

ASTERACEAE Tribe Cichorieae (Dandelion-flowered Composites)

Workshop Notes August 2015

This part of the Asteraceae, also known as the Lactuceae, is one of 17 tribes usually recognised within the family. With close to 100 genera and over 1500 species worldwide (each figure comprising 6-7% of the whole family) it makes a “significant but average” contribution to the family's biodiversity.

Its characteristic features are:

- Presence of a milky sap or latex (this can be meagre or watery in some species);
- Leaves alternately arranged (sometimes absent on the stem);
- All florets **ligulate** – that is, asymmetrical with a strap-shaped lobe towards the outer side of the flower head – with 5 lobes on the tip of the ligule (occasionally indistinct and appearing fewer);
- Filaments attached to the anthers along the back of the anther (**dorsifixed**);
- Styles usually with 2 long slender branches, typically hairy, and with one stigmatic area (pollen receptor) on each arm;
- Pollen grains ridged and/or spiny.

Flowers are mostly yellow, sometimes blue or purplish, rarely white. In Britain, apart from one rare alien, plants are not spiny, but some species are very roughly bristly.

Beginners can often be bewildered by the number of rather similar species with yellow dandelion-like flowers. Even experienced botanists can be deceived by the enormous variability shown by some common species, especially in habit and leaf shape, and some species have ecologically significant and sometimes very different-looking forms. We shall be looking at the features that really help to separate them, and also providing hints on variability to watch out for.

And then there are two huge and difficult critical genera, the Hawkweeds (*Hieracium*) and Dandelions (*Taraxacum*). In this workshop we shall not be tackling those genera in any detail, but we shall look at how to recognise the genera and, in the case of *Hieracium*, the main divisions.

Some terminology and conventions

The following are terms likely to be encountered in Floras and guides for this tribe.

Age bands on mapping	<ul style="list-style-type: none"> ● 2010 onwards ● 2000 to 2009 ● 1970 to 1999 ● up to 1969 (or undated)
achene	The one-seeded dry fruit common to all members of the family Asteraceae.
alveole	Equivalent to receptacle pit .
arachnoid	(Of hairs) cobwebby.
auricle	A projection at the base of a leaf (usually where the leaf is sessile or decurrent).
beak	A slender projection from the apex of the achene.
capitulum	The head of sessile florets, surrounded by a ring of involucral bracts , that make up the apparent “flower” of a Composite.
ciliate	With hairs projecting from the margin (e.g. of a leaf).
cone	The pyramidal section of the achene between the seed-bearing body and the beak in <i>Taraxacum</i> .
corymbose	(Referring in Asteraceae to the whole inflorescence of many capitula) With flowering branches of different lengths making a more or less flat-topped inflorescence.
cypsela	Usually equivalent to achene and sometimes applied to Asteraceae fruits, although there is a subtle technical difference between the two.
eglandula	Lacking glands.
fimbriate	With divided margins forming a fringe resembling hairs or narrow lobes.
glabrous	Lacking any type of hair, gland or spine.
glandular hair	A hair bearing a secreted fluid (in Asteraceae, often at its tip).
hyaline	Thin and translucent.
imbricate	Overlapping at the edges.
involucral bract	One of the bracts surrounding the flowering head (capitulum) of Asteraceae members.
latex	A milky, often sticky and elastic sap, sometimes with a characteristic odour, found to a greater or lesser degree

	in the tribe Cichorieae.
ligule	The strap-like appendage of an individual floret, bearing 5 apical teeth in the tribe Cichorieae.
pappus	The specialised development of the calyx found at the summit of the achene in Asteraceae: may be absent or consist of a membranous ring, scales, or hairs.
peduncle	The stalk of a group of flowers, therefore the stalk of a capitulum in Asteraceae.
phyllary	Equivalent to involucral bract .
pinnatifid	Pinnately divided, with the divisions backed by a portion of the leaf blade and therefore not reaching the midrib.
pinnatisect	Pinnately divided, with the divisions extending almost to the midrib of the leaf.
plumose	Feathery, i.e. with secondary hairs spreading from the main axis of a hair.
receptacle	The fleshy stem end which bears the florets in the capitulum of Asteraceae members.
receptacle pit	The depression in the receptacle that bears one floret of the flowering head. It may be fringed with bumps, teeth, slender lobes (fimbria) or hairs.
receptacular scale	Scales or hairs found on the receptacle between the florets in some species of Asteraceae.
rhizome	A stem resembling a root, often horizontal at or under the surface of the ground, bearing buds or shoots, and roots away from the mother plant axis (adventitious roots).
rostrum	Equivalent to beak .
runcinate	Sharply divided with the lobes directed towards the base of the leaf.
sagittate	(Of projections at the base of the leaf) forming an inverted V like the base of an arrow head.
scape	A flowering stem devoid of leaves.
stellate	(Especially of hairs) with arms radiating from the base.
stolon	A prostrate stem at or near ground level capable of producing root-bearing nodes from which new plants may arise.
terete	Rounded, without ridges, angles or grooves.

Key to the genera and species

This key omits species only found in other parts of the country and most non-native species only found very rarely or as casuals. Since the standard keys often rely entirely on features only found in fruiting plants, we have tried to include vegetative characters where they help in a diagnosis. However you may not have ripe fruit, and then you will find it necessary to do a certain amount of prior assumption and backtracking in the key. Features which may be a useful additional check, but are not diagnostic at the point where they are shown in the key, are given in *italics*. When learning the species it is useful to be able to consider the characteristics of the genus as a whole, and this can't be done with a purely vegetative key; as you will see, fruit characters are important from the outset. But all the plants we deal with here will key to one of a small number of sections in *The Vegetative Key to the British Flora*. Because of the variation in leaf shape, many species will key out in more than one place in this book:-

Leaves parallel-veined	JE
Leaves entire but not parallel-veined	KG
Leaves toothed	NI, NK
Leaves lobed	PD to PG

- 1 Pappus absent or comprising only a membranous ring or scales.....2
- 1' Pappus of at least the central florets comprised of hairs.....3
- 2 Pappus of scales; flowers blue or occasionally white; stems stout (typically > 10mm diam), stiffly erectly branched; capitula sessile in groups of one to three in the axils of upper leaves, making a spike-like inflorescence; involucre bracts in two ranks, the outer half the length of the inner and often spreading..
..... ***Cichorium intybus* (Chicory)**
- 2' Pappus absent; flowers yellow; stems less stout (<10mm diam), branches narrower and less stiffly erect; capitula prominently stalked, making a corymbose inflorescence; involucre bracts in two rows but appearing as if one, the outer being scale-like and appressed.....***Lapsana communis* (Nipplewort)**
- 3 Pappus hairs feathery (i.e. with long slender side-branches) in part, or on at least some achenes; *receptacular scales present or absent*.....4
- 3' Pappus hairs all simple, but may be shortly toothed; *receptacular scales always absent*.....9
- 4 Aerial stems with leaves none, or reduced to simple scales.....5
- 4' Aerial stems with well-developed leaves.....7
- 5 Receptacular scales present among the flowers; *stems thickened to some degree under the capitulum; hairs always simple*.....***Hypochaeris* (Cat's-ears)**
- 5' Receptacular scales absent; *stems thickened or not under the capitulum; hairs simple, or forked at tip*....6
- 6 Stems usually branched; leaves glabrous or with unbranched hairs, *typically with a more or less parallel-sided tip or terminal lobe*; pappus of one row of feathery hairs.....
.....***Scorzoneroides autumnalis* (Autumn Hawkbit)**
- 6' Stems unbranched; leaves with most hairs forked at tip; pappus with an inner row of feathery hairs and an outer row of simple ones.....***Leontodon* (Hawkbits)**
- 7 Plant with soft hairs or glabrous; leaves entire and sheathing, veins parallel; involucre bracts about 8, all in one row and of one length.....***Tragopogon* (Goat's-beards)**
- 7' Plant with harsh, hooked, bristly hairs; leaves lobed and/or toothed, perhaps clasping or decurrent but not sheathing, veins not parallel; involucre bracts in more than one row and varying in length.....8

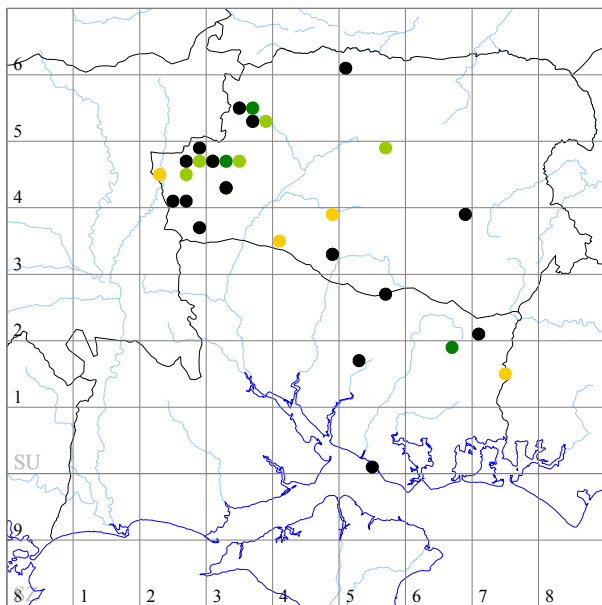
- 8 Leaves with some hairs on whitish swollen bases, midrib not reddish above; outer involucre bracts broadly ovate, cordate at base, inner much narrower; pappus with all hairs feathery; achenes long-beaked..... ***Helminthotheca echioides* (Bristly Oxtongue)**
- 8' Leaves without hairs on white swollen bases, midrib often reddish above; outer involucre bracts lanceolate, not cordate at base, similar to inner; pappus with only inner row of hairs feathery; achenes unbeaked or short-beaked..... ***Picris hieracioides* (Hawkweed Oxtongue)**
- 9 Achenes distinctly flattened..... 10
- 9' Achenes not or scarcely flattened..... 13
- 10 Achenes with distinct narrow beak at apex, or at least narrowed towards the tip..... 11
- 10' Achenes unbeaked and not or scarcely narrowing towards the tip..... 12
- 11 Involucre bracts in several overlapping rows; pappus hairs in two equal rows; *leaves often prickly*..... ***Lactuca* (Lettuces)**
- 11' Involucre bracts in two distinct unequal rows; pappus hairs in two unequal rows; *leaves never prickly*..... ***Mycelis muralis* (Wall Lettuce)**
- 12 Flowers blue to mauve; leaves with one large ovate to subcordate terminal lobe and a few or no small lateral lobes..... ***Cicerbita macrophylla* (Common Blue-sowthistle)**
- 12' Flowers yellow; leaves not as above..... ***Sonchus* (Sowthistles)**
- 13 One capitulum per flowering stem; stems conspicuously hollow, without leaves or scales; rhizomes and stolons absent..... ***Taraxacum* (Dandelions)**
- 13' More than one capitulum per stem; or stems with leaves or scales; or rhizomes and/or stolons present. 14
- 14 Pappus hairs pure white..... ***Crepis* (Hawk's-beards)**
- 14' Pappus hairs yellowish-white to pale brown..... 15
- 15 Stolons usually present; each rib of achene ending in a small point at achene apex; pappus hairs in one row ***Pilosella* (Mouse-ear-hawkweeds)**
- 15' Stolons absent; all ribs of achene ending in a smooth ring; pappus hairs in two rows..... ***Hieracium* (Hawkweeds)**

***Cicerbita* (Common Blue-sowthistle)**

One native and three introduced species have been recorded in Britain, but only one has been recorded in the south of England: ***Cicerbita macrophylla* (Common Blue-sowthistle)**.

All leaves are stem leaves (no rosette), although this may not be obvious on a young plant. It has glandular hairs on the upper stem, leaf margins and on involucre bracts, where they may be coloured.

It has widespread but scattered records in Hampshire, but with a concentration in the NW of the county. It is rhizomatous and often establishes in patches which can be persistent over many years. The form of the leaves, with one large terminal lobe and a few much smaller lateral lobes, is rather distinctive.



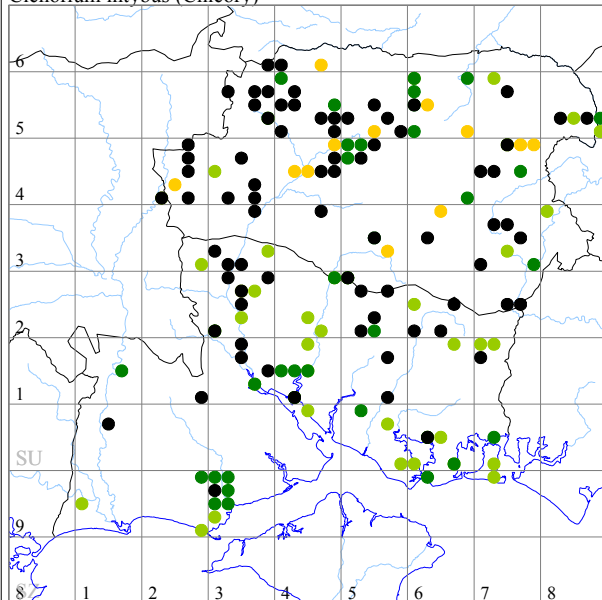
***Cichorium* (Chicory)**

Two species are recorded in Britain, but one (*Cichorium endivia*, Endive) is only a very rare garden outcast and there are no Hampshire records. *Cichorium intybus* (Chicory) occurs chiefly as a crop relic and is usually now considered an archaeophyte, although one form with lower leaves pinnatisect (see photo 2) has been proposed as a native.

Hairs are generally without glands, but there may be a few glandular hairs on the upper stem.

It is widespread in Hampshire, usually on light or chalky soils, in waste ground, disturbed grassland, road and track verges and arable margins.

Cichorium intybus (Chicory)



***Crepis* (Hawk's-beards)**

- 1 Outer achenes with short or no beak, distinctly different from inner slender-beaked ones.....
.....***Crepis vesicaria* ?subsp. *stellata* (Beaked Hawk's-beard)**
- 1' Achenes all beaked similarly, or only slightly different and grading into each other.....2
- 2 Achenes distinctly beaked, the beak being at least ½ length of body of achene.....3
- 2' Achenes not beaked, but may be gradually narrowed at apex.....4
- 3 Upper parts of plant with long, stiff, pale and usually yellowish bristle-like hairs; achenes including beak 3-5.5mm.....***Crepis setosa* (Bristly Hawk's-beard)**
- 3' Upper parts of plant without stiff bristle-like hairs; achenes including beak 5-9mm.....
.....***Crepis vesicaria* subsp. *taraxacifolia* (Beaked Hawk's-beard)**
- 4 Involucral bracts hairy on their inner faces.....***Crepis biennis* (Rough Hawk's-beard)**
- 4' Involucral bracts glabrous on their inner faces.....***Crepis capillaris* (Smooth Hawk's-beard)**

All our Hampshire *Crepis* species have lower stem leaves that either unambiguously clasp the stem or (in the case of *Crepis capillaris*) have pronounced auricles that project back around it; in this detail, Stace can be misleading. All have appressed hairs on the inner face of the involucral bracts except *Crepis capillaris*. All have white pappus hairs.

In addition to the keyed species, the following have been listed at least once in Hampshire.

***Crepis mollis* (Northern Hawk's-beard):** one plant was recorded on one occasion in the 1920s, at Swaythling. The record was accepted by Druce for the Botanical Exchange Club although he commented "A very unexpected adventive". It would be distinguished from all other *Crepis* species here by having non-clasping stem leaves with well-defined narrowly winged petioles.

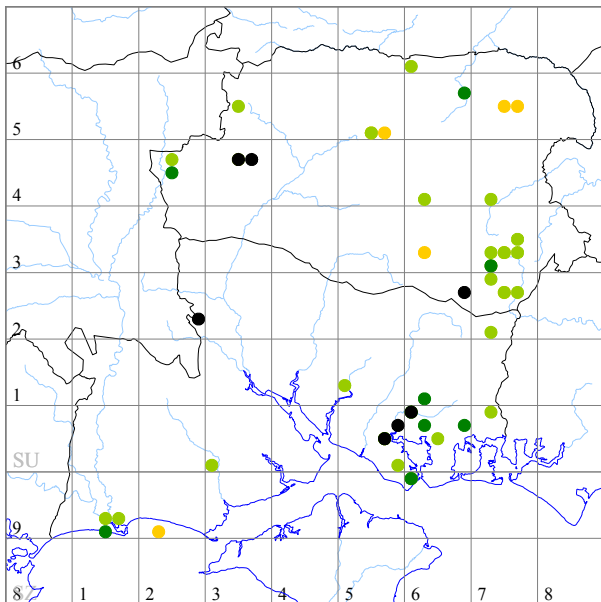
***Crepis nicaeensis* (French Hawk's-beard):** recorded once in 1890 near Odiham. It is usually a grass-seed contaminant and might be overlooked for the more robust form of *Crepis capillaris* (q.v.), from which it can be told by its spreading outer involucral bracts (appressed in *C. capillaris*) and its larger achenes (≥ 2.5 mm in *C. nicaeensis*, ≤ 2.5 mm in *C. capillaris*). It is also often much hairier, but this is not a constant character.

Hybrids are unknown in our members of the genus.

Crepis biennis (Rough Hawk's-beard)

This species most closely resembles *C. vesicaria*; apart from the unbeaked achenes, it can also be distinguished by its latex showing yellowish (not bluish) on exposure to air, and its larger (12-18mm vs. 9-12mm) florets, which give the capitula a more flamboyant and slightly untidy look once one knows the plant. Leaves tend to be more hairy, and more stiffly hairy, in this species. It also tends to start flowering about a month later.

It is rather patchily distributed in Hampshire, but may well be overlooked and is worth looking out for.



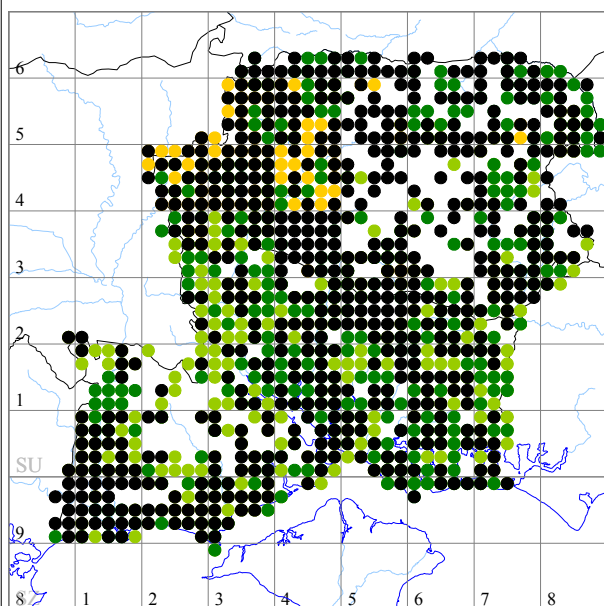
Crepis capillaris (Smooth Hawk's-beard)

This species is very variable in size, robustness and other aspects of its habit. Two varieties have been proposed: var. *capillaris*, which is the rather spreading, wiry plant with no obvious central stem, typically narrow stem leaves at least some of which are strongly sagittate, and involucre bracts $\leq 7\text{mm}$; and var. *agrestis*, which is altogether more robust, has an obvious erect main stem and involucre bracts $\geq 7\text{mm}$. In reality, all intermediates can be found. Plants with an *agrestis* tendency might be mistaken for a not very robust *C. vesicaria*. and are best distinguished by the hairiness of the inner face of the involucre bracts. Most forms have smaller capitula on average but there is considerable overlap. At the *capillaris* end of the spectrum there will be little difficulty in recognising this species.



It may start flowering almost as early as *C. vesicaria* (May), but will continue much later, often well into the autumn.

Crepis capillaris is one of the commonest of this group of plants in Hampshire, occurring on grass heaths, grasslands, walls, open and waste ground.

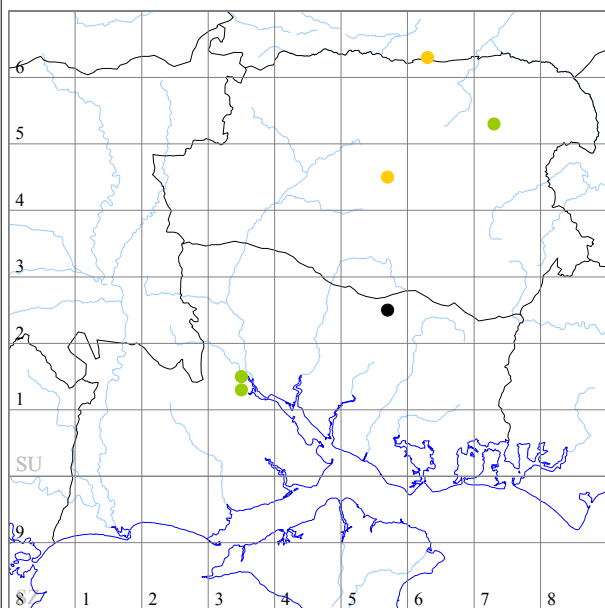


***Crepis setosa* (Bristly Hawk's-beard)**

This species might be taken to resemble some forms of *C. capillaris* but the conspicuous, pale, usually yellowish stiff bristles on the upper parts of the plant mark it out from this and other members of the genus occurring in our area. Although leaf shape is very variable, the oblong-lanceolate outline of leaf with tooting or quite shallow lobing shown in photograph 1 seems to be the most typical.

Flowering typically starts quite late (July onwards), although this may change; it starts about a month earlier in central France.

It occurs in Hampshire currently only as a casual, and a rare one at that, as a seed and crop contaminant; but as it sometimes arises from “wild flower” sowing mixes and is likely to be favoured by climatic warming, it is worth looking out for.

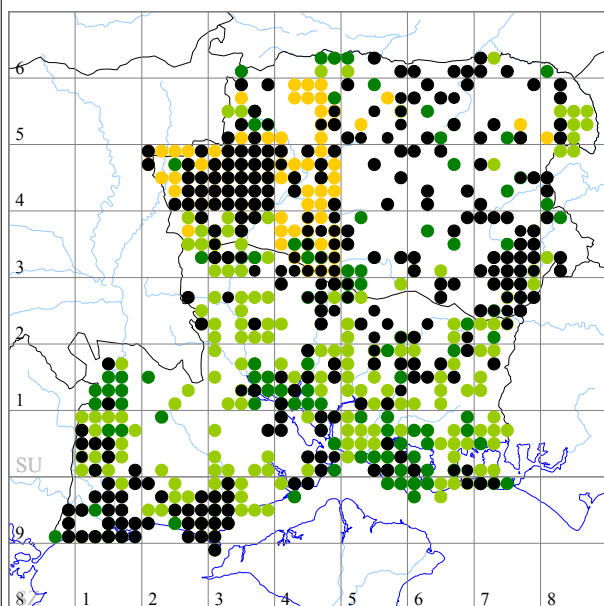


Crepis vesicaria (Beaked Hawk's-beard)

Apart from the beaked achenes, this plant tends to stand out from other members of the genus by its general “chunkiness”, particularly in the main stem, and its early flowering period. It may start as early as late April in a good season, and has usually finished flowering by early June, although it may have a second late flowering. The capitula tend to be cylindrical in bud – more so than in other species.

It is naturalised from Europe and elsewhere, and is a pretty cosmopolitan introduction across temperate zones, exhibiting a lot of variation worldwide. The vast majority of plants in Britain are subsp. *taraxacifolia*, but subsp. *stellata*, with conspicuous dense dark or greenish glandular hairs on the involucrel bracts, has been reported. This is the subspecies whose outer achenes have a very short or no beak.

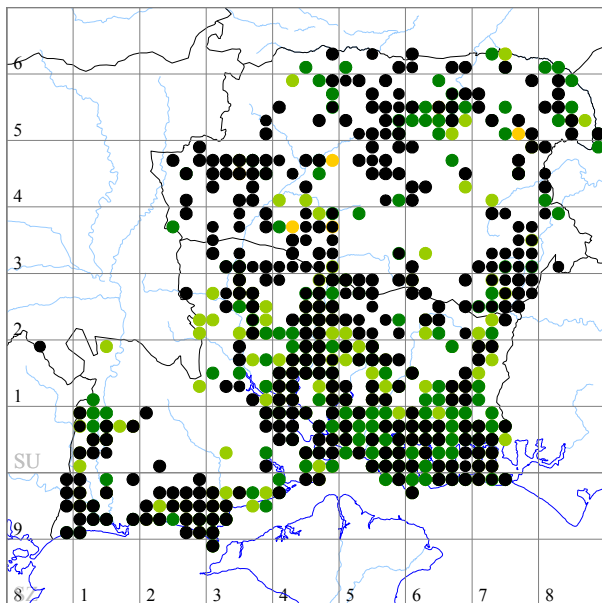
It is widespread and common in Hampshire in a variety of grassy and open places, and can be co-dominant in reseeded grassland for a while. However the map shows evidence of recorder bias, and it is worth looking out for in less well recorded areas.



***Helminthotheca* (Bristly Oxtongue)**

The single species in Britain, probably introduced from the Mediterranean, *H. echioides* (Bristly Oxtongue) was formerly included in the genus *Picris*. It is a distinctive plant both on account of its bristles, white-based especially towards the margins of the leaves, and its broad outer involucral bracts, rounded to cordate at the base. That said, it is quite variable in its habit, bristliness, leaf and bract shape. A prostrate, less bristly form with rounded, not cordate, outer involucral bract bases has been named as var. *mollis* and recorded on the Dorset coast; it should be looked for in Hampshire.

It flowers from May until late in the year. Widespread in Hampshire along coasts and in open and waste ground, it is commoner on light and rather acid soils and around conurbations, and least common on the chalk uplands.



Hieracium (Hawkweeds)

This is one of the large “critical genera” which is largely apomictic and therefore generates many localised clonal populations with subtle differences that come true from seed. Sell & Murrell (2006) list 412 microspecies, although inevitably the number will always be a matter of debate.

Fortunately, in Hampshire the species are relatively few (about 24) and do not include large numbers of closely related species as found in some other parts of Britain.

Nevertheless they are still difficult. If you are keen to investigate them, there is a reduced key for Hampshire and nearby areas on the Hants Plants web site, but you will also need a copy of Sell & Murrell (2006).

Hampshire plants belong to the following conventionally defined Sections, and it should usually be possible to key them to Section:

Sabauda: Stem leaves > 8 and usually > 15, crowded, petiolate below to sessile above, upper with broad rounded bases.

Hieracioides: Stem leaves > 8, all sessile, often linear-lanceolate, with recurved margins.

Tridentata: Stem leaves > 8 but usually < 15, rarely crowded, upper narrowed to base.

Vulgata: Stem leaves 2-8 (occasionally more), basal leaves few and often withered at flowering time.

Hieracium: Stem leaves 0-2 (occasionally 3), basal leaves numerous.

Sabauda and Hieracioides are mostly plants of late summer and early autumn, Tridentata of mid to late summer, and Vulgata and Hieracium of spring to mid summer.



Hieracium sabaudum (Sabauda)



Hieracium umbellatum (Hieracioides)



Hieracium maculatum agg. (Vulgata)



Hieracium murorum agg. (Hieracium)

***Hypochaeris* (Cat's-ears)**

- 1 Stems 1-40cm, entirely glabrous; leaves 1-20cm, prostrate, usually ciliate on margins but with no or few hairs on faces; inner involucre bracts 3-15mm long; capitula narrow (5-15mm), opening only in the sunlight and not widely; inner involucre bracts 3-15mm long; achenes 2.5-5.5mm long excluding any beak, central beaked or not, marginal usually unbeaked.....***Hypochaeris glabra* (Smooth Cat's-ear)**
- 1' Stems 1-60cm, sometimes hairy near base; leaves 1-25cm, prostrate to ascending, with coarse hairs on faces; inner involucre bracts 10-25mm long; capitula 15-50mm, opening every day; inner involucre bracts 10-25mm long; achenes 3-7mm long excluding beak, central achenes always beaked, marginal usually beaked..... 2
- 2 Stems 1-30cm, prostrate to ascending; leaves 1-12cm, usually prostrate; inner involucre bracts 10-17mm...
.....***Hypochaeris radicata* subsp. *ericetorum* (Heath Cat's-ear)**
- 2' Stems 30-60cm, ascending to erect; leaves 8-25cm, often ascending; inner involucre bracts 16-25mm.....
.....***Hypochaeris radicata* subsp. *radicata* (Cat's-ear)**

When it opens its flowers, *H. glabra* is "spottable" by the small diameter of its open capitulum, but formal identification is best done on a number of characters, for the following reasons:

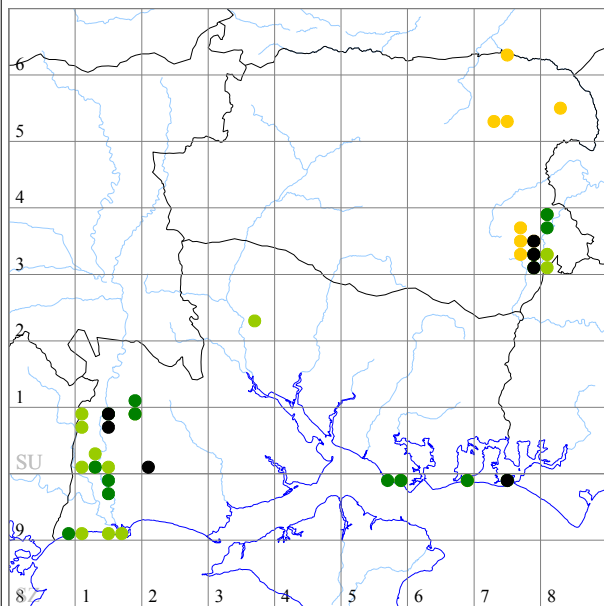
- There are overlaps in many of the size criteria, especially taking into account *H. radicata* subsp. *ericetorum*, which often grows in the same sandy and gravelly habitats as *H. glabra*.
- *H. glabra* and *H. radicata* subsp. *ericetorum* hybridise to produce *H. x intermedia*, which is however 95% infertile. The sterile hybrid most closely resembles *H. glabra*. However such fertile achenes as are produced are probably back-crosses to *H. radicata*.
- Using the achene characters is not made easy by the fact that *H. glabra* has forms with all achenes beaked (var. *balbisii* / var. *loiseleuriana*), all achenes unbeaked (var. *erostris*), and central achenes beaked and marginal unbeaked (var. *glabra*).

The two species hybridise, the hybrid usually being between *H. glabra* and *H. radicata* subsp. *ericetorum*. The hybrid has about 95% of achenes non-viable, but small end-of-season plants of *H. radicata* can also have low achene fertility.

***Hypochaeris glabra* (Smooth Cat's-ear)**

See the notes with the key above on determining this species. It is a very localised species in Hampshire, occurring in open sandy grassland or grass-heath where it often grows in mixed populations with *H. radicata* subsp. *ericetorum*. The latter also occurs without *H. glabra*, so determination should always be done judiciously on the range of characters.

The hybrid between the two species has not been recorded in Hampshire, but is likely to occur.



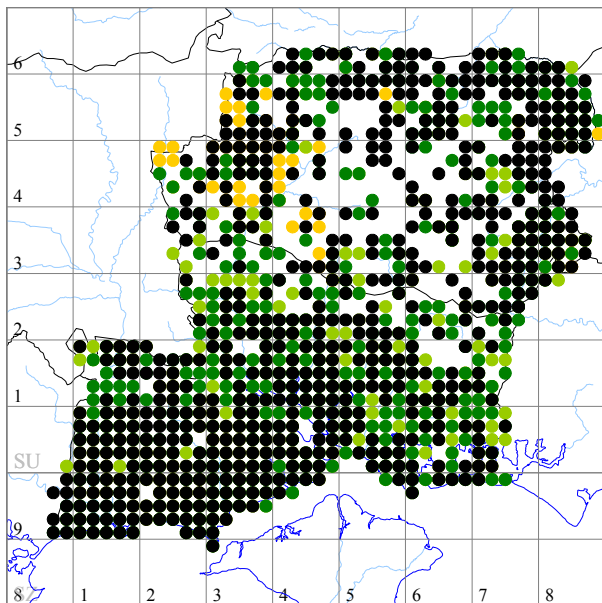
Hypochaeris radicata (Cat's-ear)

For identification, see the key and notes above. The smaller forms of this species might be mistaken for *Leontodon saxatilis*, but the forked tips to the hairs on the foliage of the latter species will easily distinguish it, in or out of flower. Some leaf forms of *H. radicata* can also resemble some leaf forms of *Scorzoneroides autumnalis*: these are best separated on the key character when flowering / fruiting, but *S. autumnalis* will normally have a reddish-brown stripe on the outer face of the ligule, while *H. radicata*'s is duller and greyer. The central achenes of the latter are most commonly beaked and the pappus is a dirty white with two rows of hairs, the inner plumose and the outer much shorter and merely scabrid, while those of *Scorzoneroides* are always unbeaked and the pappus one row of pale greyish-brown hairs.

Hypochaeris radicata is an extremely common plant of many types of grassland and open ground, with an acid grassland ecotype in subsp. *ericetorum*. It appears to be more sparsely distributed on the central chalklands, but this may be due to under-recording. It flowers from May until late in the year.



var. *ericetorum*



Lactuca (Lettuces)

- 1 Stem and midribs of leaves pale creamy- or greenish-white, sometimes with reddish tints; latex not strong-smelling; ripe achenes (excluding beak) 2.8-4.2mm with very narrow lateral wings only visible near apex, greenish-grey.....**Lactuca serriola (Prickly Lettuce)**
- 1' Stem and midribs of leaves suffused maroon or purple; latex with strong earthy opium smell; ripe achenes (excluding beak) 4-5.2mm, with lateral wings clearly visible from base to apex, maroon to blackish.....**Lactuca virosa (Great Lettuce)**

The key omits two other species that have been recorded in Hampshire.

Lactuca sativa is the garden lettuce in its many forms. It occurs only as a casual from horticulture; unlike the above two species, it has no or few rigid hairs on the lower side of the midrib.

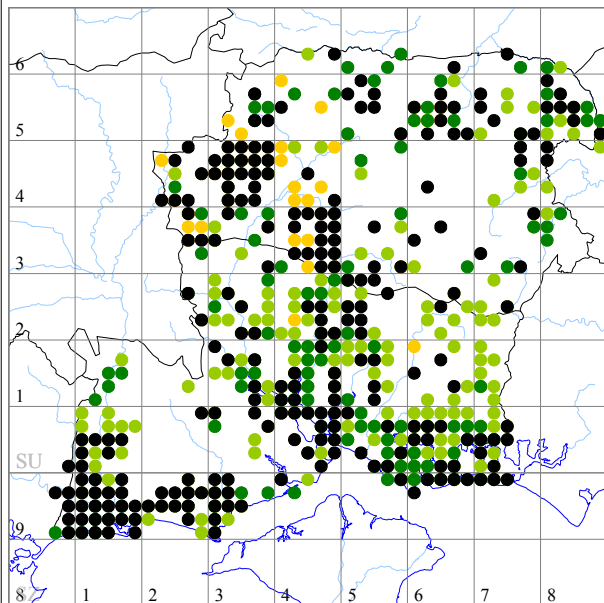
Lactuca saligna (Least Lettuce) has been recorded once at Dibden Bay in the 1970s, but the record has never been confirmed. It is a very rare coastal plant known only from East Sussex and the Thames estuary. It has a narrow inflorescence, white midrib to leaves, and upper stem leaves with an untoothed margin, often (but not always) with a sagittate base and held very upright; the keyed species have finely toothed leaf margins on at least a majority of their leaves.

Both of the keyed species have forms with lobed and unlobed leaves; the lobing was sometimes given as a distinguishing character in older guides, but cannot be relied on.

Hybrids are unknown.

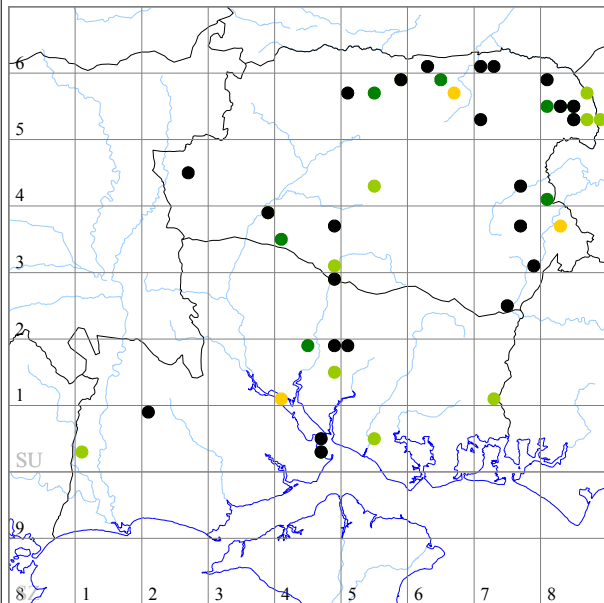
***Lactuca serriola* (Prickly Lettuce)** will grow to 1.5 or exceptionally 2 metres. The tothing at the edges of the leaves tends to be rather spinier than in *L. virosa*, and the inflorescence is often more domed. It is by far the commoner of the species in Hampshire. The dominant form throughout the county (forma *integrifolia*) has unlobed leaves (often with a wavy margin); the form with pinnatifid leaves (forma *serriola*) is now uncommon. This is a partial replacement that seems to have happened over the last few decades.

It flowers from July onwards, and can be found in all sorts of waste and rough ground particularly on lighter soils. It is certainly not ubiquitous in Hampshire,



***Lactuca virosa* (Great Lettuce)** grows to 2 or even 2.5 metres. Often the inflorescence is rather rhomboidal. It is a rather rare plant in Hampshire compared with most of southern and eastern Britain, and it is hard to generalise about which of the forms (forma *lactucarii*, with lobed leaves and forma *virosa*, with unlobed) is the commoner, but both occur.

It occurs in a range of open habitats and (unlike *L. serriola*) is probably native. It is spreading in artificial environments and is likely to become more widespread in the county, especially in the north-east. It flowers from midsummer onwards.

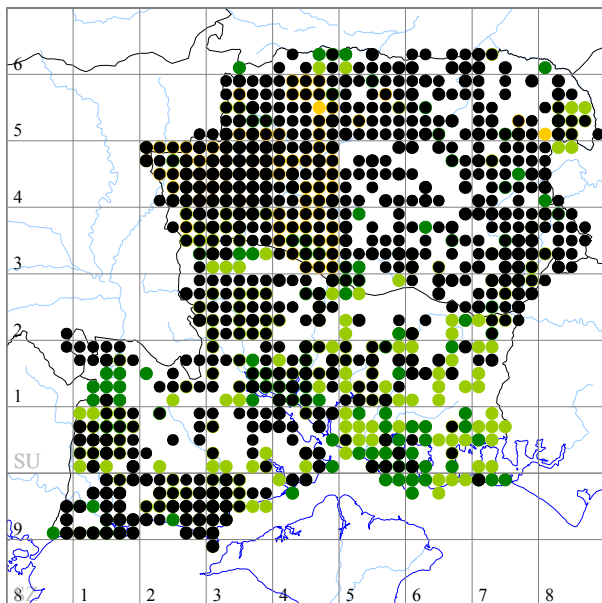


Lapsana (Nipplewort)

- 1 Annual; lateral segments of leaves often not as wide as terminal, upper stem leaves lanceolate to ovate or rhombic, usually toothed; capitula 10-20mm in diameter; involucre bracts 5-8mm; ligules rather sulphur yellow on the inner face, 2-4mm longer than the involucre.....
 *Lapsana communis* subsp. *communis*
- 1' Annual or perennial; lateral segments of leaves usually about as wide as terminal, upper stem leaves linear to linear-lanceolate, entire or hardly toothed; capitula 25-30mm in diameter; involucre bracts 7-10mm; ligules more golden yellow on the inner face, 5-9mm longer than the involucre.....
 *Lapsana communis* subsp. *intermedia*

Lapsana communis* subsp. *communis (Nipplewort) is a very common plant of hedgerows, wood borders and clearing, disturbed and open ground throughout Hampshire. The fruits without a pappus of any kind are often persistent throughout the winter and make identification straightforward.

It flowers from June until late in the year.

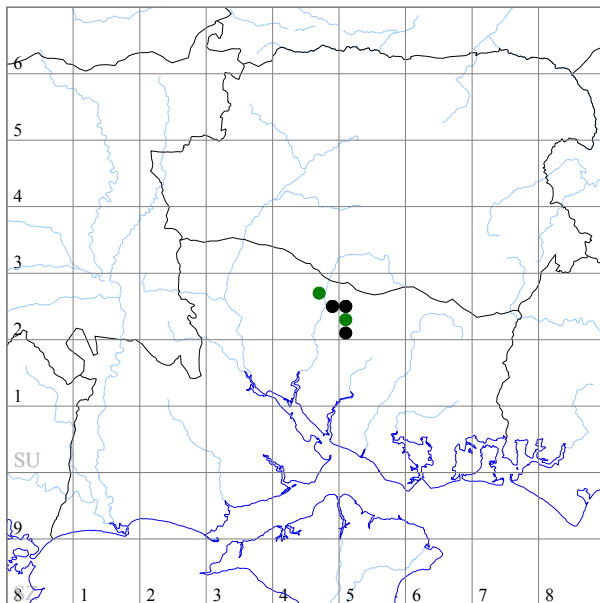


Lapsana communis* subsp. *intermedia (Large-flowered Nipplewort) is a plant with strikingly larger flowers, reminding some people of a Hawkweed. They tend to be of a slightly richer yellow colour, which adds to the impression. The upper leaves are linear, but the common subspecies may also have almost linear upper leaves.



It so far appears to be largely restricted to a few square kilometres at Owslebury and Twyford south-east of Winchester, where it is persistent and in places abundant. It may have been introduced as a crop contaminant in newly planted Lavender fields in 2001. One individual plant at Twyford has persisted for at least 12 years. A few plants appeared with imported topsoil on a building site at St Cross but were destroyed to make a lawn almost as soon as they started to flower.

Where significant populations occur, there are usually intermediates between the two subspecies, which have largely mutually exclusive native ranges.



***Leontodon* (Hawkbits)**

- 1 Flowering stem with large hollow, hairy over all its length, usually densely so; leaves often held more or less erect, quite densely and softly hairy, margins quite densely hairy, hairs on upper side of midrib rarely red-based; involucre bracts conspicuously hairy; all achenes with a pappus of hairs.....
..... ***Leontodon hispidus* (Rough Hawkbit)**
- 1' Flowering stem with small hollow, usually more sparsely hairy and often only on lower parts; leaves more or less flat to the ground, usually rather sparsely hairy, hairs on upper side of midrib often red-based; involucre bracts glabrous to somewhat hairy; outer row of achenes with pappus of cup of scales, inner row with pappus of hairs..... ***Leontodon saxatilis* (Lesser Hawkbit)**

This looks straightforward, and in the overwhelming majority of cases it is; once familiar with the typical plants, one will have little problem distinguishing them at a glance. *Picris* species also have hairs forked at the tip, but these are hooked and look like little anchors. However there are some complicating factors.

- There are glabrous forms of *L. hispidus*. These have been recorded in this country as var. *glabratus* (subsp. *danubialis* in Sell & Murrell (2006), a plant of eastern Europe and Russia). However the sites for some of these records (steep, relatively unstable combe and dale sides on calcareous strata) suggest that they may be the plant known in France as *L. hispidus* subsp. *hyoseroides*, which is normally glabrous but has a hairy form! This occurs on warm dry open chalk and limestone slopes mostly in central and eastern France, but extends westwards to much of the Channel coast. No glabrous plants have been recorded in Hampshire, but it should be looked for in sites such as Rake Bottom on Butser Hill.
- There is a form of *L. saxatilis* with densely hairy involucre bracts (var. *pristis*), although this has only been recorded in the Channel Islands within the British Isles.
- *L. hispidus* can hybridise with *L. saxatilis*. The hybrid (*L. x vegetus*) is intermediate in general appearance and often very floriferous but its achenes more resemble those of *L. saxatilis* and are highly sterile. It is known in several southern counties but not recorded in Hampshire. Opportunities certainly exist for it here (for instance, the two species occur together in several New Forest churchyards).

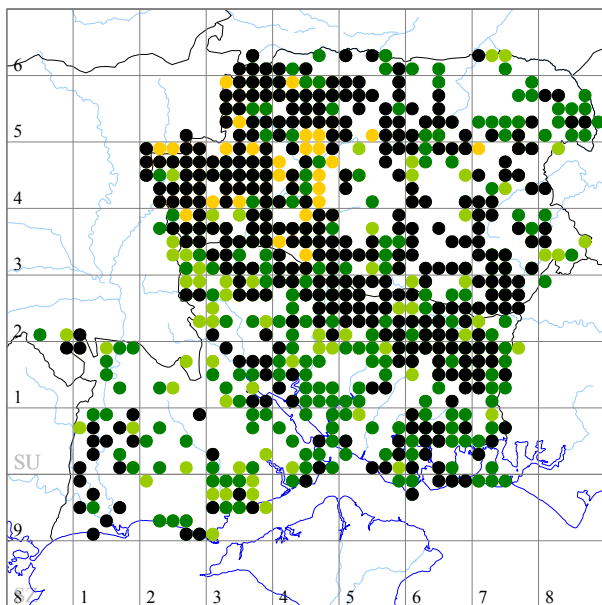
The achene character is the most reliable for separating the two species under all conditions.

***Leontodon hispidus* (Rough Hawkbit)**

This is usually a plant of stable grasslands of medium height, where it has a generally erect habit and ascending to erect leaves which can be quite strongly pinnatifid but more usually are entire to lobed. Together with its general rather dense hairiness, these aspects make its presence obvious particularly before and during flowering time.

If plants of subsp. *hyoseroides* occur here, they are likely to be more strongly pinnatifid to pinnatisect; combined with their typical lack of hairs, this would make them hard to spot.

L. hispidus is most common on calcareous soils but will tolerate some acidity and is perhaps a calcicole rather than a basicole. Certainly its presence in many Hampshire churchyards, even in areas of generally acid soils where *L. saxatilis* may also appear, is notable. Its main flowering is from the end of May to July.

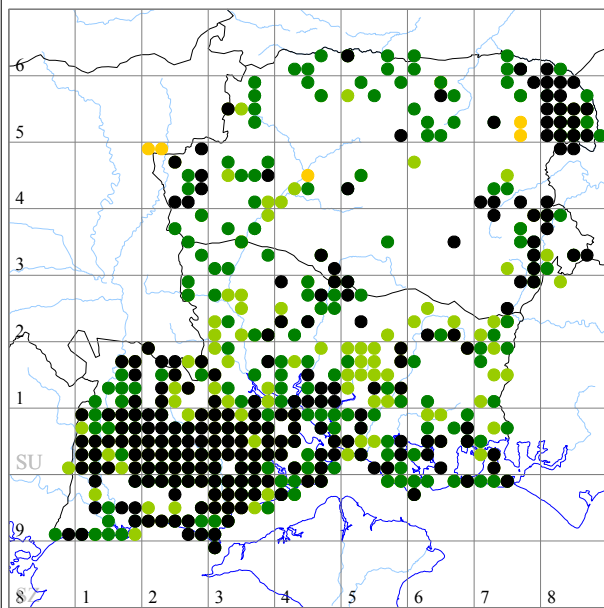


***Leontodon saxatilis* (Lesser Hawkbit)**

This is typically a shorter and less robust plant than *L. hispidus*, in addition to the diagnostic characters given in the key.

It tolerates a fairly wide range of pH, extending to more acid conditions than *L. hispidus*, but can also be found on chalk downland. It is particularly characteristic of dry lawns on the New Forest where it can be hugely abundant as rather small individuals.

It flowers from late spring through to autumn.

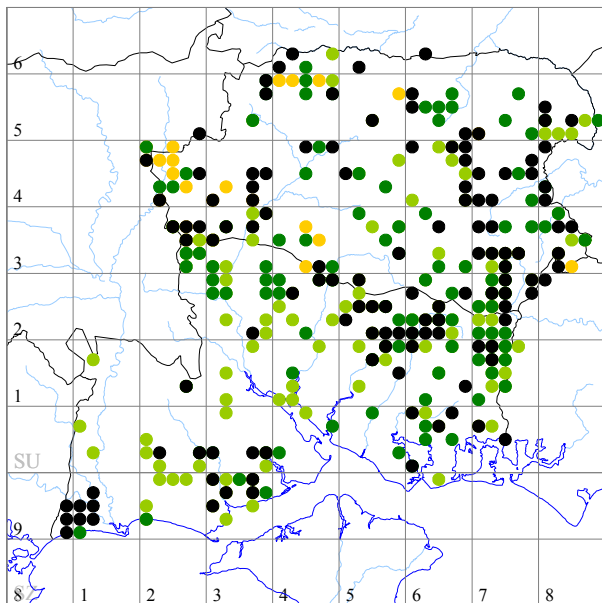


***Mycelis* (Wall Lettuce)**

***Mycelis muralis* (Wall Lettuce)**

This is a plant whose leaf patterning is unlikely to be mistaken for anything else once known, but not easy to describe, and the few-flowered, rather un-Composite like capitula are also rather distinctive. It is often included in the genus *Lactuca*, but differs from our species in having two distinct rows of involucre bracts, the outer very much shorter than the inner.

It is a plant of woodland banks, shaded lane banks, mortared walls and waste places, particularly on the chalk and often where there is some nutrient enrichment. It has a widespread but rather patchy distribution in Hampshire. It flowers from late June to September.



***Picris* (Hawkweed Oxtongue)**

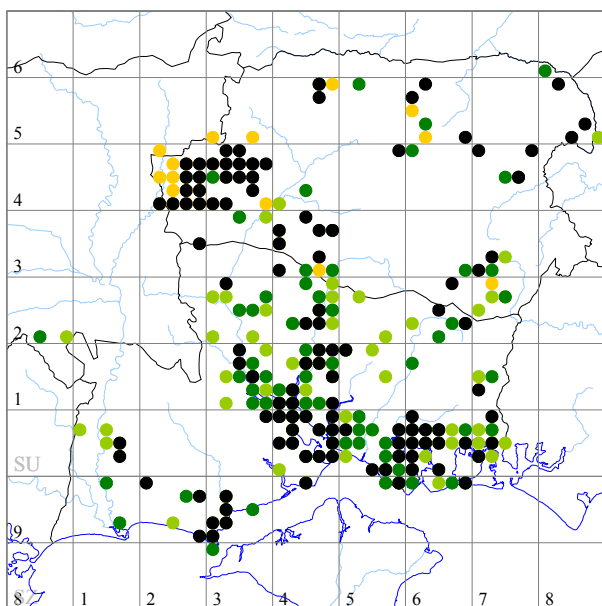
***Picris hieracioides* (Hawkweed Oxtongue)**

Formerly *Helminthotheca* was included in this genus; they share hairs forked at the tips with the forks recurved, but *Picris* has much narrower outer involucral bracts and all its achenes unbeaked or very shortly beaked.

It is a variable plant, not least in its branching, and several subspecies and varieties have been described, but all tend to be more narrow and erect than *Helminthotheca echioides*.

It is a plant of grassland and rough ground particularly on free-draining soils, and appears to be going through a phase of spread in Hampshire on roadsides around some of the towns. It flowers from July onwards.

One of the named forms in particular may be worth looking out for: subsp. ***grandiflora*** has long (10-15mm) involucral bracts with large capitula borne on long branches, the whole plant robust. Sell & Murrell say the bracts are blackish but this is not necessarily so in fresh material. It is suggested that it is a recent import from southern Europe.



***Pilosella* (Mouse-ear-hawkweeds)**

- 1 Ligules orange-brown to orange-red.....***Pilosella aurantiaca* (Fox-and-cubs)**
- 1' Ligules yellow at least on inner face..... 2
- 2 All flowering stems with only one capitulum; stem leaves always absent except sometimes for one bract-like scale***Pilosella officinarum* (Mouse-ear-hawkeed)**
- 2' At least some flowering stems with more than one capitulum; a few stem leaves sometimes present; leaves pale green; capitula 1-7 per stem, not crowded; involucre bracts 8-12mm, ≥ 1 mm wide, acute or obtuse.....***Pilosella flagellaris* (Spreading Mouse-ear-hawkweed)**

The following are either very rare or have not been recorded in Hampshire and are excluded from the key, but might occur as garden escapes.

***Pilosella x stolonifera* (Hybrid Fox-and-cubs)** has flowers of various colours ranging from yellow to brick-red, with capitula 20-30mm in diameter (10-20mm in *P. aurantiaca*).

***Pilosella x floribunda* (Irish Fox-and-cubs)** has leaves somewhat glaucous; capitula 6-50 per stem, crowded; involucre bracts 5-9mm, typically > 1 mm wide, obtuse. It is known from one spot close to a road verge near Beaulieu Road station in the New Forest, where it is presumed introduced probably with military activities in the area.

***Pilosella praealta* (Tall Mouse-ear-hawkweed)** has a few stem leaves which may be glabrous or almost so, largest leaves typically < 12 mm wide, flowering stems up to 70cm with numerous capitula, involucre bracts 5-9mm and mostly < 1 mm wide and acute, and yellow flowers.

***Pilosella caespitosa* (Yellow Fox-and-cubs)** has up to 3 stem leaves, largest leaves > 12 mm wide, flowering stems typically up to 50cm but sometimes more, involucre bracts mostly > 1 mm wide and obtuse, and yellow flowers.

The genus is sometimes included within *Hieracium*. Apart from the key characters given, its stems are usually leafless and the basal leaves are usually entire and neatly oblanceolate to narrowly elliptical, with a narrowed base but little or no petiole.

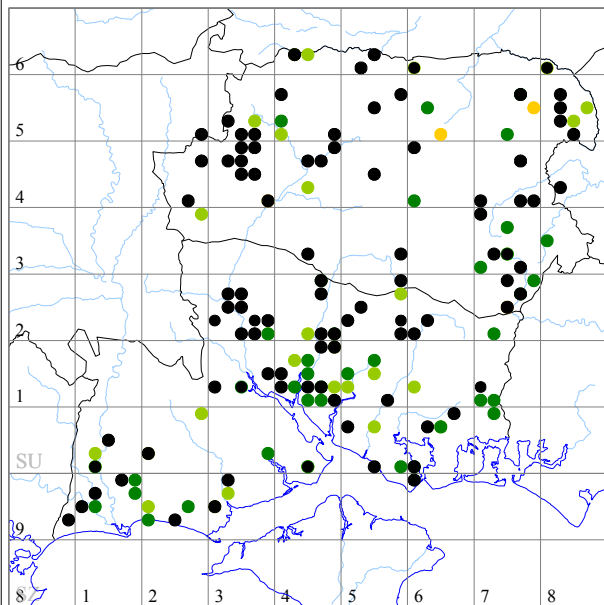
Pilosella is a critical group in Europe and beyond, and even in the few species encountered in Britain many varieties and subspecies have been described. The more significant of these appear in the species accounts.

***Pilosella aurantiaca* (Fox-and-cubs)**

With its distinctive colouring, this is unlikely to be mistaken for any other *Pilosella*, or plant, in Britain – except perhaps for its hybrid *P. x stolonifera*.

Two subspecies have been described. Subsp. ***aurantiaca*** has short rhizomes and is not extensively patch-forming, with basal leaves mostly 10-20 x 2-6cm and involucral bracts 8-11mm. Subsp. ***carpathicola*** has long, leafy stolons and spreads well. It has basal leaves mostly 6-10 x 1.2-2cm and involucral bracts 5-8mm. It is the commoner subspecies in Britain, but only a few of the Hampshire records are to subspecies.

A garden escape, *P. aurantiaca* occurs in a wide variety of medium-short grassland and sometimes in more open conditions or on walls. It often favours churchyards and cemeteries where it was no doubt originally introduced. It flowers from May onwards.

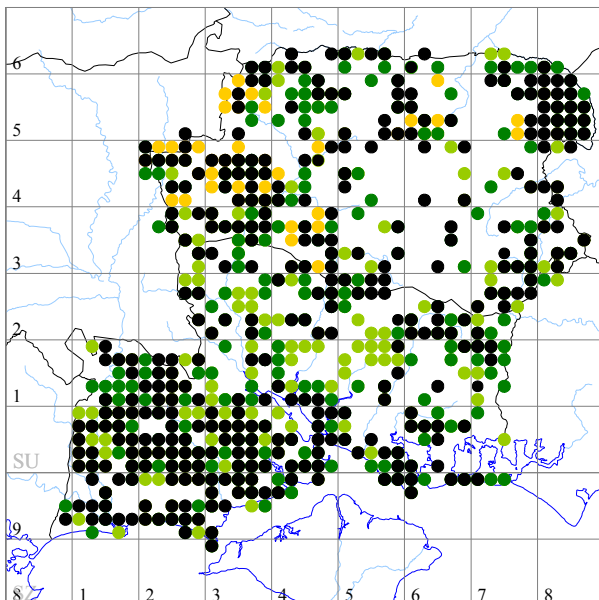
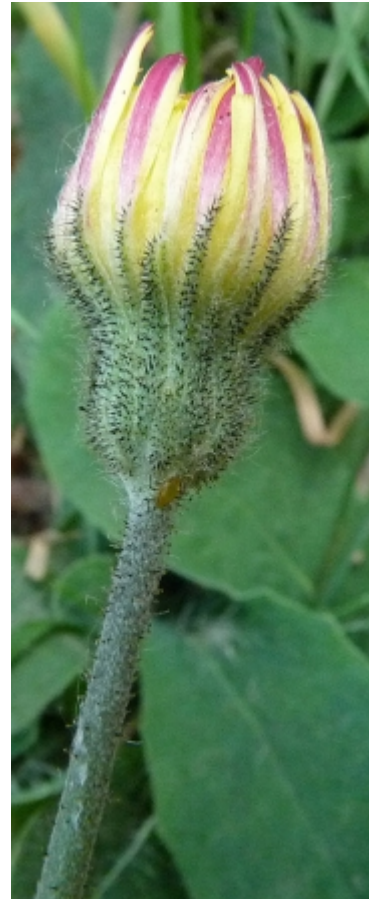


***Pilosella officinarum* (Mouse-ear-hawkweed)**

This plant has single capitula with florets of a distinctive lemon yellow colour, often boldly marked with red on the outer face. Combined with the conspicuous stolons and the neat more or less entire leaves, dull green above and whitish with stellate hairs below, it is unlikely to be confused with any other species in Hampshire (*P. peleterana*, which occurs in Dorset and the Isle of Wight on chalk and limestone cliffs, is similar).

Several subspecies (probably better treated as varieties) have been described on the basis of the form and length of hairs on the stems and involucre bracts. So far records in Hampshire reveal no ecological or distributional pattern. The two commonest forms here (*micradenia* and *officinarum*) grow together, and there seem to be intermediate plants.

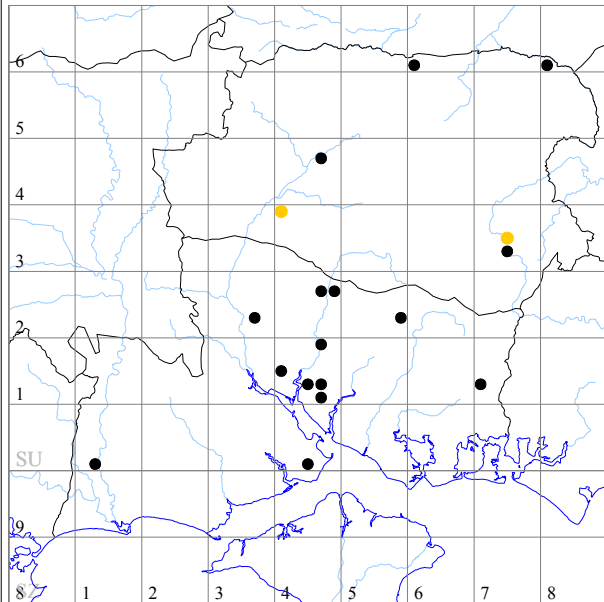
P. officinarum is a widespread plant of many short grassland habitats including chalk downs, grass heaths, verges and lawns. It flowers from May to July and intermittently later.



***Pilosella flagellaris* (Spreading Mouse-ear-hawkweed)**

This species has two subspecies recorded in Britain: subsp. *bicapitata* is a rare endemic plant found only in Shetland, while subsp. *flagellaris* is a garden escape found scattered in Hampshire, particularly on lawns and verges in the Southampton area.

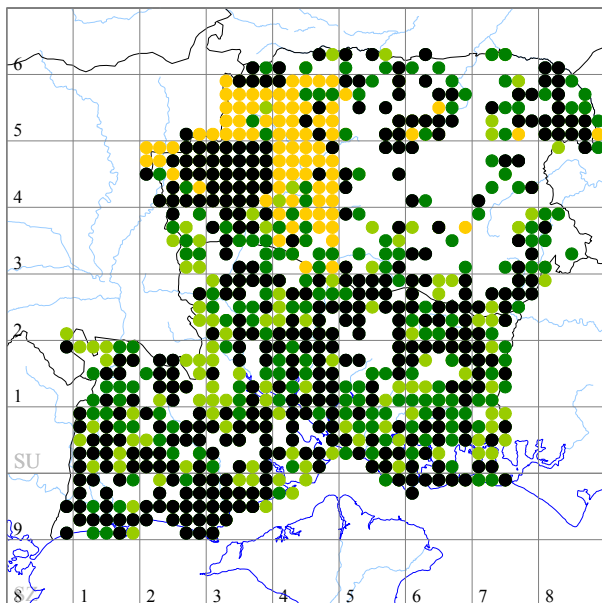
Its stolons are robust, leafy and hairy. Capitulum size is similar to *P. officinarum* but at least some flowering stems will bear more than one capitulum, and the outer face of the ligules is a warm grey colour. It flowers from May onwards.



Scorzoneroïdes (Autumn Hawkbit)

Scorzoneroïdes autumnalis (Autumn Hawkbit) was formerly placed in the genus *Leontodon*. Apart from the characters mentioned in the key, it also differs by having more scale-like bracts on the stem, and these are particularly frequent just below the capitulum where they tend to merge with the involucre bracts; in *Leontodon* the stem bracts, if there are any, are separated from the capitulum.

Many of this group of Composites are very variable in leaf outline and hairiness, but *S. autumnalis* is perhaps outstanding, with leaf forms ranging from almost entire to finely pinnatisect, and hairless or with varying quantities of white or black hairs. Regrowth from cut plants often has more or less unlobed leaves. Eleven forms have been described; those most worth looking for are var. *salina* which grows in the top edge of salt-marshes, and var. *simplex* (deeply and strikingly pinnatisect, despite the name) which is found on heaths and on coastal shingle and sand. Another three forms are common wayside plants. It flowers from June onwards.



Sonchus (Sowthistles)

- 1 Plant annual or biennial, with a modest tap-root and fine lateral roots.....2
- 1' Plant perennial, with a sturdy more or less erect, semi-tuberous stock and tap-root, or creeping horizontal rhizomes..... 3
- 2 Leaves shiny dark green above, glaucous below, with rather stiff marginal spines; auricles of stem leaves rounded, appressed; petiole with 7-9 vascular bundles; achenes ribbed but not transversely wrinkled.....
.....**Sonchus asper (Prickly Sowthistle)**
- 2' Laves matt glaucous green on both sides, with weak marginal spines; auricles of stem leaves obtusely to acutely angled, more or less spreading; petiole with 5 vascular bundles; achenes ribbed and transversely wrinkled between ridges.....**Sonchus oleraceus (Smooth Sowthistle)**
- 3 Plant arising from a tuberous, more or less erect, root stock; stems sharply angled or winged, branched in upper ¼ or less; auricles of basal leaves sagittate, those of stem leaves at least pointed; lobes of leaves generally long and narrowly triangular-oblong; upper leaves generally broadly to narrowly lanceolate and unlobed; achenes pale brown with cream ribs.....**Sonchus palustris (Marsh Sowthistle)**
- 3' Plant arising from far-creeping rhizomes (hence often patch-forming); stems bluntly angled, often branched from ½ way upwards; basal leaves narrowed to a petiole with broad more or less clasping wings, stem leaves with rounded spiny-toothed more or less appressed auricles; stem leaves with broadly triangular lobes or almost unlobed; achenes rich brown ripening darker.....
.....**Sonchus arvensis (Perennial Sowthistle)**

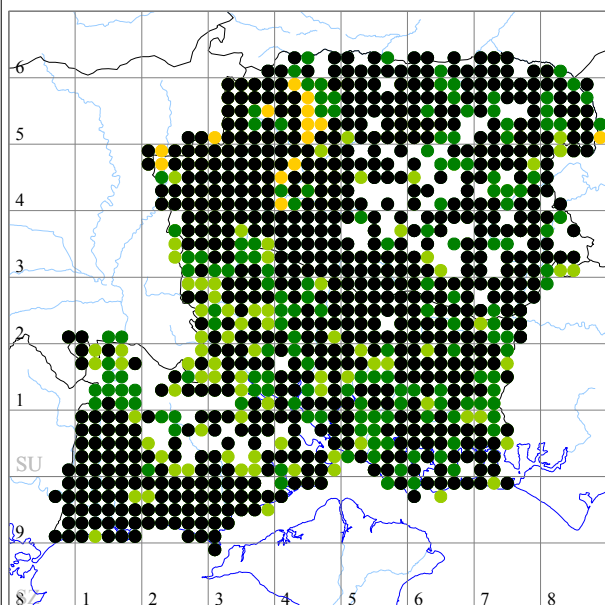
The white latex of all these *Sonchus* species turns orange (slowly in the case of *S. oleraceus*). The two annual species (and particularly *S. oleraceus*) have their capitula in more or less corymbose inflorescences with all the side branches arising close together and, if not tightly crowded, resembling irregular umbels.

The only recorded hybrid in our plants is *S. oleraceus* x *asper*, and this is so dubiously and rarely recorded that it should be treated with scepticism. It would be more or less fully sterile.

***Sonchus asper* (Prickly Sowthistle)**

Leaf outlines are very variable (from unlobed to deeply pinnately divided and three-dimensional) and several forms have been named. On Hampshire shingle beaches the latter extreme (var. *sabulosus*) is often conspicuous.

This is a plant that occurs both in semi-natural habitats (open coastal ground) and in waste and cultivated ground. It flowers from May onwards, and is common throughout the county.



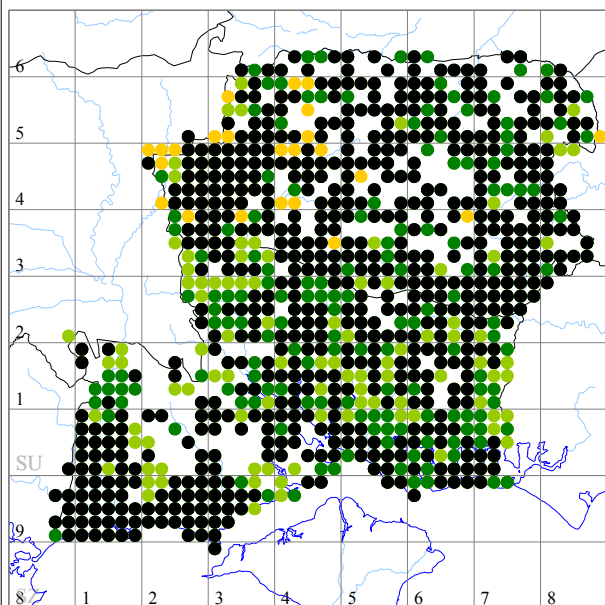
***Sonchus oleraceus* (Smooth Sowthistle)**

This is also very variable in leaf shape, but its leaves are rarely as dramatically three-dimensional, lacking the stiffness of *S. asper*. A form with unlobed parallel-sided leaves is quite striking. A reddish-purple coastal form with dense, few-flowered inflorescences has been given a varietal name but seems to be simply at one end of a continuum of variation.

When examining the auricles it is important to extend them out, as the shoulders will often appear rounded and obscure the angled tips.

The flower colour of *S. oleraceus* is often paler than *S. asper*, and there is a creamy colour form, but this is not a character to rely on for diagnosis.

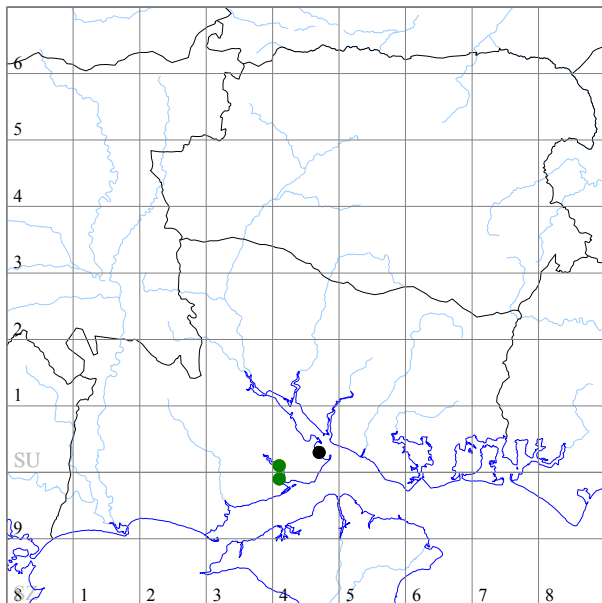
It occurs in a similar range of habitats to *S. asper*, but seems much less common as an arable weed. It flowers mostly from May onwards. It is almost as common as *S. asper* in Hampshire.



***Sonchus palustris* (Marsh Sowthistle)**

Once known, this plant is unlikely to be mistaken; but because of its rarity, large forms of *S. arvensis* are sometimes misidentified. The general habit is shown in the first photograph, and stem and leaf characters are well illustrated in the second. The main part of the stem is usually glabrous but the inflorescence branches and involucre bracts are covered in yellowish glandular hairs.

This is a rare plant in Britain as a whole, and rare also in Hampshire where it occurs exclusively in coastal marshes. Given its spectacular height (it can attain 3 metres) it is hard to imagine it being overlooked, but it was not recorded in the county until 1959. Since then it has been found in a number of new spots, all west of Southampton Water and all but one in the Beaulieu River estuary. It flowers from the beginning of July onwards.

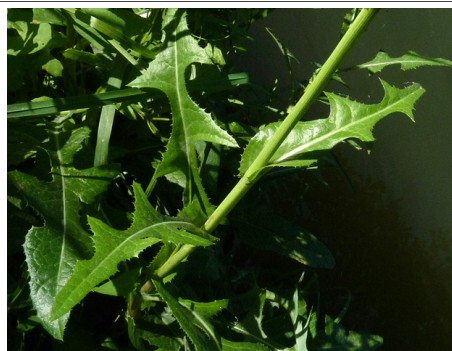


Sonchus arvensis (Perennial Sowthistle)

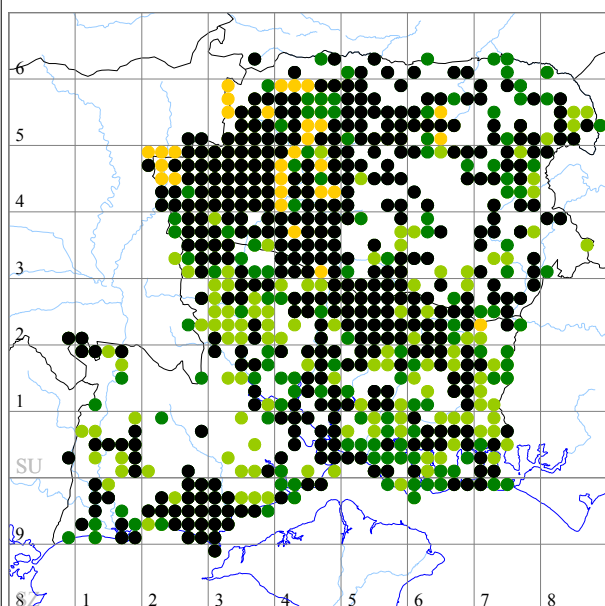
The stems can be glandular-hairy in their upper parts below the inflorescence (in some forms of subsp. *arvensis*, which is always glandular-hairy at least on the upper parts of the peduncles and the involucral bracts, with hairs usually yellow on fresh material). Leaf shape is variable in this subspecies and there are several named varieties: narrow-leaved forms with up to 6 pairs of prominent lateral lobes and large capitula 1-3 together, growing on coastal shingle, have been named var. *maritimus*. Var. *riparius*, a tall plant with particularly long leaves and rather acute auricles, is the plant most likely to be mistaken for *S. palustris*, and grows beside it at Ashlett.

Subsp. *uliginosus* lacks glandular hairs even on its upper parts and tends to smaller capitula (involucral bracts 10-15mm against 14-20mm in subsp. *arvensis*). Its general habitat requirements are unknown but it has been seen in sub-coastal reed beds in Hampshire (however many reed bed plants are glandular). It is worth looking out for.

Also widespread in damp disturbed ground and sometimes a problem weed in arable, it flowers from July onwards.



var. *uliginosus*



***Taraxacum* (Dandelions)**

This is the other big critical genus of the tribe in Britain, with over 200 microspecies described. They have been relatively little studied in Hampshire; two sections (Hamata and Ruderalia) largely comprise plants of “weedy” habitats, but there are several sections that include species of ecological interest, including:

- Erythrosperma (mostly dry grassland and grass-heaths);
- Palustria (fen grassland and wet flushes)- Hampshire has 3 of the 5 British species;
- Naevosa (damp grassland – a few in Hampshire);
- Celtica (damp and dry grassland)

Stace (2010) has a good key and descriptions to section level only. To go further one needs Dudman and Richards (1997), and the excellent section accounts that are available on the BSBI web site (<http://bsbi.org.uk/identification.html>).



T. dunense (Erythrosperma)



T. palustre (Palustria)



T. duplidentifrons (Celtica)

***Tragopogon* (Goat's-beards)**

- 1 Stem slightly dilated below capitulum; flowers yellow.....*Tragopogon pratensis* (Goat's-beard)
- 1' Stem strongly dilated below capitulum; flowers purple.....*Tragopogon porrifolius* (Salsify)

One other species may turn up as a casual, although not so far recorded in Hampshire: ***Tragopogon hybridus* (Slender Salsify)**. It has mauve or pink rather small flowers (ligules 12-14mm), and the marginal achenes with a pappus of simple hairs (the keyed species both have achene hairs all plumose).

With their glaucous, glabrous, long linear leaves, our *Tragopogon* species are unlikely to be mistaken for anything other than *Scorzonera* species, which by contrast have involucre bracts in several rows and unbeaked achenes. *Scorzonera humilis* is an extremely rare plant now found at one site in Dorset and two in south Wales. *S. hispanica* is a horticultural plant ('Black Salsify') which is not commonly grown but sometimes turns up as a casual escape.

The hybrid between *T. pratensis* and *T. porrifolius* (***T. x mirabilis***) occurs very rarely and does not persist. It is largely infertile, and has yellow flowers with purple tips, giving the capitulum a more or less 'two-tone' look.

Tragopogon pratensis (Goat's-beard)

Three subspecies are recognised:

- subsp. *minor* has outermost ligules $\frac{1}{2}$ to $\frac{2}{3}$ the length of the outer involucre bracts and exceeding their neighbours by <4mm, sulphur yellow; achene body c. as long as beak;
- subsp. *pratensis* has outermost ligules equalling or almost equalling the outer involucre bracts and exceeding their neighbours by >4mm, sulphur yellow or bright yellow; achene body c. as long as beak;
- subsp. *orientalis* has outermost ligules equalling or almost equalling the outer involucre bracts and exceeding their neighbours by >4mm, golden yellow; achene body longer than beak.

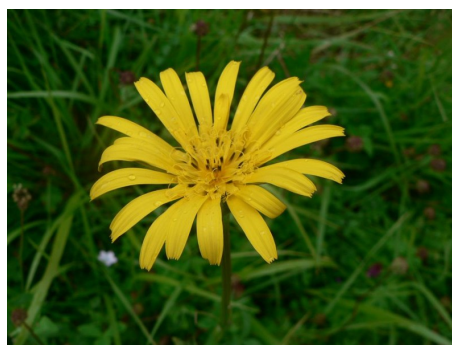
The first two are plants of grasslands, rough and open ground; subsp. *minor* is much the commoner. In Hampshire subsp. *pratensis* has mostly been recorded from the south-east of the county. The third is a rare casual from Europe and Asia east and south-east from the Paris basin, so far recorded once in Hampshire.



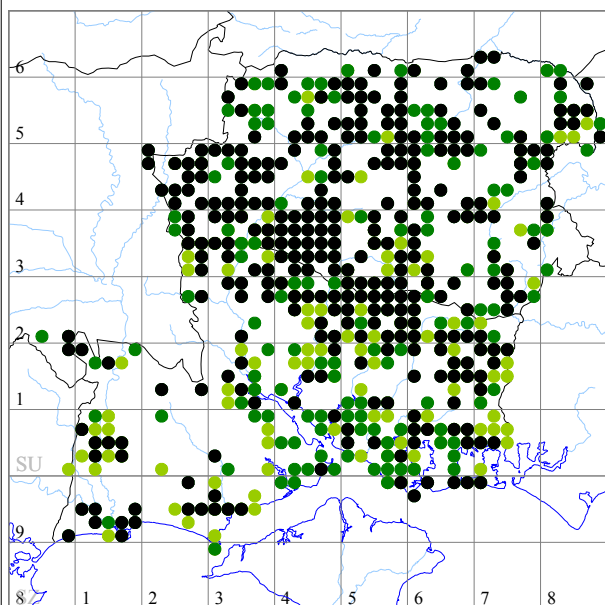
subsp. *minor*



subsp. *pratensis*



subsp. *orientalis*



Tragopogon porrifolius (Salsify)

Two subspecies are recorded in Britain:

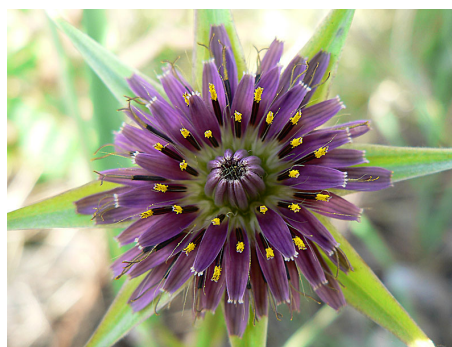
- subsp. *porrifolius* has ligules roughly the same length as involucre bracts, and achenes abruptly narrowed into the beak;
- subsp. *australis* has ligules about $\frac{1}{2}$ as long as involucre bracts, and achenes gradually narrowed into the beak.

Most records made in Hampshire to date do not distinguish to subspecies, and those that do are all for subsp. *porrifolius*.

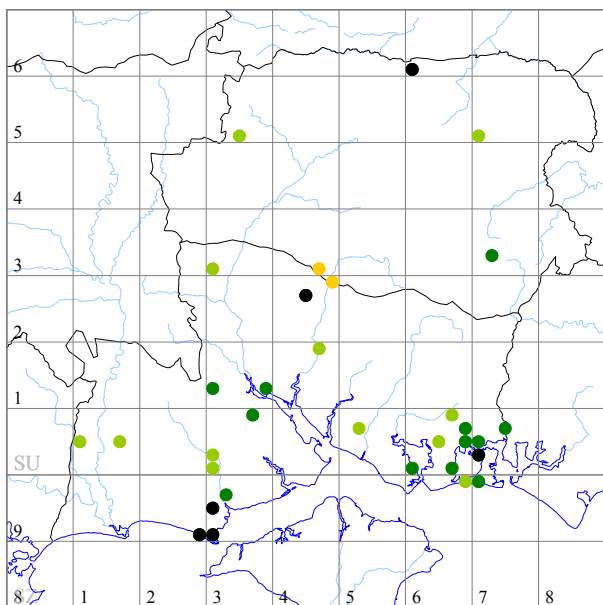
This is a rather uncommon and often impermanent plant of grassland, rough and open ground, which is becoming a fashionable vegetable again and so may appear more widely as a garden outcast.



var. *porrifolius*



var. *australis*



References and Further Reading

General ID guides

Johanssen, J.T. (2013-): *The Phylogeny of Angiosperms*, online at <http://angio.bergianska.se/>. Look up ASTERIDS / Campanulales / Asteraceae. A limited selection of photos from a wide geographical base, but includes some good (and correctly named) pictures of infra-specific taxa.

Poland, J. & Clement, E.J. (2009): *The Vegetative Key to the British Flora*, BSBI.

Rose, F. & O'Reilly, C. (2006): *The Wild Flower Key*, Warne.

Stace, C.A. (2010): *New Flora of the British Isles* (3rd edn.), Cambridge University Press.

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Rich, T.G.C & Jermy, A.C., *The Plant Crib*, BSBI: sections on *Lactuca* and *Tragopogon* downloadable from <http://bsbi.org.uk/identification.html>.

Ross-Craig, S. (1962-3), *Drawings of British Plants*, Parts XVII and XVIII, G. Bell & Sons. Illustrations strong on technical detail but limited almost entirely to native and archaeophyte species.

Tela Botanica web site (http://www.tela-botanica.org/page:eflore_bdtfx?langue=fr) has many contributed photographs from the Continent (search by individual taxon). It is not totally reliable, and is weak on infraspecific taxa, but is much better than general Internet searches.

Specialist works and monographs

Dudman, A.A. & Richards, A.J. (1997): *Dandelions of Great Britain and Ireland*, BSBI Handbook no. 9. Essential for study of the genus.

McCosh, D.J. & Rich, T.G.C. (2011): *Atlas of British and Irish Hawkeeds*, BSBI. As well as distribution information, includes plant silhouettes.

Perring, F.H. & Sell, P.D. (1968): *Critical Supplement to the Atlas of the British Flora*, BSBI / Thomas Nelson & Sons. Still contains much useful information although partly superseded by later works mentioned here.

Rich, T.G.C & Jermy, A.C., *The Plant Crib*, BSBI: sections on *Taraxacum* downloadable from <http://bsbi.org.uk/identification.html> are now an essential adjunct to Dudman & Richards (1997), with detailed keys and many useful diagnostic photographs.

Sell, P.D. & Murrell, G. (1996): *Flora of Great Britain and Ireland* vol. 4, Cambridge University Press. Exhaustive treatment of the tribe, and essential for study of *Hieracium*. The coverage of infra-specific taxa in other genera can confuse by its generosity, and the award of subspecies status to some forms is open to debate, but a judicious reading of ecologically significant forms provides much useful information.

Stace, C.A, Preston, C.D. & Pearman, D.A. (2015): *Hybrid Flora of the British Isles*, BSBI. Only a small number of plants fall within our scope (pp. 297-301) but the accounts contain much useful information.

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