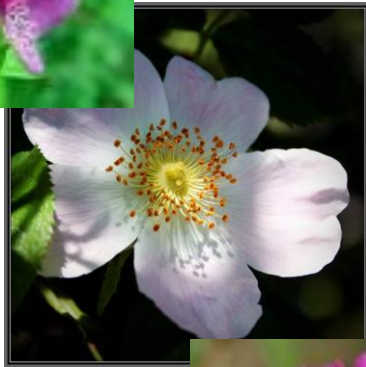


# An introduction to wildflowers – Part 2



**Magic**  
**5**

the  
species  
recovery  
trust



## The Crucifer or Cabbage family (Brassicaceae)

~100 species in UK  
~3,350 species globally

### Key characteristics

- Herbs
- 4 equal petals, arranged in cross
- 4 sepals, usually 6 stamens
- Alternate leaves, without stipules
- Seed pods point upwards



Cuckooflower



### British wild species

- Cuckooflower (*Cardamine pratensis*)
- Charlock (*Sinapsis alba*)
- Black Mustard (*Brassica nigra*)
- Thale Cress (*Arabidopsis thaliana*)
- Shepherd's-purse (*Capsella bursa-pastoris*)

### 🌐 Around the world 🌐

- Heliophila (Cape Stock)
- Alyssum
- Rose of Jericho
- *Lignarella* spp. (Japan)

### Uses

- Ornamental e.g. *Iberis* (Candytuft), *Lunaria* (Honesty), *Alyssum*, *Aubretia* and Wallflower
- Crops – Oils (Oilseed Rape), Mustards, forage and fodder (Kale and Cabbage)
- Vegetables and edible flowers

## Master your Crucifers with the Magic 5!

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### BEGINNER

- |                         |                          |
|-------------------------|--------------------------|
| Shepherd's Purse        | <input type="checkbox"/> |
| Cuckooflower            | <input type="checkbox"/> |
| Garlic Mustard          | <input type="checkbox"/> |
| Wavy/Hairy Bitter-cress | <input type="checkbox"/> |
| Hedge Mustard           | <input type="checkbox"/> |

HELP!

**Bittercress** – Hairy is only hairy along leaf margins, but has 4 stamens (Wavy has 6 – flex, sex, 6)

---

### INTERMEDIATE

- |                    |                          |
|--------------------|--------------------------|
| Thale Cress        | <input type="checkbox"/> |
| Charlock           | <input type="checkbox"/> |
| Water-cress        | <input type="checkbox"/> |
| Sea-kale           | <input type="checkbox"/> |
| Danish Scurvygrass | <input type="checkbox"/> |
- 

### ADVANCED

- |                    |                          |
|--------------------|--------------------------|
| Horse-radish       | <input type="checkbox"/> |
| Marsh Yellow-cress | <input type="checkbox"/> |
| Treacle Mustard    | <input type="checkbox"/> |
| Wild Radish        | <input type="checkbox"/> |
| Marsh Yellow-cress | <input type="checkbox"/> |
- 

### TWITCHER

- |                       |                          |
|-----------------------|--------------------------|
| Woad                  | <input type="checkbox"/> |
| Tower Mustard         | <input type="checkbox"/> |
| Perfoliate Pennycress | <input type="checkbox"/> |
| Wild Candytuft        | <input type="checkbox"/> |
| Coralroot             | <input type="checkbox"/> |

HELP!

**Woad** – lvs basal rosette, lanceolate, downy and upper lvs hairless arrow shaped. Yellow flowers 4mm

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## The Heather family (Ericaceae)

~17 British members

~4,050 species globally

Heathers, Heaths, Rhododendrons, Bilberries, Blueberries, Cranberries

### Key characteristics

- Shrubs and small trees with simple usually leathery, mostly evergreen, without stipules
- Flowers terminal and radially symmetrical with 4 or 5 of each part
- Petals joined into tube, stamens twice number of corolla lobes
- Fruit a berry or capsule



*Rhododendron ponticum*



### Key British species

- Introduced - Rhododendron (*Rhododendron ponticum*)
- Heather - Ling (*Calluna vulgaris*)
- Bell Heather (*Erica cinerea*)
- Cross-leaved Heath (*Erica tetralix*)
- Bilberry (*Vaccinium myrtillus*)

### 🌍 Around the world 🌍

- Strawberry Tree
- Rhododendron (850 spp)
- Cranberry
- Blueberry
- Checkerberry (*Gaultheria*)

### Uses

- Major spp. (heathers) of priority habitat - heathland
- Horticultural ornamentals e.g. *Rhododendron*, *Azalea*, *Kalmia*, *Pieris*
- Ornamental trees e.g. Strawberry Tree
- Fruit crops e.g. Cranberry, Blueberry, Bilberry
- Most woody species are calicifuges (except *Arbutus unedo*, *Erica terminalis*)
- Some species are highly toxic, and the honey from *Rhododendron* can cause illness or fatality, from the effects of andromedotoxin

## Master your Heaths with the Magic 5!

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### BEGINNER

- Heather (Ling) ☐
- Cross-leaved Heath ☐
- Bell Heather ☐
- Rhododendron ☐
- Bilberry ☐

HELP!

Cross-leaved heath – leaves in whorls of 4. Bell Heather – leaves in whorls of 3. Heather – leaves opposite.

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### INTERMEDIATE

- Cranberry ☐
  - Dorset Heath ☐
  - Cowberry ☐
  - Tree Heath ☐
  - Cornish Heath ☐
- 

### ADVANCED

- Cornish Heath ☐
- Bog Rosemary ☐
- Checkerberry ☐
- Bearberry ☐
- Corsican Heath ☐

HELP!

Corsican Heath - introduced and naturalised, only found in Magilligan (Co Londonderry), Dorset and Westernness

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### TWITCHER

- Irish Heath ☐
- Bog Bilberry ☐
- Blue Heath ☐
- Northern Bilberry ☐
- Small Cranberry ☐



## The Rose family (Rosaceae)

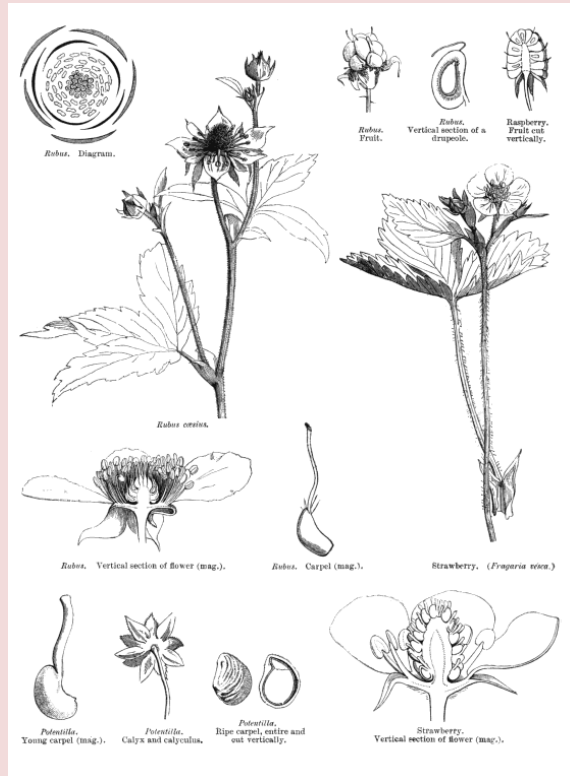
~59 species in the UK  
~2,000 species globally

### Key characteristics

- Large family of woody trees, shrubs and climbers, also herbs
- Alternate leaves, always with stipules
- Flowers with 4-5 separate petals and sepals. Petals delicate – cherry blossom.
- Stamens usually 2,3 or 4 times number of sepals
- Variable in characters



Rock-rose



### British wild species

- Rowan (*Sorbus aucuparia*)
- Hawthorn (*Crataegus monogyna*)
- Dog Rose (*Rosa canina*)
- Creeping Cinquefoil (*Potentilla reptans*)
- Salad Burnet (*Sanguisorba minor*)

### 🌍 Around the world 🌍

- Almond
- Loquat
- Wood Strawberry
- Attar of Roses – fragrant oil from *Rosa damascene*, *R. gallica* and *R. centifolia*

### Uses

- 3<sup>rd</sup> most economically important family, next to Peas and Grasses
- Food – Fruits (*Malus*, *Prunus*, *Rubus*, *Pyrus*, *Cydonia* and *Fragaria*)
- Essential oils from Roses and Almonds, medicinal from plants like Agrimony and Meadowsweet
- Ornamentals – Trees e.g. *Amelanchia*, *Sorbus*, *Photinia*, *Cotoneaster* and *Pyracantha* and herbaceous perennials e.g. *Alchemilla*, *Geum*, *Potentilla* and, of course, Roses
- Timber

## Master your Roses with the Magic 5!

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### BEGINNER

Hawthorn	<input type="checkbox"/>
Tormentil	<input type="checkbox"/>
Meadowsweet	<input type="checkbox"/>
Bramble	<input type="checkbox"/>
Rowan	<input type="checkbox"/>

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### INTERMEDIATE

Wild/Barren Strawberry	<input type="checkbox"/>
Wood/Water Avens	<input type="checkbox"/>
Whitebeam	<input type="checkbox"/>
Wild Cherry	<input type="checkbox"/>
Lady's-mantle	<input type="checkbox"/>

Help! Wild Strawberry, terminal leaflet longer; Barren Strawberry terminal leaflet shorter than rest

Wood Avens, small yellow flowers; Water Avens nodding pinky brown flowers

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### ADVANCED

Dog Rose	<input type="checkbox"/>
Midland Hawthorn	<input type="checkbox"/>
Field Rose	<input type="checkbox"/>
Sweet Briar	<input type="checkbox"/>
Parsley-piert	<input type="checkbox"/>

---

### TWITCHER

Pear	<input type="checkbox"/>
Mountain Avens	<input type="checkbox"/>
Wild Service Tree	<input type="checkbox"/>
Fragrant Agrimony	<input type="checkbox"/>
Arran cut-leaved Whitebeam	<input type="checkbox"/>

## The Figwort family (Scrophulariaceae)

~100 species in the UK  
~5,800 species globally

### Key characteristics

- Flowers bi-sexual with tubular fused petals
- Leaves with no stipules, alternate or opposite.



Yellow Rattle



Foxglove – *Digitalis purpurea*

### Key British species

- Foxglove (*Digitalis purpurea*)
- Great Mullein (*Verbascum thapsus*)
- Common Figwort (*Scrophularia nodosa*)
- Common Toadflax (*Linaria vulgaris*)
- Germander Speedwell (*Veronica chamaedrys*)

### 🌍 Around the world 🌍

- *Verbascum*
- *Castilleja*
- 30m lianes of *Wightia*

### Uses

- Garden ornamentals- Herbaceous, shrubs and trees, genera such as *Antirrhinum*, *Penstemon*, *Verbascum*, *Hebe*, and *Paulownia*
- Drugs – Digoxin and digitalin are extracted from the leaves of *Digitalis* for heart treatment
- Parasitic weeds – Yellow Rattle (*Rhinanthus minor*) used in species-rich grassland restoration as hemi-parasitic on grasses. Seeds contain iridoids.



## Master your Figworts with the Magic 5!

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### BEGINNER

Foxglove	<input type="checkbox"/>
Germander Speedwell	<input type="checkbox"/>
Ivy-leaved Toadflax	<input type="checkbox"/>
Great Mullein	<input type="checkbox"/>
Common Figwort	<input type="checkbox"/>

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### INTERMEDIATE

Eyebright	<input type="checkbox"/>
Brooklime	<input type="checkbox"/>
Common Toadflax	<input type="checkbox"/>
Yellow Rattle	<input type="checkbox"/>
Lousewort	<input type="checkbox"/>

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### ADVANCED

Heath Speedwell	<input type="checkbox"/>
Grey Field Speedwell	<input type="checkbox"/>
Yellow Bartsia	<input type="checkbox"/>
Greater Yellow Rattle	<input type="checkbox"/>
Red Bartsia	<input type="checkbox"/>

---

### TWITCHER

Crested Cow-wheat	<input type="checkbox"/>
Field Cow-wheat	<input type="checkbox"/>
Round-leaved Fluellen	<input type="checkbox"/>
Mudwort	<input type="checkbox"/>
Weasel's-snout	<input type="checkbox"/>

## The Pink family (Caryophyllaceae)

~90 species in UK  
~2,200 species globally  
Also known as: the Campion family

### Key characteristics

- Herbs
- Flowers bisexual and regular, petals and sepals usually 5 (sometimes 4)
- Flowers pink, red or white
- Stems forked, swollen at nodes
- Opposite leaves without stipules



Cheddar Pink



### Key British species

- Red Campion (*Silene dioica*)
- Corncockle (*Agrostemma githago*)
- Bladder Campion (*Silene vulgaris*)
- Common Chickweed (*Stellaria media*)
- Soapwort (*Saponaria officinalis*)

### 🌍 Around the world 🌍

- Rupturewort *Herniaria* is found in Europe, Mediterranean region to Afghanistan and South Africa
- Stitchwort *Stellaria* can be found world-wide
- Carnation
- Mouse-ear
- *Gypsophila*

### Uses

- Large number of garden ornamentals. Most important species are the carnations & pinks
- Specialised crop for the cut-flower market
- Several species are widespread annual weeds of fields, gardens and other disturbed habitats e.g. Common Chickweed *Stellaria media*

## Master your Pinks with the Magic 5!

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### BEGINNER (ish!)

- |                      |                          |
|----------------------|--------------------------|
| Common Chickweed     | <input type="checkbox"/> |
| Red Campion          | <input type="checkbox"/> |
| Ragged-Robin         | <input type="checkbox"/> |
| Procumbent Pearlwort | <input type="checkbox"/> |
| Common Mouse-ear     | <input type="checkbox"/> |
- 

### INTERMEDIATE

- |                     |                          |
|---------------------|--------------------------|
| Soapwort            | <input type="checkbox"/> |
| White Campion       | <input type="checkbox"/> |
| Bladder Campion     | <input type="checkbox"/> |
| Greater Sea-spurrey | <input type="checkbox"/> |
| Nottingham Catchfly | <input type="checkbox"/> |

### HELP!

Bladder Campion has a swollen calyx and waxy leaves, White Campion is sticky and hairy

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### ADVANCED

- |                       |                          |
|-----------------------|--------------------------|
| Sand Catchfly         | <input type="checkbox"/> |
| Three-nerved Sandwort | <input type="checkbox"/> |
| Marsh Stitchwort      | <input type="checkbox"/> |
| Common Mouse-ear      | <input type="checkbox"/> |
| Upright Chickweed     | <input type="checkbox"/> |
- 

### TWITCHER

- |                     |                          |
|---------------------|--------------------------|
| Corncockle          | <input type="checkbox"/> |
| Nottingham Catchfly | <input type="checkbox"/> |
| Cheddar Pink        | <input type="checkbox"/> |
| Deptford Pink       | <input type="checkbox"/> |
| Umbellate Chickweed | <input type="checkbox"/> |

**Magic 5 aims gently to introduce people to the magical and diverse world of the UK flora, simplifying, but at the same time inspiring a growing knowledge of our wild plant heritage.**

There are over 5,000 species of flowering plants, ferns, bryophytes and lichens in the UK, which can be fairly intimidating. This course breaks down that flora into several bite-size chunks, and while it won't teach you every species, it will highlight important groups and allow you confidently to identify some commonly encountered flowering plant families based on several key features.

Other courses will introduce similar bite size chunks of the remaining four parts of the plant kingdom –opening people's eyes and imagination to the exciting, diverse yet often overlooked world of lichens, bryophytes, ferns and grasses whilst giving an overview of the whole of the UK flora.

1. Lichens
2. Bryophytes
3. Ferns
4. Grasses
5. Flowers

### **The Species Recovery Trust**

is a charity dedicated to saving some of the rarest species in the UK, and educating and enthusing the public about wildlife around them.

More details of our work, our training courses and how you can support us can be found at;

[www.speciesrecoverytrust.org.uk](http://www.speciesrecoverytrust.org.uk)