



Life on the Verge

Wild Flower Identification Guide



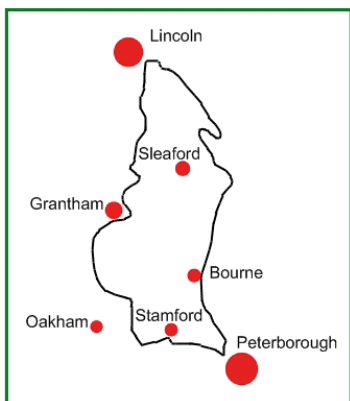
This booklet... is designed to help volunteers identify wild flowers on road verges as part of the **Life on the Verge Survey**. It can be used in combination with the **Life on the Verge Survey Form** which is available from the project website (lifeontheverge.org.uk) or the Limestone Grassland Project Officer (see back cover). This survey is part of the Limestone Grassland in the Lincolnshire and Rutland Limestone Natural Area Project which aims to identify, maintain, restore and re-create limestone grassland.

Why is limestone grassland important?... With the right management, grassland growing on limestone soils can be one of the most diverse habitats in the country and a riot of wild flower colour in spring and summer. Forty species of plant can be found in a square metre of turf.

Both the variety of wild plants and animals it supports and its relative scarcity in Britain and Europe make this a habitat of high conservation value. By conserving limestone grassland, we benefit a whole suite of plants and animals which include nationally threatened species such as dingy skipper, grizzled skipper and Duke of Burgundy butterflies, four-spotted moth, glow worms, early gentian, pasque flower and skylark.

Sadly, there has been a sharp decline in the extent of lowland limestone grassland across the country, particularly in the last 60 years. This has mainly been a result of more intensive farming.

Limestone grassland in Lincolnshire and Rutland... Only 100ha of limestone (calcareous) grassland is thought to remain within the 4,400 square kilometres of the Lincolnshire and Rutland Limestone Natural Area. This is a tiny proportion of its former extent and what remains is among the most fragmented in the country.



The Lincolnshire and Rutland Limestone Natural Area

The location of all that is left is not yet known; but it is thought that most parishes in the area contain some flower-rich road verges. The network of road verges enables many plants and animals to survive. In places, verges are as much as 20m wide, where Enclosure Acts provided for roadside grazing along drove roads. A few verges, such as those along High Dyke north of Ancaster, are so important that they have been designated as Sites of Special Scientific Interest. Lincolnshire's Protected Roadside Verge Scheme (now known as the Roadside Nature Reserve Scheme), adopted in 1960, was the first in the UK and now forms a basis upon which further work can be done to ensure the survival of this threatened habitat.

How you can help... By taking part in this roadside verge survey, you will contribute vital information to help secure a future for wildlife. The project aims to identify the most important roadside verges for limestone grassland species throughout the Lincolnshire and Rutland Limestone Natural Area by surveying all the 4000km/1250 miles of verge in the area over the next two years. Once located, these

verges can be managed in a way that will help the wild plants and animals survive. It is also important to know which verges have lost important wildlife, so that attention can be focused on those of greatest value.

Road verges represent a vital opportunity to link the few remaining patches of limestone grassland across the landscape. A well cared for network of verges will act as green corridors that help plants and animals move as they need to in the face of climate change and disturbance.

About this guide... The plants illustrated here are relatively easy to identify with confidence and are widespread in the project area. The plants fall into two categories: 1) those characteristic of wildlife – rich limestone grassland and 2) those that indicate that the verge has deteriorated so much that it would be very difficult to restore.

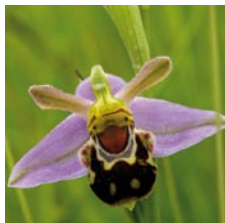
If you know of a verge where **any** of these plants grow, please do fill in a survey form. 'Ruling out' verges where restoration is unlikely to succeed is almost as important as learning about the best verges, so that attention can be focused on the places of highest conservation value.

Thank you for taking part in this important survey

Plants characteristic of limestone grassland in good condition

Orchids

Are a distinctive group of plants. Many are threatened and none should be picked. Shown here is a selection of the orchids you are most likely to notice on roadside verges. They have a range of flowering times throughout the summer. Of these, all have spear-shaped to oval leaves with parallel veins that are waxy to the touch (except common-spotted orchid which has papery leaves).



Bee Orchid
(*Ophrys apifera*)



Common Spotted Orchid
(*Dactylorhiza fuchsii*)



Fragrant Orchid
(*Gymnadenia conopsea*)



Pyramidal Orchid
(*Anacamptis pyramidalis*)



Burnet-saxifrage

(*Pimpinella saxifraga*)

Flowering: July to September

Flowers: White, small (2mm across), in stalked clusters all branching from the same point

Leaves & stems: Lower leaves with paired oval, toothed leaflets; upper leaves with very narrow leaflets

Appearance: Upright, slender and downy with a rough round stem; 30-100cm tall

Confusion species:

Salad burnet (*Sanguisorba minor*) has very similar leaves, but the green and globular flowerheads are quite different. See page 6.



Dropwort

(*Filipendula vulgaris*)

Flowering: June to August

Flowers: Cream flowers tinged with red outside, 10-20mm across; on branching stalks

Leaves & stems: Tiny leaflets alternate with larger ones; leaflets oblong and deeply toothed

Appearance: 10-50cm tall

Confusion species:

Meadowsweet (*Filipendula ulmaria*), which is usually taller (up to 120cm) and has larger, simpler leaves.





Hoary Plantain

(*Plantago media*)

Flowering: May to August

Flowers: Oblong spikes 2-6cm long, appearing pink initially and then conspicuously white

Leaves & stems: Leaves greyish, downy, almost circular and short-stalked

Appearance: Leaves all in a flat rosette, with a single flowerhead arising from the centre



Confusion species:

Two other plantains are both very common and widespread. Greater plantain (*P. major*) has similar shaped leaves, but they are longer stalked and largely hairless, while the flowerhead is long. Ribwort plantain (*P. lanceolata*) has much narrower leaves and a short, brown flowerhead.



Common and Greater Bird's-foot Trefoil

(*Lotus corniculatus* & *L. pedunculatus*)

Flowering: June to September

Flowers: Buds flattened, flowers orange/deep yellow, can be bright-tinged; flower stems up to 15cm long, 2-12 pea-type flowers per head

Leaves & stems: Leaflets oval, in threes with a pair below

Appearance: Low and creeping, or upright; 10-60cm long



Confusion species:

Horseshoe vetch (*Hippocrepis comosa*); but this has leaves with 4-5 leaflets in opposite pairs, and only flowers from May to July. See below.



Horseshoe Vetch

(*Hippocrepis comosa*)

Flowering: May to July

Flowers: Yellow in whorls of 5-8 on a 5-10cm stalk; each 8-10mm long

Leaves & stems: Leaves with 4-5 paired leaflets and one at the end; all notched at the tip

Appearance: Spreading and hairless with a woody rootstock; seed pods have a wavy shape



Confusion species:

Bird's-foot trefoil (*Lotus corniculatus*) and greater bird's-foot trefoil (*L. pedunculatus*), which have fewer, larger leaflets and a longer flowering season. See above.

Carlina Thistle

(*Carlina vulgaris*)

Flowering: July to October

Flowers: Flowerheads are conical in bud, then opening to 3-4cm wide, with a brownish-yellow centre surrounded by spreading straw-yellow 'petals'

Leaves & stems: Leaves wavy-lobed, cottony below and fringed with weak spines, sometimes purple-flushed

Appearance: Upright and 10-30cm tall

Confusion species:

Other thistles (*Cirsium* and *Carduus* spp.), which all have red or purple flowers. See also dwarf thistle (*C. acaule*) on page 5, and spear thistle (*C. vulgare*) and creeping thistle (*C. arvense*) on page 8.



Cowslip

(*Primula veris*)

Flowering: March to May

Flowers: Drooping flowers clustered on top of a single stem are apricot yellow, 8-10mm across and cup-shaped

Leaves & stems: The wrinkled leaves are broadest towards the tip and somewhat spoon-shaped

Appearance: Leaves all arise from the plant base

Confusion species:

Primrose (*Primula vulgaris*) has pale yellow, larger flowers, only one per stem. Leaves are more oval in shape.



Lady's Bedstraw

(*Galium verum*)

Flowering: July to August

Flowers: Small (2-3cm across), golden yellow; in branched clusters

Leaves & stems: Soft leaves are linear and bristle-tipped, in whorls of 8-12 along stem; 6-25mm long

Appearance: Upright flowering stems are 4-sided and hairless, 15-60cm tall

Confusion species:

Hedge bedstraw (*Galium mollugo*), which has white flowers and wider leaves.





Yellow or Hay Rattle

(*Rhinanthus minor*)

Flowering: May to August

Flowers: Yellow, in short leafy spikes; flattened on each side; seeds rattle when ripe

Leaves & stems: Hairless, stalkless, narrow and pointed leaves are coarsely toothed and in opposite pairs; stems are black-spotted and hairless

Appearance: Up to 50cm tall, but can be much shorter

Confusion species:

Red bartsia (*Odontites verna*) looks similar, except that it has pink flowers.



Clustered Bellflower

(*Campanula glomerata*)

Flowering: June to October

Flowers: A rich purplish-blue; narrow bell-shaped; 15-20mm long; upright and stalkless in a dense head often with more flowers below

Leaves & stems: Downy lower leaves have blunt teeth, a long stalk, and are oval but not pointed; upper leaves oval, pointed and stalkless, clasping the stem

Appearance: Upright and closely downy, 3-30cm tall

Confusion species:

Nettle-leaved bellflower (*C. trachelium*) is a much taller plant and flowers from July to September. All leaves are coarsely sharp-toothed; flowers are stalked and 30-40mm long.

Harebell (*C. rotundifolia*) is small, delicate and blue flowered.



Greater Knapweed

(*Centaurea scabiosa*)

Flowering: June to August

Flowers: Flowerheads purple-red, 3-6cm across, solitary and always with spreading outer 'petals'

Leaves & stems: Lower leaves stalked and 10-25cm long; upper leaves deeply lobed, each lobe with blunt teeth

Appearance: Upright and downy, 30-80cm tall, stems grooved, branched above

Confusion species:

Field scabious (*Knautilia arvensis*) is similar before it flowers, but is more roughly-hairy, and has more rounded leaf lobes.

Common/Black knapweed (*Centaurea nigra*) tends to be shorter. The leaves are never deeply lobed, flowerheads are not more than 4cm across, and outer 'petals' are usually not spreading.





Common and Chalk Milkwort

(*Polygala vulgaris* & *P. calcarea*)

Flowering: May to June

Flowers: Small (6-8mm long) and can be blue, purple, pink or white

Leaves & stems: Leaves narrow, oval, pointed and hairless

Appearance: Low-growing and small



Confusion species:

None, except each other; just record as 'Milkwort'.



Small Scabious

(*Scabiosa columbaria*)

Flowering: July to September

Flowers: Blue-violet, small and clustered densely into a globular head 2-3cm across; outer florets much larger than inner ones; flowerhead stalks downy

Leaves & stems: Lower leaves dissected with rounded end lobes; upper leaves thread-like

Appearance: Slender and upright, 15-70cm tall



Confusion species:

Field scabious (*Knautia arvensis*) is stouter and more roughly-hairy; lower leaves dissected with pointed end lobes.

Devil's-bit scabious (*Succisa pratensis*) has florets of equal size across the flowerhead; lower leaves un-dissected.



Dwarf Thistle

(*Cirsium acaule*)

Flowering: June to September

Flowers: Purple-red flowerheads usually 1, sometimes 2-3; normally stalkless in centre of leaf rosette

Leaves & stems: Leaves 10-15cm long, deeply indented, stoutly spined

Appearance: All leaves flat against the ground, radiating from the centre



Confusion species:

Other thistles, but none have a stalkless purple flowerhead at ground level with all leaves at ground level. See carline thistle (*Carlina vulgaris*) on page 3, and spear thistle (*Cirsium vulgare*) and creeping thistle (*C. arvense*) on page 8.



Hairy and Sweet Violet

(*Viola hirta* & *V. odorata*)

Flowering: March to May

Flowers: Solitary; pale violet-blue to deep violet; occasionally white

Leaves & stems: Hairy leaves heart-shaped on long stems to 10cm. Stems hairy

Appearance: All stems arise from ground level



Confusion species:

Other violets (*Viola spp.*), which all have hairless stems and leaves.

Common and Spiny Restharrow

(*Ononis repens* & *O. spinosa*)

Flowering: June to September

Flowers: Pink, pea-type flowers, 10-15mm

Leaves & stems: Leaves oval, toothed, 10-20mm long, sticky, hairy and with a strong odour when bruised

Appearance: Creeping or upright, sometimes with spines



Confusion species:

None, except each other. Just record as 'Restharrow'.

Salad Burnet

(*Sanguisorba minor*)

Flowering: May to August

Flowers: Globular heads of tiny green flowers with red/purple feathery stigmas

Leaves & stems: Lower leaves with round, paired, coarsely toothed leaflets often tinged purple; leaf stalks also often purple-tinged

Appearance: Upright, hairless, 15-40cm tall



Confusion species:

Burnet-saxifrage (*Pimpinella saxifraga*) has similar lower leaves, but the white flowers in branched clusters are very different. See page 1.



Wild and Large Thyme
(*Thymus polytrichus* & *T. pulegioides*)

- Flowering:** May to August
- Flowers:** Pink, 5mm across, divided into upper and lower lobes
- Leaves & stems:** Small, oval, thyme-scented leaves (up to 5mm across) are short-stalked and in opposite pairs
- Appearance:** Mat-forming with thin, tough stems



Confusion species:
None, except each other. Just record as 'Thyme'.

Plants which, if growing in large quantities, indicate a verge likely to be of low botanical value



Cow Parsley or Kek
(*Anthriscus sylvestris*)

- Flowering:** April to June
- Flowers:** Many small (3-4mm) pure white flowers form clusters up to 6cm across
- Leaves & stems:** Leaves dull green, floppy and fern-like. Stems furrowed and not purple-spotted
- Appearance:** Upright, downy and 60-100cm tall



Confusion species:
There are many other similar members of the carrot family, but this is the only common, early-flowering species with white flowers.



Hogweed
(*Heracleum sphondylium*)

- Flowering:** June to September
- Flowers:** Many small (5-10mm) white or pinkish flowers form clusters 5-15cm across
- Leaves & stems:** Rough, grey-green, large leaves (15-60cm) that are less divided than those of cow parsley
- Appearance:** Robust and roughly hairy, growing to 200cm



Confusion species:
Angelica (*Angelica sylvestris*); although quite similar in appearance, this plant is associated with damp places, not limestone grassland.



Bramble/Blackberry

(*Rubus fruticosus* agg.)

Flowering: May to September

Flowers: White or pink with 5 petals

Leaves & stems: Leaflets arranged in spreading groups of 3 or 5

Appearance: A scrambling shrub with arching stems bearing hooked spines



Confusion species:

None, except perhaps wild roses.



Creeping and Spear Thistle

(*Cirsium arvense* & *C. vulgare*)

Flowering: July to October

Flowers: Purple or white flowerheads 1.5-5cm long and 1-3cm wide

Leaves & stems: Very prickly, with deeply lobed leaves

Appearance: Upright and branched, 30-150cm tall



Confusion species:

Carlina thistle (*Carlina vulgaris*) and dwarf thistle (*C. acaule*) and are on pages 3 and 5. Several other thistles may also be found, but it is not necessary to identify them at this stage.



Curled and Broad-leaved Dock

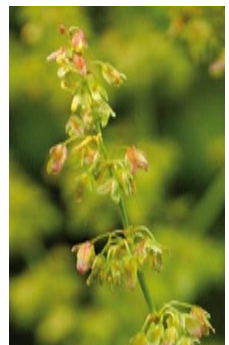
(*Rumex crispus* & *R. obtusifolius*)

Flowering: June to October

Flowers: Spikes of many, small, greenish flowers

Leaves & stems: Broad flat leaves or wavy-edged narrower leaves

Appearance: Stout and upright to 120cm



Confusion species:

Common sorrel (*Rumex acetosa*) is generally much smaller and more delicate. Several other docks may be found, but it is not necessary to identify them at this stage.



Ivy
(*Hedera helix*)

Flowering: September to November

Flowers: 5 yellow-green 4mm long petals; tends not to flower in shade

Leaves & stems: Hairless, glossy dark green leaves with paler veins; broad pointed lobes on lower leaves, oval higher up; all leaves un-toothed

Appearance: Evergreen woody climber which can creep across shaded turf

Confusion species:
None.



Common/Stinging Nettle
(*Urtica dioica*)

Flowering: June to August

Flowers: Yellowish-green, drooping, catkin-like clusters

Leaves & stems: Oval in opposite pairs with coarse teeth

Appearance: Very vigorous and robust; coarsely hairy, upright and with stinging hairs

Confusion species:

Deadnettles (*Lamium*), mints (*Mentha*), and woundworts (*Stachys*) etc. are similar, but none have stinging hairs.



Bracken
(*Pteridium aquilinum*)

Flowering: This is a fern, not a flowering plant

Flowers: There are no flowers

Leaves & stems: Leaves, known as fronds, are fern-like

Appearance: Fronds arise singly from the ground, not in clumps; often forms dense stands

Confusion species:

Other ferns such as male fern (*Dryopteris filix-mas*) and broad buckler-fern (*D. dilatata*), but these grow in clumps.



The Life on the Verge Wild Flower Survey...

aims to identify the most important roadside verges for limestone grassland species in Lincolnshire, Rutland and East Leicestershire. The survey will rely on local volunteers of all skill levels.

Please contact us to take part...

To 'claim' your local verges for surveying and to obtain a survey form, or for more information, visit the project website at lifeontheverge.org.uk or contact:

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For more help with wild flower identification check the project website for free training days to be held across the project area. These will be aimed at beginners but will also be useful practice if you already know some wild flowers. If you remain in doubt about the identity of a plant, guides are available from the natural history section of libraries and bookshops.

If you can recognise the plants in this guide and would like to carry out this survey in more detail, please do get in touch.



Lincolnshire
COUNTY COUNCIL

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RINGWAY



Acknowledgements:

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