIN.



THE SHINING CRANE'S-BILL AND RAGGED ROBIN.

Geranium lucidum. Nat. Ord., Geraniaceæ.
Lychnis Flos-cuculi.
Nat. Ord., Caryophyllaceæ.

S possibly some of our readers may not have sufficient knowledge of the subject to discriminate correctly between the two species represented so as to be able to say which is which, we may well preface our remarks on the plate by pointing out that the plant with small flowers and rounded leaves is the crane's-bill; the large-flowered plant, the ragged robin. At the same time we imagine that any one who notices the general form of the meadow crane's-bill or the herb-Robert, plants which form the subject of other illustrations in our series, will find little difficulty in detecting a sufficiently satisfactory likeness to those plants in the structure of one of the two here delineated to enable them to give a shrewd guess at

the plant best entitled to bear the name of crane's-bill. Probably, on the other hand, the smallest child or merest novice, if asked to pick out the plant they thought most likely to be called ragged robin, would point to the flower with the large, deeply cut, erratic petals, and the guess, as we have seen, would be a correct one; though, as surmise and knowledge are not quite identical terms, our opening sentence is not an altogether superfluous one.

The shining crane's-bill is the *Geranium lucidum* of the botanist. The generic name is derived from a word in Greek that signifies crane, and alludes to the form of the fruit, which is something like the bill of that bird; while the specific name is the Latin equivalent for bright or shining. Its specific and common English names arise from the smooth and polished surface of both leaves and stems. The plant will, under ordinarily favourable conditions of growth, be found in flower by the beginning of May, and lasts in blossom throughout the summer.

The plant is an annual, but seeds so freely that it holds its ground almost as effectually as if it were more long-lived. It attains to no great height, as the stems, which fork a good deal, spread out laterally. The stems, like those of most of the crane's-bills, are jointed, swelling at the articulations, and brittle. The leaves are in general form circular, but deeply cut into five lobes or broad segments; the lower ones are somewhat simpler in form. The whole of the foliage is, in the spring and early summer, of a peculiarly bright green, but as the days of June pass away the leaves often become bordered with red, and ultimately the whole plant turns a rich crimson colour. The flowers are small, arranged in pairs, and of a beautifully pure rose tint. The calyx is pyramidal in form, the edges of its sepals forming

very conspicuous angles at their lines of contact. Three of the sepals differ somewhat in form from the remaining two.

Though at times found in the hedgerow, the natural habitat of the shining crane's-bill is on dry and stony wastes, rocks, and old stone walls, its large masses of shining green or glowing crimson foliage and its small pink blossoms being a beautiful covering to the rugged grey stones that give them support. It is generally distributed, but seems to prefer either a chalk district or a hilly and mountainous tract of country. Several other species of the same genus, and all familiarly known as crane's-bills, may be found. With the exception of one by no means common species, all agree in one conspicuous point: the flower-stem, or peduncle, bears at its summit two lesser stalks, or pedicles, and each of these is surmounted by a flower. This feature, though not absolutely peculiar to the crane's-bills, will practically be found of great service as a means of identifying them; for though it does not quite follow that any unknown plant having its flowers in pairs is a crane's-bill, there is at least a presumption in favour of the idea, while the fact of its inflorescence not being of this character is virtually almost sufficient to prove that it cannot belong to this genus of plants. The following species are, from their commonness, most likely to be met with:—the *G. molle*, or dove's-foot crane's-bill, and the cut-leaved geranium, or *G. dissectum*. The first of these is called in France the *pied-de-pigeon;* both this and the English name are based on the form of the leaf, though the resemblance does not strike us as being at all obvious. In both species the flowers are small, and not very brilliant purple in tint.

The second plant, the meadow lychnis, or ragged robin, the *Lychnis flos-cuculi,* is a near relative of the white lychnis, the subject of another of our illustrations. It is very abundant in most parts of the country where the natural conditions favour its growth, and should be looked for in low-lying lands, moist meadows and pastures, or by the sides of ditches and streams. The general growth of the plant is erect; the stems stand up boldly from one foot to eighteen inches high, and branch but little. The leaves are but few in number, arranged in pairs on the stem, and very narrow in proportion to their length, of the form that is known botanically as lanceolate. The flowers are arranged in a loose head of blossoms. The flower has five large and spreading petals of a bright pink colour, each petal being deeply cleft into four long and narrow segments, the feature that has prompted the familiar name of the plant. The calyx has ten conspicuous ribs and furrows, and, like the upper part of the flower-stalks, is of a dull reddish-purple colour. The ragged robin is in blossom during the spring and early summer. It is a perennial.

WATER RAGWORT.

THE WATER-RAG-WORT.

Senecio aquaticus. *Nat. Ord., Compositæ.*

WHEREVER, throughout Britain, we find a low-lying and marshy piece of meadow land, there almost certainly we shall find the brilliant yellow flowers of the water-ragwort, the plant here represented, starring it over in rich profusion. It may also be commonly met with by the edges of ditches and streams; and when seen at all is generally abundant, hundreds of plants being often found in one small river-side pasture or other likely spot. It is not, therefore, a plant that requires much searching for; not only the size of the plants but also their number in any suitable locality, will prevent their being readily overlooked. It is found in flower throughout the whole summer.

The plant is the *Senecio aquaticus* of botanical science. The generic name is derived from the Latin *senex*, an old man, from the hoary look that the early ripening

of the grey seed-down gives to the plant. The name, a somewhat forced and fanciful one, was bestowed on the genus by the great Linnæus. The idea seems to have struck him as a good one, for a closely allied genus in the same sub-tribe of this great natural order was by him called *Erigeron*, a name bestowed on the plants of that genus for the same reason that guided the choice of the generic name of the water-ragwort, *Erigeron* being derived from two Greek words signifying "early," and "an old man." The specific name *aquaticus*, of the ragwort now under consideration, and its English name water-ragwort, both point clearly to its liking for the neighbourhood of water; the plant, however, is not really an aquatic plant in the sense that the water-lily or the flowering-rush are, as it is always found on the banks, though these could perhaps not always be literally termed *terra firma*. The English name ragwort refers to the somewhat torn and ragged look of the deeply-cut foliage, wort being an old English word for plant. We meet with it again in the swallow-wort, saw-wort, soap-wort, glass-wort, roth-wort, cross-wort, dane-wort, cole-wort, awl-wort, butter-wort, may-wort, milk-wort, and many other old plant names.

Several of the species of *Senecio* are very similar in appearance, and this is one of them. The present plant, the narrow-leaved ragwort (or *S. erucæfolius*), and the ragwort proper, (or *S. Jacobæa*), may often be mistaken for each other, for though the type-forms are sufficiently distinct to amply justify their discrimination as separate species, the forms often run into variations that render their identification at times difficult. The botanical test in such a case is the form of the fruit, a point which, in a book like the present, it is needless for us to discuss

in such detail as would make our remarks of any real service.

The general features noticeable in the water-ragwort are as follows:—Foliage alternate in arrangement on the stem, dark green, deeply cut; the stem ordinarily about two feet high—one help towards its identification, for in the *S. Jacobæa* the stems are often three feet high; the lower portions of the stems are often very pure and brilliant pink, or even crimson. It also branches and spreads more than in the other species named; the individual flowers are larger also, and the growth of the corymb, as the form of inflorescence is termed, is looser and more irregular. Strictly speaking, each so-called flower of popular parlance is an aggregation of a great number of florets into what should more properly be termed a flower-head; and the same remark applies to what is familiarly called a dandelion or a daisy-flower; it is in each case a mass of small blossoms gathered into one whole. The corymbose inflorescence is the form produced when the stems bearing the lower flowers are much longer than those nearer the summit, so that, roughly speaking, the flowers all come to one level. The water-ragwort is a perennial.

The genus *Senecio*, to which this plant belongs, is the largest of the numerous genera into which the great composite family is divided. Eleven species of *Senecio* are found in Britain, some, like the groundsel (*S. vulgaris*), and the present plant, are abundantly met with, while of the others some are rare and very local in their range. All the British species have yellow flowers. The various kinds of garden cinerarias, as the florists call them, all belong, too, to this same genus: the lowly groundsel, that springs up everywhere in the garden, and the greenhouse plant so

zealously preserved from harm, are brethren. The ragwort is by the older herbalists known also as the St. James's-wort, stagger-wort, and stammer-wort. St. James's day is the 25th of July, and as that is about the date when the ragwort is fairly in blossom, that will probably, as in the case of several other plants bearing saints' names, give the point to the title. It is clear that stagger-wort and stammer-wort are both testimonials to its supposed medical efficacy. The plant was in the Middle Ages held to be "singular good to heal green wounds, as also inward wounds." Cancer, sciatica, and many other grievous ills, were supposed to yield to its potency, but its good qualities, if it possesses any, are now altogether disregarded, for no use is made of the plant in any form.

NIPPLEWORT.

THE NIPPLEWORT.

Lapsana communis. Nat. Ord., Compositæ.

THOUGH not so attractive as many other plants, the nipplewort, the subject of our present illustration, is so commonly met with that it could scarcely be omitted from our series; and though it cannot compare with the beautiful sprays of wild roses that spread over our hedges in the early summer, or the pure white chalices of the water-lilies as they are gently borne on the surface of some placid stream, it will, in the eyes of the lover of plants, be judged only for what it is, not for what it fails to be. Judged by this standard, by those who consider nothing in all the realm of nature to be beneath their loving regard, the lowly nipplewort will not be found without some beauty of its own, on which the eye may rest with pleasure, either in the delicate branching of its flowering stems, the rich contour of its leaves, or the golden rays of its many blossoms; and as

these pages are probably read by those already appreciative of nature, we make no further apology for introducing the plant, we offer no regret that its commonness forbids its omission.

The nipplewort is the *Lapsana communis*. The generic name is Greek in its origin, and refers to the medicinal effects of the plant, while the specific name emphasises the abundance in which the plant may be found. The common English name points to an old belief in its remedial efficacy, as, indeed, do the names of many other plants, names given at a time when the herbalist's calling was held in high repute, and our wild plants were accounted not only pleasant to the eye, but full of healing virtues. In some cases the value is beyond dispute, while in others the belief had no solid foundation in fact. In arriving at the truth two prejudices must be borne in mind—first, that of the man who sees no use in bringing things over the seas when all kinds of plants are growing almost at our doors; and, secondly, that of the man who thinks but meanly of what can be got with little trouble, but is quite prepared to believe in the efficacy of a remedy that has cost no little pains and expense to procure. When our own plants furnish a potent remedy, there can be no reason for setting it aside; but when the choice of the flora of all the world reveals one still more effectual, it is folly not to avail ourselves of it.

The belief in the medical efficacy of many of our plants may be gathered from the following names, but a few of those that might readily be culled from old herbals—throat-wort, all-heal, eye-bright, fever-few, live-long, mad-wort, tooth-wort, sneeze-wort, self-heal, and wormwood. To these might readily be added many of the old botanical

names, such as *pulmonaria* and *sanicula*, but as it would be necessary to analyse these, and reduce them to the vernacular, it seems scarcely worth while to do more than make the assertion, leaving it to others to work the subject out at more length for themselves, should they care to do so.

The nipplewort is very commonly distributed throughout the whole of Britain. It should be looked for either on patches of waste ground, or in fields, or carelessly-kept gardens. It flowers during June, July, August, and September. The plant is an annual, and in its earlier state appears as a ring of leaves lying close to the ground, and some six or eight inches in diameter. Should this escape the hoe, a stem gradually rises from the midst of this circle of leaves until it reaches a height of some two or three feet. The stem is quite smooth, and in its upper portion branches off very freely into numerous smaller branches, bearing the flower-stalks that carry the flower-heads. The stems have but few leaves, and those of much simpler form than the radical leaves; a gradual progression of form and approximation to the radical foliage may be seen as the leaves are traced downwards; there is no abrupt transition from simple stem-leaves to deeply-divided root-leaves, but a delicate gradation from simplicity to richness of form. The leaves are rather soft and thin to the touch, and generally slightly hairy; the surface has little or no gloss on it. The inflorescence is paniculate or corymbose. The peduncles are very slender, and the flowering heads small, and bright yellow. The involucre is composed of a single row of green scales, ordinarily about eight, and the angles made by their juxtaposition are somewhat clearly defined, thus throwing the involucre rather into a polygonal than

circular form in cross-section. At the base of these larger segments, and exterior to them, are a few much smaller ones.

Though it is questioned by some observers, a second species is ordinarily recognised. It is called the dwarf nipplewort, or *Lapsana pusilla*. The specific name is a Latin word, and signifies little, or mean. The plant only grows to a height of some six or seven inches; its flower-heads are bright yellow, and share in the general diminutive character of the parts. We do not remember to have ever specially noticed the plant, though nippleworts, little and big, have been familiar enough to us for many a long year. Mere smallness is scarcely sufficient to pay much regard to, and the specific features given by those writers that admit it, all appear unimportant. As we do not ourselves know the plant we offer no opinion on the matter, for in such a case nothing but familiarity with the natural form is of any value.

CORN-COCKLE.

Ben George. Lon

THE CORN-COCKLE.

Agrostemma Githago. Nat. Ord., Caryophyllaceæ.

LIKE the poppy, the corn chrysanthemum, and the beautiful blue blossom that is pre-eminently called the corn-flower, the present species is one of the typical plants of the harvest-field. It is by most writers spoken of as an introduced plant, one that has probably been brought over from Russia, where it is very common, and from whence large quantities of grain have been procured, the theory being that the seeds of this plant might readily be introduced in such cargoes, and distributed over the land when the corn was re-sown in England. It will easily be remembered, however, by many who read these lines that the importation of foreign corn has only been a matter of comparatively recent development. As, moreover, amongst the Anglo-Saxon names of plants we find the *coccel* mentioned, its claim to be a native appears to be proved, if only, and this we cannot certainly say, the Anglo-Saxon plant so named was identical with the

present plant. Whether the cockle, however, be an indigenous plant or one that has been introduced, there is no doubt that it finds its surroundings all that are necessary to its wellbeing, as it is in many places so abundant as to be reckoned one of the farmer's pests. It is the *Agrostemma Githago* of most authorities, though some botanists unite it with the genus that includes the white lychnis and the ragged-robin, and call it the *Lychnis Githago;* and it is certainly very nearly akin to those plants in its general structure. The genus *Agrostemma* was originally founded by Linnæus; the word is Greek in its origin, and signifies "crown of the field," a testimony to the beauty of the plants, all of which, however, with the exception of the present species, have been referred back to the allied genus *Lychnis*, a genus also founded by the great Swedish botanist.

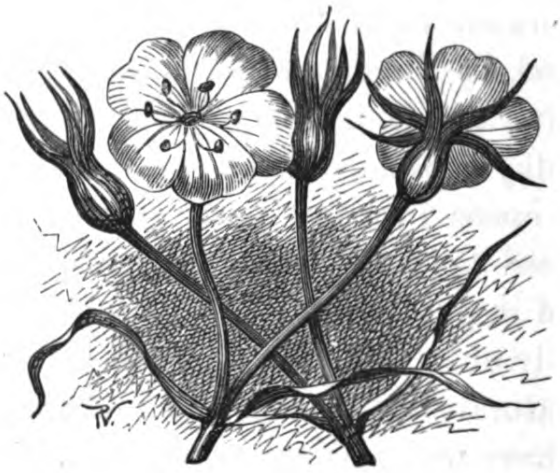
Some of our readers will recall a passage in the Bible where, after Job's solemn protestation of his integrity, he calls even his land to bear record against him if those protestations of uprightness are false, and concludes by saying, "Let thistles grow instead of wheat, and cockle instead of barley." The reading, however, in the margin substitutes the expression "noisome weeds" for the cockle in the body of the text. We are unable to find that cockle is one of the plants of Palestine, though it is very possible that it is; all, therefore, that we seem able to really deduce from the passage is, that at the time our authorised version was made cockle at once suggested itself to the translators as a representative noisome weed in the corn-field.

The corn-cockle is an annual. It is in general effect erect, for it branches but slightly, such branches as there

are being given off at a very slight angle. The plant is ordinarily about two feet high. All the stems and leaves are generally covered with long soft hairs, that are often so numerous as to give a greyish bloom to the parts they so abundantly clothe. The foliage is long and narrow, and somewhat sombre in tint. The conspicuous but not very numerous blossoms are borne on long peduncles which rise from the axils of the leaves. The petals are five in number, purplish-crimson in tint, and have their exterior edge simple in form; not deeply lobed, as in the white campion, an allied species, already represented. On the crimson ground of each petal are two or three lines of black; these lines are interrupted in character, not continuous. The blossoms have no scent. The calyx is long and tubular, hard and leathery in texture, and divided into five very long and prominent segments; these segments project boldly far beyond the general line of the corolla in the expanded blossom. The styles are five in number, and very long, while the stamens are twice five. The corn-cockle will ordinarily be found in flower by about the end of June, and lasts throughout July and August. After flowering, the calyx enlarges to enfold the somewhat bulky capsule, or fruit, that succeeds the blossom. The capsule opens into five parts on the ripening of the seeds contained therein. Many beautiful kindred species are cultivated in gardens.

The family of plants to which the corn-cockle belongs is a very natural one, as all the numerous plants that belong to it have many points in common. All the species have their leaves arranged in pairs; these leaves are what is termed botanically entire—*i.e.*, they are bounded by a simple line, and have no serrations or other form of broken

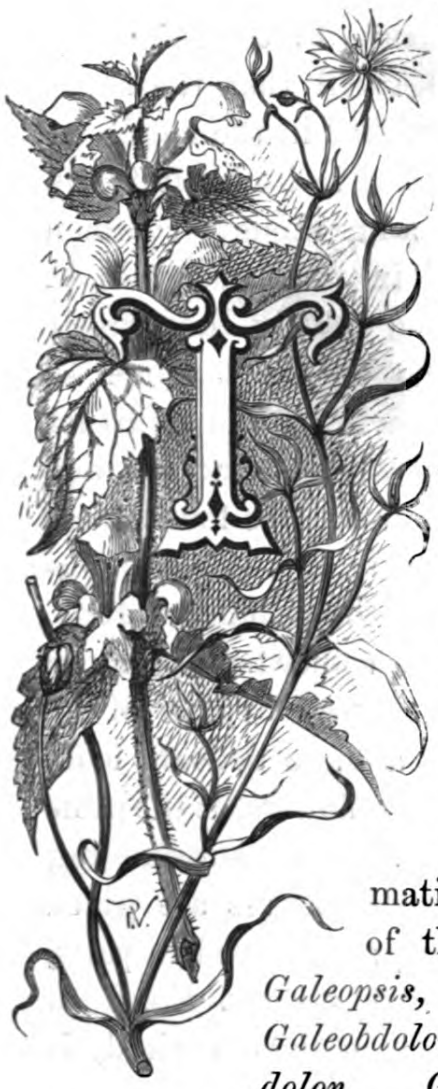
outline, and they are almost always long and narrow. Where the width increases in proportion to the length the form is still quite simple. There are no stipules. The stems, circular in transverse section, are generally somewhat swollen at the points where the pairs of leaves are thrown off, and the plants snap readily at these points. These features may all be seen in the following plants, members of the same family as the corn-cockle, viz., the stitchwort, figured together with the yellow nettle, on one of our plates; the white campion, the subject of another illustration; and the ragged-robin, represented, together with one of our wild geraniums or crane's-bills, on another plate in our series. Other examples of the family are the soapwort, the bladder-campion, and the mouse-ear chickweed; while amongst cultivated blossoms the sweet-william and the numerous varieties of pinks and carnations are easily accessible for comparison.



YELLOW DEAD-NETTLE. STITCHWORT

THE YELLOW DEAD-NETTLE AND THE STITCHWORT.

Galeobdolon luteum. Nat. Ord., Labiatæ.
Stellaria holostea.
Nat. Ord., Caryophyllaceæ.



THE yellow-flowered plant, the most conspicuous feature in the present illustration, is a near relative of the white and red dead-nettles already figured. It is called indiscriminately the yellow dead-nettle, the yellow blind-nettle, or yellow archangel, while a less common name is weasel-snout.

A certain amount of difficulty seems to have been felt in assigning it its true place in a systematic botanical arrangement, as by some of the older writers it is classed as a *Galeopsis*, while later writers call it either *Galeobdolon luteum*, or else *Lamium Galeobdolon*. *Galeopsis* is compounded of two Greek words signifying *a weasel* and *appearance*, *i.e.*, resemblance to a weasel, a portion of the flower being supposed, by a considerable stretch of the imagination, to resemble the nose of a weasel, whence, too, its vulgar

name of weasel-snout; while *Galeobdolon* is made up of two words, also from the Greek, the first being our friend the weasel again—for the idea, though somewhat recondite and far-fetched, has a charm that prevents its being willingly abandoned—and a second word signifying a disagreeable odour, in allusion, probably, to the somewhat strong and not altogether pleasant smell that the stems and leaves of the plant have when crushed in the hand.

The yellow nettle is much more local in its habitat than either the white or red nettles, and though common enough when met with at all, will in many localities be searched for in vain. Woods and shady hedgerows are its favourite spots, therefore it does not come so readily before the eye as do its relatives; while a further reason why it is less known is, that whereas the red and white species may almost all the year round be found more or less in flower, the yellow dead-nettle will only be thus met with from the middle of April to the middle of June. The leaves of the present species are somewhat longer in proportion to their width than in the case of either of its congeners, and the whole plant has a more delicate look. The inflorescence, or arrangement of the flowers, is the same as in the white dead-nettle, a ring of blossoms surrounding the stem at the points from whence the leaves are given off, and the leaves, as in that plant, are arrayed in pairs, placed at right angles to those that precede them on the stem. The lip of the corolla, it will be noticed, is spotted with a darker and richer colour than that of the rest of the flower. The whole plant stands about one foot in height: it is a perennial. The yellow dead-nettle is of no economic value, though, as the other dead-nettles may in time of scarcity be eaten as food, and are, in fact, so

eaten in some places, the present species might probably prove equally palatable under equal pressure of circumstances. We may, in passing, mention that the common stinging-nettle, which is, however, a quite distinct plant, and one some distance removed in botanical classification from the present plants, is largely eaten as a matter of course in many rural districts, from its real or supposed value as a cooler of the blood, its stinging powers being, of course, destroyed by the act of boiling, and guarded against in the act of gathering by the prudent wearing of leather gloves.

The white-blossomed plant introduced in our present illustration is the greater stitchwort, the *Stellaria holostea* of botanical nomenclature. The generic name *Stellaria* is derived from the Latin word for a star, *stella*, and is used as being descriptive of the star-like or stellate appearance of the flowers of the various species in the genus, while the specific name *holostea* is composed of two Greek words signifying *all bone*, a name said by many writers to be bestowed upon the plant by a bold figure of speech, to be taken as meaning the very opposite to the idea that appears on the surface, and that it was really called all-bone from the very softness of its nature. We should, however, be inclined to think that the name was bestowed upon the plant by the fathers of the science in all good faith, partly because we meet with so few other examples of the same principle in nomenclature, and we may, therefore, the more readily doubt whether this be indeed one, but more especially because, while fully admitting the delicacy of the growth, we also notice that in this plant the stems are swollen out at the junctions of the leaves with them, and at these points they very readily snap across.

It appears to us that the earlier botanists, who ordinarily studied plants from a medicinal point of view, and were commonly at least as much at home in animal as in vegetable physiology, were struck by this resemblance of the stems of the stitchwort to the articulations of the bones, in the human hand for instance, and in all seriousness regarded *holostea* as a very fairly descriptive specific affix.

The stitchwort may very commonly be met with in woods and damp hedgerows. It attains to the height of eighteen inches to two feet, and from the profusion and brilliant whiteness of its starry flowers, is very readily noticed. It is a perennial, and flowers in the spring and early summer; its companions, therefore, are the primrose, the hyacinth, the wood anemone, and the orchis, and it will ordinarily be found with them by the lover of nature as he rambles through the coppice in May. We are unable to say with certainty why it should have received its familiar name; possibly because, at a time when almost all plants were held to have healing virtues, it may have been regarded as an antidote for stitch, or catching of the breath.

BRAMBLE.

THE BRAMBLE.

Rubus fruticosus. *Nat. Ord.*, *Rosaceæ.*

FEW plants, perhaps, are more readily recognised by the generality of people than the blackberry, or bramble, while perhaps few are less readily identified by the botanist. Certain broad features at once present themselves, and enable any one of ordinary observation to say that a given plant before him is the blackberry, while many minor features become visible on close and attentive study. The once simple bramble becomes a very Proteus amongst plants, and develops into almost any number of species; and, unfortunately, these species are by no means all equally recognised or recognisable, so that while some will tell us that there is but one true blackberry, with many aberrant forms, another will tell us that nine distinct types are clearly recognisable, a third will say not nine but twenty, while Professor Babington finally divides the British *Rubi* into forty-one species. Into the minor points that are necessary when such precision of classification is striven after we need not here enter;

suffice it for our present purpose to take what may fairly be called the ordinary type, that known to some botanists as the *Rubus fruticosus*, or common bramble.

The root-stock of the blackberry is perennial; from this the flowering stems are produced; these are ordinarily biennial, and grow woody in substance. Though at times found shooting upward and maintaining the erect position, they are more often rather wild and straggling-looking, sometimes arching so much as to touch the ground, when they root afresh and throw up new shoots. The stem is generally pentangular in section, though the angles are not always clearly developed, and it is often lavishly furnished with prickles, whose powers are well enough known to those who have ever tasted the delights of "going blackberrying." A delicate and beautiful lilac bloom is often found on these stems; at other times they may be found a delicate pink or pale greenish-grey. Where the stem is clearly angular it will generally be noticed that the prickles, abundant as they are, are only met with on the angles themselves. The leaves are usually composed of five leaflets, a central and two lateral ones, all of about the same size, and beneath these a pair which are generally considerably smaller. At other times this second pair of laterals is missing, and only indicated by a boldly projecting lobe on the lower edge of the other pair. In the upper leaves the leaflets are often only three in number, as may be seen in our illustration, though even there a slightly projecting serration or two from the lower edges gives what we may term a suggestion of the missing pair. Not only the leaf-stems, but often even the midribs of the leaves on their lower surface, are armed with sharp prickles, while the general under-surface of the

leaf is more or less commonly covered with a white down or felt. Our readers will, we trust, excuse the absence of anything more definite. In writing of a plant that varies in so marked a degree, it is impossible to draw a hard and fast line, though we are very conscious that it may be as painful to others to read such a series of halting definitions, such a free use of the words often, generally, more or less, as it is to us to pen them. The blossoms are either white or varying degrees of pink. The petals are five in number, and of a delicate satin-like texture, and as they surround the mass of deep yellow anthers in the centre, form with it a very pleasing and beautiful flower.

The fruit is almost as literally black as the name of the plant implies, for it is, when ripe, so deep a purple as to appear almost black. Before ripening, the berries are first green, then bright red; and as the fully-matured fruit and those in all stages of progression towards this luscious consummation may be met with on the same spray, the contrast of colours is often very marked, and not without its charm. When the fruit is ripening, and, in fact, directly after flowering, the sepals of the calyx are turned downwards, as may be seen in our illustration. They do not, as in the dewberry and cloudberry, other species of the genus, surround the base of the fruit.

The generic name of the blackberry, *Rubus*, was bestowed by Linnæus; it is supposed to have been suggested by the Celtic word *reub*, to tear. The specific name does not, as some novices might imagine, mean fruit-bearing; the word would in that case have been *fructuosus*. *Fruticosus* is a Latin word, derived from the word for a bush or shrub, and refers to the bushy nature of the plant. The word blackberry is too self-evident in its

meaning to need any exposition; while the other common name, bramble, is interesting as showing both the indigenous nature of the plant, and how little these vulgar names change as they are handed down from generation to generation, and from century to century; the word is but a slight modification of the old Anglo-Saxon word for it, *bremel*.

The bramble was at one time highly commended as a material for hedgerows; and it is probably owing in some degree to this fact that we find it so universally distributed in such situations, though on open commons and moors it may frequently be found leading an entirely independent existence, and certainly owing nothing of its origin to the intervention of man. The long trailing stems are sometimes employed in country districts to bind the thatch on corn-stacks; and the fruit, we need scarcely say, is largely eaten both in its raw state and as a preserve.

HEART'S EASE OR PANSY.

THE HEART'S-EASE, OR PANSY.

Viola tricolor. Nat. Ord., Violaceæ.

THE heart's-ease, or pansy, belongs to the same genus as the sweet violet, a plant we have already figured. The present plant is the *Viola tricolor*, the sweet violet the *Viola odorata*. We have, in addition to these two, some half-dozen or so of other species of violet. It is a genus of which the several species are subject to a very considerable amount of variation, more or less marked, in the various parts, and that has, therefore, been the cause of a good deal of difference of opinion, some observers admitting to full specific rank forms that others can only acknowledge as more or less prominent variations from the true type forms.

The present plant, the heart's-ease, is as variable as any of the other members of the genus; but whatever modifications of form it may present, it may always be readily distinguished from the other violets by the

general form of its foliage, which is much more cut up than in any of the other species, and by the very large foliaceous stipules at the bases of the true leaves. The stem, too, branches much more than we commonly find in the other members of the genus.

Besides the free branching of the stem, it is generally very angular; a section cut across it would not give the circular form that we should find in the stems of so many other plants. The leaves are deeply cut into rounded lobes, the terminal one being considerably the largest. In the other species the foliage is ordinarily very simple in general outline, reniform, or heart-shaped, and having its edge finely toothed. The form of the stipules in the heart's-ease can hardly be clearly described without the use of technical terms that we desire as much as possible to exclude from our present pages; but our readers will readily gather an idea of their nature from our illustration, where they necessarily form a conspicuous feature. The flowers vary a great deal in colour, but are either purple, yellow, or white, and most commonly there is a combination of all these colours in each blossom. The upper petals are generally most showy in colour, and purple in tint, while the lowest and broadest petal is usually a more or less deep tint of yellow; in some cases as pale as what we often hear people call straw-colour, while in other examples it is full and rich. The spur at the back of the flower, produced by an elongation of the base of the lowest petal, is a feature that is in an especial manner a characteristic of our various species of violets, and one possessed by very few other flowers. The flowers of the heart's-ease are in due course succeeded by the little capsules of seeds. In all the other species of

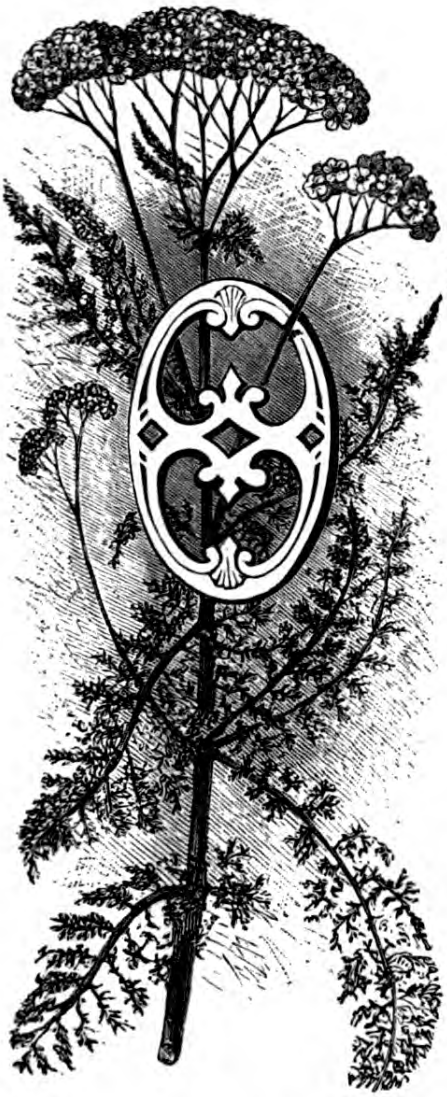
violet the flowers that attract our attention rarely ever set their fruit; this is produced later on in the year, by small and insignificant petal-less flowers, that would very rarely be noticed at all or their import regarded if a cursory glance fell on them. The capsule opens by three valves, and, if cut across before it is quite ripe for opening, makes a very pleasing section, as indeed do many other similar forms. Our readers, furnished with a sharp knife and magnifying glass of small power, would find in such sections much that would interest and delight them.

The heart's-ease is abundantly met with almost throughout Britain. Though found on hedge-banks and waste ground, it seems in an especial degree a weed of cultivation, hence it will be most freely found in corn-fields and garden ground. It blossoms almost throughout the entire floral season, expanding its attractive little flowers in the early days of summer, and keeping up a succession of blossom until late in autumn.

The meaning of the generic name has already been referred to in our remarks on the sweet violet. The specific name *tricolor*, or three-coloured, needs no comment. The name pansy is derived from the French word *pensée*. Our minds at once turn to the passage in Shakespeare, where Ophelia says, "There's pansies, that's for thoughts." That the thoughts the plant is supposed to suggest are altogether right and pleasant ones may be gathered from its other names, heart's-ease and herb-constancy. It is also sometimes by old writers dedicated to the Trinity, because it has in each flower three colours—like many of the old monkish ideas, a somewhat strained and fanciful one. The plant is in many old herbals called the *Herba Trinitatis*.

The heart's-ease was formerly in great repute as a remedy in asthma, epilepsy, pleurisy, and many other ailments. As the plant was also considered a cordial, and efficacious in diseases of the heart, it has been by some writers supposed that its name, heart's-ease, really owes its origin to no such poetical association of ideas as is ordinarily imagined, but that it is simply a testimony to the plant's curative powers. The balance of evidence however, in the writings of our poets goes far to outweigh this idea. Numerous passages from Spenser, Chaucer, Shakespeare, Milton, and the writings of lesser men, might easily be brought forward did space permit, and it would then readily, we think, be felt that the poetical associations very considerably outweighed the medical — that the heart's-ease was no mere absence of bodily pain, but a considerably more subtle presence and possession, altogether beyond the power of pill or potion to produce or to destroy.

YARROW



THE YARROW.

Achillea millefolium. *Nat. Ord., Compositæ.*

ONE of our commonest plants is the yarrow, or milfoil, though, as it is somewhat lacking in attractiveness, it is very possible that it is unknown to many. Its common name, yarrow, is a corruption of the Anglo-Saxon name for it—*gearwe;* while the second popular name, milfoil, is derived from the Latin *mille,* a thousand, and *folium,* a leaf, in evident allusion to the very numerous divisions of the leaf. It is hence in some country districts called thousand-leaf. The botanical name of the yarrow is the *Achillea millefolium;* the same idea is therefore conveyed both in the specific and popular names. The plant was in olden time accredited with many healing virtues. According to an old myth, Achilles was the first to employ the plant medicinally, having been instructed in its properties and uses by Chiron the Centaur, who, as we have seen, also gave his name to the knapweed, or *Centaurea.* In honour

of this benefactor of his species, the plant was called *Achillea*. An ointment of the leaves was employed as a vulnerary; it was also freely employed in inflammations. If the head be bathed with a decoction of the plant, it will, we are told by the old herbalists, prevent the shedding of the hair; while the chewing of the leaf in the mouth is a remedy for toothache. Another use of the plant is sufficiently indicated in its old name of nose-bleed.

The yarrow will ordinarily be found in flower by the beginning of June, and it lasts in blossom all through the summer and autumn, and, indeed, we have picked flowering specimens as late as December. It may be abundantly met with almost everywhere—on hedge-banks, in pastures, on waste ground, and by the roadside. To show not only how widely distributed a plant it is, but how far, too, it is held in repute, we may mention that Hooker affirms that the Highlanders of Scotland make a valuable ointment of it; that Woodville says that a kind of beer is made of it in Sweden, while Sparmann indicates a very similar use of it in Africa. It is also widely distributed over North America. It is said by later and more trustworthy writers than the herbalists of the Middle Ages that the plant really is in some degree sedative, astringent, antispasmodic, and tonic.

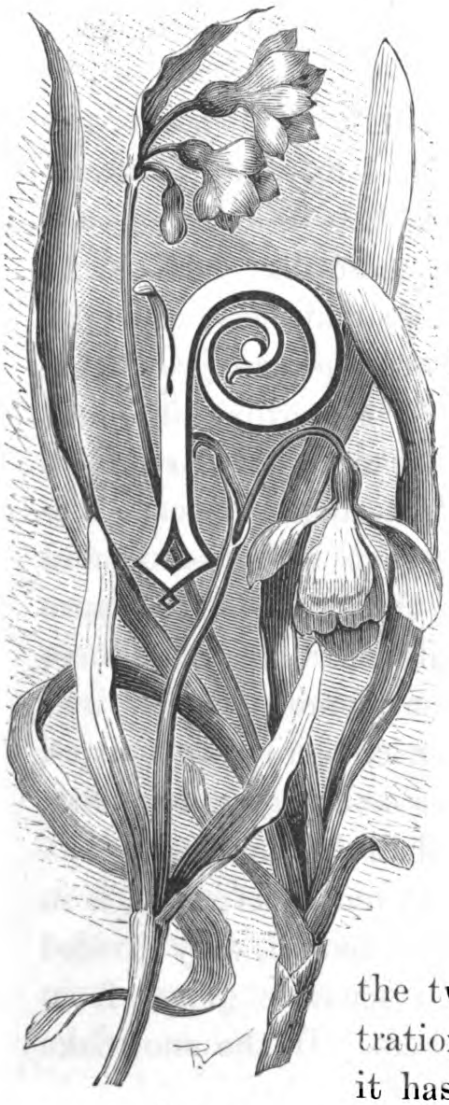
The root-stock of the yarrow is perennial, and creeps underground some little distance. From this several small leafy branches, that bear no blossom, are thrown up to a height of some four or six inches, forming a compact-looking mass of verdure, and from this rise the flowering stems, which are sometimes eighteen inches or so high. These stems are often pale grey in colour, from the mass of soft woolly hair with which they are felted. They bear but

few leaves, and do not branch much, if at all, until near their extremities, when the numerous stems that support the inflorescence are given off; these leave the main stem at a rather small angle, so that the general upright character of growth is still in a great measure preserved. All the stems are generally finely furrowed. The inflorescence is corymbose, a term employed to describe this particular variety of flower arrangement. Numerous flower-bearing stems are thrown off at different levels, but, owing to the shortness of the upper and the length of the lower stems, all are so arranged at their upper extremities as to make a flat, or almost flat, mass of blossoms. There is perhaps no better example of the corymb, common as examples of it are, than that presented by the dense flat mass of flowers that crowns the branches of the yarrow. Like the daisy or the dandelion, the sow-thistle or the groundsel, those parts of the plant that we in ordinary parlance call flowers are really compound—aggregations of numerous blossoms in one mass, called a flower-head. In many of the *Compositæ* this fact is sufficiently evident, from the size and distinct character of the individual florets, to strike any one on very slight examination; but in the yarrow the florets of the disk are small, and might easily pass on a cursory view for a group of stamens; while the florets of the ray, the exterior and ray-bearing blossoms, are so few in number—ordinarily five or six—that these rays in like manner might to the novice appear but the petals of some simple flower, like the five of the buttercup. They, however, bear the same relation in this flower that the outer circle of white does to the daisy flower-head, or the yellow rays of the ragwort do to the central portion. These rays in the yarrow are generally

white, but a more or less deep tint of pink is not by any means uncommon; both colours may often be found on the same hedge-bank. The leaves of the yarrow are very long and narrow in general outline, and very deeply divided into a great number of small lateral parts, which are in themselves again sub-divided; hence the name milfoil, or thousand-leaf, that is often applied to the plant. The foliage varies a good deal in appearance from its being sometimes thickly covered with soft white hairs, while at other times it is quite free from them.

The sneeze-wort, *Achillea ptarmica*, an allied species, is common in moist mountainous districts. The inflorescence is white, but the leaves are much simpler in form than those of the milfoil.

SNOWDROP AND SNOWFLAKE.



THE SNOWDROP AND SNOWFLAKE.

Galanthus nivalis ; Leucojum æstivum.
Nat. Ord., Amaryllidaceæ.

PROBABLY to many of our readers the two plants here figured will be better known as garden blossoms than as real wild flowers. Like the primrose and the foxglove, their beauty and grace have led to their wholesale introduction into the garden ; they are, nevertheless, true wild flowers, as truly wild as any buttercup. It has been contended by some writers that the snowdrop, the smaller of the two plants represented in our illustration is probably not indigenous ; but it has, in any case, got so thoroughly naturalised amongst us that, whatever may have been the state of affairs five hundred years ago, it is now as much a wild flower in our midst as any of the other plants mentioned in the British Flora, and as such is always included without question amongst them. The snowdrop is a perennial. Its graceful little drooping flowers must be sought for in orchards, shady pastures, woods, and

hedgerows, during February and March. In our own orchard, and nestling deep down in our hedges, we have them springing up by thousands at the opening of each year.

The bulbs grow in compact clusters. The leaves are two in number, bluish-green in colour, long and narrow in form. At the time of flowering they are from four to six inches in length, but after the blossom has died away continue to elongate for some time, and may often be found a foot long, and the vigorous upward growth of their younger days exchanged for a somewhat drooping and feeble appearance. The flowering stem that rises from the midst of these little leaves bears a single flower. The flowers of the snowdrop are somewhat bell-shaped, and composed of six segments. Of these, three are pure white; while the other three, that alternate with these and are placed within them, are considerably smaller, and are tipped or blotched at their outer extremity with a spot of bright green. The three outer and larger segments spread outwards considerably more than do the others.

The snowflake, the larger plant in our illustration, is in many points like the snowdrop, and is, indeed, only divided from it botanically, and put into a separate genus, from the forms of its perianth and anthers. In the snowflake all the segments of the perianth are of equal size; while in the snowdrop, as we have seen, three of them are larger than the other three. In the snowflake the anthers open in longitudinal slits; in the snowdrop, from the top only. The specific difference is indisputable, and the points of difference we have named are those that appeared to Linnæus sufficient to justify the division into two different genera. Like the former plant, the snowflake is a

perennial and springs from a bulb. The leaves thrown up are few in number, a foot or so in length, and very narrow, much like those of the daffodil. The flowering stem rises above these and from their midst; near its summit is a large sheath-like bract, called a spatha: we see it again in the peculiar form of the wild arum, and from this spatha springs the cluster of blossoms. The snowflake delights especially in rather moist meadow-land. Though not so common as the snowdrop, it is very fairly distributed, though chiefly in the northern and eastern counties of England. Curtis, in his "Flora Londinensis," published in 1798, gives a meadow by the river-side between Greenwich and Woolwich, and on the shore of the Isle of Dogs, as two metropolitan localities; but the growth of London must long since have destroyed all chance of finding the plants there. It flowers during May, which, compared with the time of flowering of the snowdrop, may almost be considered summer; hence the plant is often called the summer snowflake. This somewhat erroneous name is also expressed in its scientific appellation, the *Leucojum æstivum*, the specific name being a Latin adjective, signifying that which relates to the summer. The generic name is derived from two Greek words, meaning white and a violet. Of the motive that impelled the great botanist Linnæus to give the plant such a name we can say nothing in explanation. The pure white of the blossoms is an evident fact, but the resemblance, either in form or colour—or anything else, in fact—to a violet is not by any means so clearly beyond question.

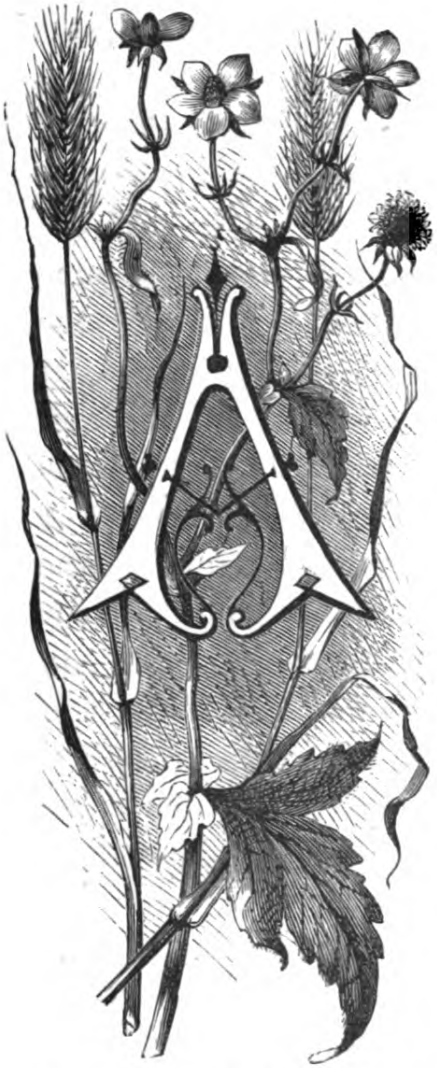
The name borne by the snowdrop in the botanical lists is the *Galanthus nivalis*. As the specific name of the snowflake pointed to the blossoming of the plant in

early summer, so the specific title of the present plant indicates the early period of the year when its graceful little blossoms peer above the snow-covered ground, as pale and pure themselves as the soft mantle that covers all but the tips of their leaves and pendant flowers, *nivalis* being a Latin adjective that signifies relating to or resembling snow. The generic name is Greek in its origin, and signifies milk-flower.

From its early appearance and delicacy, the snowdrop has attracted the notice of several of our poets. Of these we can now only mention Drayton, Langhorne, Shelley, Thomson, and Wordsworth, leaving our readers to look up the allusions for themselves.

As the snowflake and the snowdrop would never, under any circumstances, we imagine, be found in flower together, our plate is so far inaccurate; but as the two plants were so closely related botanically, so similar, too, both in appearance and in name, it seemed, on the whole, advisable to represent them on the same plate, trusting to the descriptive text to clear up any misconception that might otherwise possibly arise.

COMMON AVENS, AND MEADOW-BARLEY.



THE AVENS.

Geum urbanum. *Nat. Ord.*, *Rosaceæ.*

AMONGST the rank vegetation of the hedgerow the wood or common avens—the plant represented in flower in our illustration—will very commonly be found, and more especially if the situation be somewhat damp and shaded from the too direct rays of the sun; hence, too, it is very frequently met with in woods and coppices. It is a perennial, and may therefore be looked for year after year in any spot where it has once been noticed. It will ordinarily be found in flower by about the beginning of May, after which date examples more or less numerous may be met with until late in autumn. We have twice found it as late, indeed, as the first week in December.

The common avens is the *Geum urbanum* of the systematic botanist. The generic title is taken from the Greek, and signifies that which is aromatic. The roots of the present species possess an agreeable odour and

taste, and have on this account been sometimes employed in culinary operations. In old herbals the plant is often called the herb-bennet, a name that sprang from the beneficent nature of the plant, since it was not only, according to the monks, a herb of potent might in the assuaging of bodily pains, but a very present and effectual help in things spiritual, against the wiles of evil spirits or the influence of wicked men. As a corruption of the monkish title, it is sometimes called herb-bonnet, a name quite meaningless in itself, but a fair illustration of the way in which, when a name ceases to be understood, it becomes perverted into something else that is at least English in sound though devoid of sense. As an example of this, we may quote the case of the *Hypericum androsœmum*, which in the Middle Ages was known as the *toute saine*, but which in many parts of England is now called touchen-leaf. Its ordinary book name is tutsan, an evident corruption of the old monkish term. Many other instances—and some of them very curious in the transition undergone—might readily be given, did the limited space at our disposal justify our wandering at will into those pleasant by-paths.

Though the medical virtues of the avens were held in such high esteem as to make it pre-eminently the *Herba benedicta*, modern experience has not confirmed the high opinion thus held. It is slightly astringent, and the roots have been at times used to add a special and distinctive flavour to ale, and from a belief that it prevented it from turning sour. As is the case with all plants, whatever properties it may possess vary greatly under various circumstances of growth and at various stages of the plant's history; but in the present plant, under any cir-

cumstances, these properties seem to be but of little real value as remedial agencies.

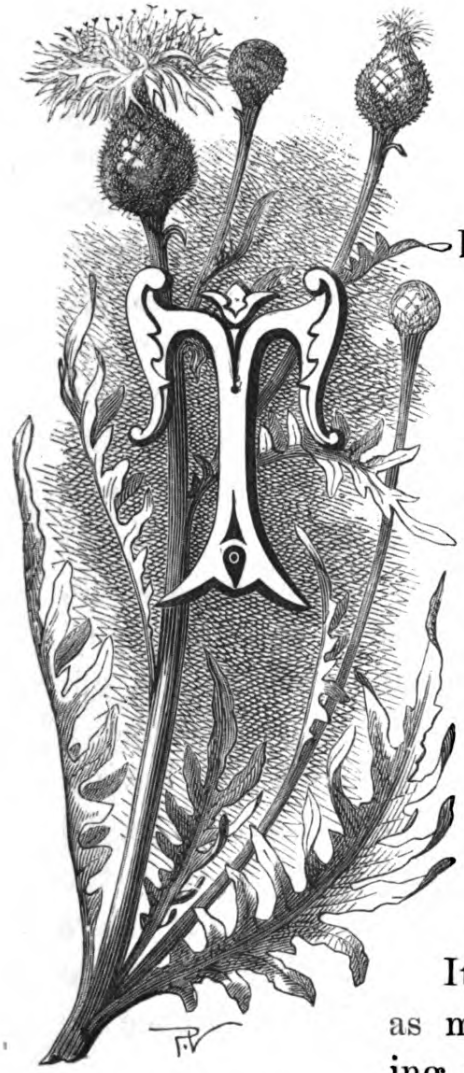
We pass now to some few words of description of the more salient features of the growth of the plant. The stems thrown up are but few in number, somewhat thin and wiry-looking, from one to two feet in height, and almost destitute of hairs. The stipules—the leaf-like members that in many plants occur at the junction of the true leaf with the stem—are in the avens very large, rounded in form, and deeply cut in outline. The leaves vary very considerably in form, according to their position. The upper leaves are made up of three long and narrow leaflets. Those intermediate on the stems have the three leaflets or segments as well, but in these they are round and full; while the lower leaves are borne on long stalks, have a large terminal leaflet, and a series of smaller ones given off at intervals along the stalk. These smaller leaflets vary very considerably in size. There will ordinarily be two or three pairs of considerable size, and between these a number of very small ones. The same curious type of leaf may be seen in the silverweed, the subject of one of our illustrations; the agrimony, which we have also figured; the meadow-sweet, and several other plants. All the leaves, irrespective of their position on the plant, are coarsely toothed in outline. The flowers of the avens are deep yellow, and rather small for the general growth of the plant. The corolla is composed of five spreading petals, and, when fully expanded—like the blossom of the pimpernel—forms a flat disc. The calyx is cleft into ten segments, the alternate members much larger than the others—a feature that may be very well seen again in the silverweed or the strawberry. The fruit that succeeds

the blossom is of a dark crimson colour, and the various members of which it is composed terminate in an awn, of which the extremity is curved into a little hook.

The only other indigenous plant in the genus is the *Geum rivale,* or water-avens, a plant of the moors and marshes, a lover of wet, swampy ground—one of the plants that fringe our river-banks. Though not by any means a rare plant, it is not so common as the wood-avens, and is much more local in its occurrence. The general character of the leaf is much the same, but the plant may readily be identified by its large, drooping, dull orange blossoms and sombre purple calyx.

The grass represented in our illustration is the *Hordeum pratense,* or meadow barley, a plant abundant enough in moist meadows in England, though it is very rarely met with in Scotland, and is by no means common in Ireland. It may very legitimately be introduced in our plate, as it is amongst the long grass that fringes the hedgerow that the avens delights to grow, and where the avens is found the meadow barley will ordinarily be close at hand.

LARGER KNAPWEED.



THE LARGER KNAPWEED.

Centaurea Scabiosa. Nat. Ord., Compositæ.

THE species of knapweed we have here represented, though of very general distribution, is somewhat local. It is found freely almost throughout England, but is one of the rarer plants in Scotland, and seems to thrive best in chalk districts. It flowers throughout the summer and autumn months, and will be found on poor pasturage, on the waste land that may sometimes be met with bordering the hedgerows, in the angles of poorly-tilled fields, and by roadsides.

It is a rather tough and stout plant, as may readily be found on attempting to pluck a piece—a matter of no slight difficulty unless a knife be at hand—as no amount of twisting and jerking seems at first sufficient to detach a piece. The stems branch a good deal, and spring boldly up to a height of some three feet or more; it is therefore

a rather conspicuous plant when in vigorous growth and condition. The leaves are very deeply cut into long and narrow lobes, and have their edges coarsely serrated. The lower leaves are very large, often a foot or even more in length, and, as they are rather numerous, they make a striking-looking rosette on the ground as a base from which the flowering stems ascend. The flower-heads are large, and rich in colour. They rise from a solid-looking head, a mass of bracts lapping over each other like tiles, each having a central green portion and a black fringe-like edge. In some country districts the plant is, from this solid globose involucre, called hard-head; and the more ordinary English name, knapweed, is no doubt based on the same idea. We have never seen a derivation suggested, but if we may be allowed to venture on one ourselves, we would say that probably this name is a corruption of knop-weed. Knop is, we know, a good old English word for what in these days we should call a knob, a hard, globular mass; it may be found in our established version of the Scriptures, as in Exodus xxv. 31 and 33, where, amidst the fittings of the tabernacle, we find a candlestick having knops and flowers, and bowls having knops and branches of almond; while in 1 Kings vi. 18 we find the word again, where, in the description of the temple built by Solomon, we read that the cedar doors were carved with knops and open flowers. The knops are in this latter case given in the marginal reference as gourds; but this is immaterial to our present purpose, or perhaps rather illustrates it, as all we desire to show is that a knop, like a gourd, is a globular form.

The botanical name of the knapweed figured is *Centaurea Scabiosa*. The generic title, we are told, is given to

the plant because, either with this or some other species of the genus, the Centaur Chiron cured himself of a wound received in the foot from Hercules. There must, however, surely be an error here, as in the ordinarily accepted myth the wound was a mortal one. There is another common plant found in the chalk districts—the home in an especial degree of the knapweed—called the scabious, a plant, in general size, form of leaf, and other features, very similar to the present plant. The word scabious is derived from the Latin word *scabies*, an irritating roughness or eruption of the skin, a term still employed in medical science. The plant was so called because it was formerly employed as a remedy in this and other cutaneous affections. It will be noticed that the specific or second name of the knapweed is also scabiosa; but whether it is so called from its resemblance to that plant, and therefore the scabious-like knapweed, or whether it is from its having the credit of possessing healing virtues of a similar character, we cannot say. We do not in any old herbal accessible to us find this particular application of its remedial efficacy, though it is credited with healing power in several other directions—staying bleeding of the nose, curing inward wounds, being "good for those that are bruised by any falls, blows, or otherwise, and is profitable for those that are bursten," and a sovereign remedy for sore throat and many other things.

There are six or seven other species of *Centaurea* more or less commonly to be met with. We give the number in this rather vague way, for, while some botanists accept certain forms as having specific value, others regard them but as varieties. The black knapweed, or *C. nigra*, is a very widely distributed species, being found almost

everywhere throughout Britain in meadows and hedgerows. The corn-flower or blue-bottle—the *C. Cyanus*—is a very beautiful species, and one of the most characteristic plants of the corn-field; it is hence called *par excellence* the corn-flower. The central part of the flower is bluish-purple, the outer florets large, widely spreading, and of an intensely deep and pure blue, vying in strength and brilliancy of colour with the rich yellow of the corn-marigold or the scarlet of the poppy, its companions of the harvest-field. Other species are the star-thistle, or *C. Calcitrapa*, and the yellow knapweed, or *C. solstitialis*. The first of these, a striking-looking plant, is found occasionally by roadsides and waste places in the south of England; the second seems to prefer similar localities when within the influence of the sea breezes; like the former, it is a southern and somewhat rare plant.

SOWTHISTLE.

THE SOW-THISTLE.

Sonchus oleraceus. Nat. Ord., Compositæ.

WE have already figured one plant of this genus, the corn sow-thistle; the present species is still more abundant, for while the former plant is fairly common throughout Britain in our corn-fields, the present species, the common sow-thistle, is abundant everywhere. Like the corn sow-thistle, it is a weed of cultivation; but it does not confine itself to one crop, but springs up freely wherever a piece of land is under culture of any kind. The plant is almost universally distributed, north, south, east, and west, over the wide world, except in some few tropical localities. Wherever we go we find this pertinacious weed, springing amidst the crops, availing itself of the tillage of man, and filling his fields with its unwelcome seedlings. The meaning of the name we have already given in our remarks on the corn sow-thistle. We may, however, just remark that it is in France *le Laiteron*, a name bestowed on it from the milky juice with which its stems are filled.

On this account, also, it is at times erroneously called the milk-thistle; the true milk-thistle is a very different plant.

Two very distinct forms or varieties of the common sow-thistle are met with. These are sometimes considered as different species, and called the *Sonchus oleraceus* and the *S. asper* respectively; while by other botanists one species only is recognised, the *S. oleraceus*, which at times exhibits so marked a variation that it is known as the *S. oleraceus*, var. *asper*. The points of difference do not appear to be constant; the variety is often found growing with the typical plant, though in some districts almost all the plants are either of one or the other form, The plant represented in our illustration is the *S. oleraceus*, var. *asper*, or the *S. asper*, if it be granted the rank of an independent species. The prickly variety we have selected for our illustration ordinarily has its leaves darker in colour than the normal form, less cut up into lateral segments, and much more prickly in character: the portion of the leaf that clasps the stem is also rounder and more densely fringed with prickles; these auricles, as they are termed, or little ears, the name given to these clasping bases of the leaves, are also much rounder in form and more marked every way in the asper variety. In our own garden, where the sow-thistle, from its freedom in seeding, is a perfect nuisance, all the specimens are of the prickly type, and we certainly found no difficulty in procuring any number of characteristic specimens for the purpose of our illustration.

The sow-thistle is an annual, frequently attaining a height of from three to four feet. Unlike the corn sow-thistle, its stems and leaves are almost entirely free from hairs. The leaves are a rather deep green in colour, have a polished surface, are deeply divided into lateral

lobes, and have their outlines roughly serrated. The upper leaves are much simpler in form than the lower. The general arrangement of the flower-heads is paniculate. The drum-like form of the involucre, and its conical character after the flower-heads have withered away, are noticeable features. The seeds we have found continue to develop after the plant is gathered. We once picked a piece in full flower, and after sketching it forgot to throw it away. On noticing it a few days after, we found that several of the characteristic globular heads that betoken the ripening seed, had formed, and were, in fact, so far matured that they were already scattering their seed; and, had our study been but the congenial soil they love, we should speedily have been overrun with the young seedling plants.

The sow-thistle was by the ancient writers accounted very wholesome and nourishing as an article of diet. It is recorded by Pliny that Theseus, prior to his encounter with the bull that was ravaging the plain of Marathon—which he afterwards captured and led to Athens, offering it in sacrifice to the goddess Athene, who had lent him her aid in the undertaking—took as a prelude and suitable nourishment a dish of sow-thistles. The young leaves are still in some parts of the Continent employed as an ingredient in salads, though the ancient belief in their strengthening qualities seems to have in great measure passed away. In the Middle Ages, of course, the plant, like almost every other, was accredited with healing powers. "The milk that is taken from the stalks when they are broken, given in drink, is very beneficial to those that are short-winded and have a wheezing." It was also prescribed for inflammation, deafness, and many other things, and used by the

ladies of the period as a wash for the face, as it was held to give great clearness of complexion. At present, we need scarcely remind our younger readers, its chief use is as food for rabbits: there is no green food they will welcome more eagerly.

The marsh sow-thistle, or *S. palustris*, with its large yellow flowers and height of some seven or eight feet, is a very striking plant, but it is too rare to come within the scope of our remarks.