

Common yellow-flowered ligulate composites

Introduction

Members of the family Asteraceae (traditionally called Compositae) have flower-heads (**capitula**) consisting of a **receptacle** bearing (usually) numerous **florets** (each strictly a separate flower). Each **capitulum** looks like a single larger flower, being surrounded by a calyx-like **involucre** of one or more rows of sepal-like **bracts** (also known as **phyllaries**).

The florets can be of three types:

- (i) tubular and regular (actinomorphic), with 5 equal teeth at the top,
- (ii) tubular and 2-lipped,
- (iii) **ligulate**, with the corolla tube prolonged on one side into a strap-shaped **ligule**, which is usually 5- or 3-toothed at the tip.

At the base of each fertile floret, fixed to the receptacle, is a single inferior ovary (**achene**) crowned by the true calyx, which is not green and leaf-like, but is either a **pappus** of simple or feathery hairs or else consists of scales, teeth or bristles (or is occasionally absent). There may be a slender **beak** ('neck') between the ripe achene and the pappus.

The capitula can be of three types:

- (i) discoid, with tubular flowers (disc florets) only, as in Groundsel *Senecio vulgaris*,
- (ii) ligulate, with ligulate flowers (usually 5-toothed) only, as in Dandelion *Taraxacum* species,
- (iii) radiate, with a central region of tubular flowers (disc florets) and an outer region of ligulate flowers (ray florets, usually 3-toothed), as in Daisy *Bellis perennis*.

This account relates to those members of the family with capitula of type (ii), bisexual, 5-toothed, ligulate florets ONLY and (usually) milky sap (**latex**) when broken; but it excludes the blue- and purple-flowered species such as Chicory *Cichorium intybus* and Salsify *Tragopogon porrifolius*.

Key

- 1 Calyx absent, so without any pappus; bracts of involucre in 1 row, erect, + a few small basal scales; stems leafy; little latex except in capitula Nipplewort *Lapsana communis*
- 1 Calyx composed of hairs, forming a pappus; bracts of involucre usually in several rows (but see couplet 7); stems leafy or not; amount of latex variable, often copious 2
- 2 Pappus with at least the inner hairs feathery (with side hairs visible, at least when bent over) 3
- 2 Pappus wholly of unbranched hairs (though these are sometimes minutely toothed) 9
- 3 Stems without true leaves but often with small, usually scale-like bracts; leaves in a basal rosette 4
- 3 Stem-leaves large, conspicuous (at least on the lower part of the stem) 7
- 4 Lance-shaped chaffy scales, sometimes yellow-tipped, present on receptacle among florets; stems normally branched, enlarged below capitula, with several to many, scattered, distinctive dark-tipped 'cat's-ear' bracts Cat's-ear *Hypochaeris radicata*
- 4 No scales on receptacle among florets; stems branched or unbranched, with or without some bracts on the upper part (*Leontodon* spp.) 5
- 5 Leaves with simple or no hairs; stems normally branched, with bracts; involucre tapering into the stalk; pappus of 1 row of feathery hairs Autumn Hawkbit *Leontodon autumnalis*
- 5 Leaves with at least some hairs forked at the extreme tip; stems unbranched, with or without bracts; involucre narrowing abruptly; pappus of 2 rows of hairs, inner feathery, outer simple 6
- 6 All achenes with 2-rowed pappus of hairs; stems usually conspicuously and regularly hairy, often with 1–3 small bracts; florets golden yellow; outermost ligules usually orange or reddish on the back Rough Hawkbit *Leontodon hispidus*
- 6 Outermost achenes with pappus reduced to a scaly ring (best seen after flowering); stems usually with scattered hairs, more lower down than above, normally bractless; florets usually paler yellow; outermost ligules grey-violet on the back Lesser Hawkbit *Leontodon saxatilis* (*L. taraxacoides*)
- 7 Plant ± woolly, later ± hairless; leaves grass-like; capitula closing around noon ('Jack-go-to-bed-at-noon'); bracts of involucre in one row, appressed; ripe achenes with a very long beak; pappus stiff, intricate, with fine interwoven side-hairs Goat's-beard *Tragopogon pratensis*
- 7 Plant bristly, with many of bristles anchor-like at tip; leaves lance-shaped to oblong, toothed; outer bracts of involucre ± spreading in a ruff, inner appressed; pappus soft, feathery (*Picris* spp.) 8

- 8 Outer bracts of involucre broad, heart-shaped; bristles on leaves with white swollen bases; ripe achenes with a beak of the same length; pappus white Bristly Oxtongue *Picris echioides*
- 8 Outer bracts of involucre narrow, like inner but shorter; bristles without swollen bases; ripe achenes with a very short beak; pappus off-white Hawkweed Oxtongue *Picris hieracioides*
- 9 Achenes distinctly flattened 10
- 9 Achenes not or scarcely flattened 15
- 10 Achenes with a distinct narrow beak or at least markedly narrowed at the top (lettuces) 11
- 10 Achenes without a beak and scarcely narrowed at the top (*Sonchus* spp.) 13
- 11 Perennial, usually under 1 m; side-branches of inflorescence \pm horizontal; capitula nearly always of 5 florets; bracts of involucre in 2 very unequal rows, inner erect and equal, outer very short and spreading; pappus-hairs in 2 rows, inner ones longer Wall Lettuce *Mycelis muralis*
- 11 Annuals or biennials up to 2 m or more (unless stunted); side-branches of inflorescence ascending at an acute angle; capitula of more than 5 florets; bracts of involucre unequal, in several overlapping rows; pappus-hairs in 2 equal rows (*Lactuca* spp.) 12
- 12 Ripe achenes (excluding beak) over 4 mm long, dark maroon; open capitula (morning only) up to 20 mm across; stem-bases and leaf midribs often tinged maroon; stem-leaves not flat, held at various angles; auricles of stem-bracts appressed; inflorescence characteristically kite-shaped; latex stinking like Opium Poppy Great Lettuce *Lactuca virosa*
- 12 Ripe achenes (excluding beak) under 4 mm long, olive-grey; open capitula (morning only) up to c. 10 mm across; stem-bases and leaf midribs usually whitish; stem-leaves flat, usually held vertically in one plane; auricles of stem-bracts spreading; inflorescence variously shaped; latex smelling like Garden Lettuce Prickly Lettuce *Lactuca serriola*
- 13 Perennial, with rhizomes; open capitula 40–50 mm across; involucre usually densely covered with yellowish glands; achenes with 5–6 ribs down each face Perennial Sow-thistle *Sonchus arvensis*
- 13 Annuals or biennials; open capitula 20–25 mm across; involucre not very glandular; achenes with at least 3 ribs down each face 14
- 14 Stem-leaves with pointed auricles, dull, toothed but never spiny; achenes with longitudinal ribs and transverse wrinkles Smooth Sow-thistle *Sonchus oleraceus*
- 14 Stem-leaves with rounded auricles, glossy, crisped, spiny on margins; achenes with longitudinal ribs but otherwise smooth Prickly Sow-thistle *Sonchus asper*
- 15 Leaves all in a basal rosette; inflorescence-stems hollow, leafless, with 1 capitulum Dandelions *Taraxacum* spp.
- 15 Stems leafy, at least on creeping runners; inflorescence-stems solid or hollow 16
- 16 Plant with leafy runners at the base; inflorescence-stems with few or no leaves; rosette-leaves unlobed, untoothed, hairy, silvery beneath; florets lemon-yellow; pappus brownish, brittle Mouse-ear-hawkweed *Pilosella officinarum* (*Hieracium pilosella*)
- 16 Plants with no runners at the base; stem-leaves usually numerous; rosette- and stem-leaves \pm toothed or lobed, with or without hairs; florets deeper yellow; pappus various 17
- 17 Bracts of involucre many, overlapping, unequal; achenes never beaked; pappus brownish, brittle Hawkweeds *Hieracium* spp.
- 17 Bracts of involucre mainly in one equal row, with some shorter outer ones; achenes beaked or unbeaked; pappus white, soft (*Crepis* spp.) 18
- 18 Leaves \pm hairless; flower-heads 1–1.5 cm in diameter; outer bracts of the vase-shaped involucre appressed; achenes c. 2 mm long, not beaked, 10-ribbed Smooth Hawk's-beard *Crepis capillaris*
- 18 Leaves roughly hairy; flower-heads over 1.5 cm in diameter; outer bracts of involucre narrower than inner, spreading in a ruff; achenes over 3 mm long, eventually beaked or not 19
- 19 Ripe achenes beaked, 10-ribbed Beaked Hawk's-beard *Crepis vesicaria* subsp. *taraxacifolia*
- 19 Achenes narrowed at top but not beaked, 13–20-ribbed Rough Hawk's-beard *Crepis biennis*

N.B. Species which have been recorded from Cambridgeshire but are excluded from this key are *Arnoseris minima*, *Hypochaeris glabra*, *H. maculata*, *Lactuca saligna*, *Sonchus palustris*, *Crepis foetida* and *C. setosa*. Dandelions (*Taraxacum* spp.) and hawkweeds (*Hieracium* spp.) have not been separated down to species level.

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