

Simplified Key for Hampshire Umbellifers

This key omits species only found in other parts of the country and most non-native species only found very rarely or as casuals. See below for the list of excluded species that have been recorded (correctly or not) in the county.

Unless otherwise stated, “leaves” should be taken as the lower stem leaves or, if these are absent, the youngest rosette leaves.

- 1 Leaves leathery, with spiny margins; flowers blue, in dense heads; plant bluish-grey *Eryngium maritimum* (Sea-holly)
- 1' Not as above..... 2
- 2 All leaves entire, linear to narrowly oblanceolate; umbels small, few-flowered, with linear bracts and bracteoles; petals yellow..... *Bupleurum tenuissimum* (Slender Hare's-ear)
- 2' Not as above..... 3
- 3 Leaves rounded in outline, palmately divided, lobed most of the way to base; flowers in dense globose umbels arranged in cymes; flowers white; involucre bracts inconspicuous; fruits with hooked bristles....
..... *Sanicula europaea* (Sanicle)
- 3' Aquatic plants; leaves rounded in outline, unlobed or palmately lobed to less than half way to base.....
..... 4 (*Hydrocotyle*)
- 3" Basal leaves pinnately or ternately divided..... 5
- 4 Leaves peltate, scarcely lobed..... *Hydrocotyle vulgaris* (Marsh Pennywort)
- 4' Leaves not peltate, with deep basal sinus..... *Hydrocotyle ranunculoides* (Floating Pennywort)
- 5 Fruit with a long apical beak >2x as long as the seed-bearing part.....
..... *Scandix pecten-veneris* (Shepherd's-needle)
- 5' Fruit unbeaked or with beak shorter than seed-bearing part..... 6
- 6 Stem arising from thin root attached to buried globose tuber; stem hollow after flowering; leaves triangular in outline, basal with narrow segments, usually withered by flowering, stem leaves with linear segments; peduncle longer than the rays of the umbel; bracts none or occasionally 1-2; bracteoles 2-5, linear; petals white..... *Conopodium majus* (Pignut)
- 6' Not as above..... 7
- 7 Petals yellow..... 8
- 7' Petals greenish-white, white, pink or purplish..... 13
- 8 Fruits strongly dorsally compressed, presenting a broad face view and a narrow edge view, broadly elliptical to almost orbicular; leaves 1-pinnate, with ovate coarsely toothed lobes.....
..... *Pastinaca sativa* (Parsnip)
- 8' Fruits not or scarcely dorsally compressed..... 9
- 9 Leaves 3-4 pinnate, finely divided into thread-like segments with a cartilaginous tip.....
..... *Foeniculum vulgare* (Fennel)
- 9' Leaves not as above..... 10
- 10 Fruit laterally compressed, c. 2x as wide in edge view as in face view..... 11
- 10' Fruit not or scarcely compressed, roughly the same width in edge and face views..... 12
- 11 Leaves with a large conspicuous basal sheath; leaf lobes usually 25-80mm, sometimes coarsely lobed, with obtuse teeth; bracts few and small or absent; mericarps with 3 prominent sharp ridges.....
..... *Smyrniololus atrum* (Alexanders)
- 11' Leaves with a modest sheath; leaf lobes typically 10-30mm, toothed and often further lobed, teeth more or less acute; bracts 1-3, often lobed like the leaves; mericarps with 3 low rounded ridges.....
..... *Petroselinum crispum* (Garden Parsley)

- 12 Leaves succulent; bracts > 4; mericarps with prominent thick ridges, not forming wings; styles in fruit divergent but not reflexed.....**Crithmum maritimum (Rock Samphire)**
- 12' Leaves not succulent; bracts 0-3; mericarps with very prominent slender ridges, making lateral wings; styles in fruit recurved and appressed to the style base.....**Silaum silaus (Pepper-saxifrage)**
- 13 Fruits with spines, bristles, conspicuous hairs or conspicuous swellings.....14
- 13' Fruits glabrous or at most minutely hairy, more or less smooth.....20
- 14 Fruits strongly dorsally compressed, presenting a broad face view and a narrow edge view; leaves up to 2.5m, coarsely lobed and toothed.....**Heracleum mantegazzianum s.l. (Giant Hogweed)**
- 14' Fruits not or scarcely dorsally compressed.....15
- 15 Fruits finely bristly-hairy on angles, 15-25mm long; plant (especially fruit) smelling of aniseed when crushed.....**Myrrhis odorata (Sweet Cicely)**
- 15' Fruits with stout spines hooked or barbed at tips.....16
- 16 Bracts deeply pinnately or ternately divided into linear segments.....**Daucus carota (Carrot)**
- 16' Bracts none, or simple.....17
- 17 Persistent sepals present; fruits unbeaked, with spines up to bottom of style base.....18 (**Torilis**)
- 17' Sepals absent; fruits with obvious spineless ridged beak topping body with hooked spines.....
.....**Anthriscus caucalis (Bur Chervil)**
- 18 Umbels more or less sessile, with peduncles ≤ 1cm and rays <5mm; the two mericarps of each fruit conspicuously different, outer with long spines barbed at the tip and inner with dense tubercles between the ridges.....**Torilis nodosa (Knotted Hedge-parsley)**
- 18' Umbels with long peduncles; both mericarps the same, with hooked or curved bristles.....19
- 19 Bracts 0-1; fruits 3-4mm excluding spines; spines ± straight with fine hook at tip.....
.....**Torilis arvensis (Spreading Hedge-parsley)**
- 19' Bracts >2; fruits fruits 2-2.5mm excluding spines; spines curved but not hooked.....
.....**Torilis japonica (Upright Hedge-Parsley)**
- 20 Fruits strongly dorsally compressed, presenting a broad face view and a narrow edge view.....21
- 20' Fruits not or scarcely dorsally compressed.....24
- 21 Leaves and/or stems more or less harshly hairy.....22 (**Heracleum**)
- 21' Leaves and main parts of stems more or less glabrous, sometimes coarsely papillose.....23
- 22 Stems to 2(-3)m, roughly hairy; terminal umbel usually < 30cm across; bracts none-few; rays usually 10-20; linear oil-bodies on fruits scarcely widening at lower end.....**Heracleum sphondylium (Hogweed)**
- 22' Stems to 5.5m, rather softly hairy; terminal umbel usually >40cm across; bracts several; rays usually 50-120; oil-bodies on fruits conspicuous, swollen at lower end.....
.....**Heracleum mantegazzianum s.l. (Giant Hogweed)**
- 23 Annual, easily uprooted; upper leaves with petiole sheathing but not broad or heavily inflated and a blade longer and broader than the petiole; mericarp with prominent keeled ridges, all similar.....
.....**Aethusa cynapium (Fool's Parsley)**
- 23' Perennial, firmly rooted; upper leaves with a broad, heavily inflated petiole sheathing at base and a small or vestigial blade; mericarp with prominent, obtuse dorsal ridges and broadly winged lateral ridges.....**Angelica sylvestris (Wild Angelica)**
- 24 Base of stem often sheathed with fibrous remains of old petioles; leaves very variable, base and upper stem leaves usually 1-pinnate, intermediate usually 2-pinnate, lowest with leaflets often ovate and toothed or pinnatifid, highest usually with small, very narrow-lobed leaflets.....
.....**Pimpinella saxifraga (Burnet-saxifrage)**
- 24' No fibrous remains at base of stem.....25
- 25 Fruits >2x (usually >2.5x) as long as greatest width.....26
- 25' Fruits ≤2x as long as greatest width.....34

26	Sepals none or minute, not or scarcely visible at top of fruit.....	27
26'	Sepals $\geq 0.2\text{mm}$, distinctly visible at top of fruit.....	29 (<i>Oenanthe</i>)
27	Fruit not ridged in mid or basal regions; stems hollow; no aniseed scent.....	
 <i>Anthriscus sylvestris</i> Cow Parsley)	
27'	Fruit ridged along whole length; stems hollow or solid; aniseed scent present or absent.....	28
28	Stems solid; fruits 5-6mm long, with low, rounded ridges; not aniseed-scented.....	
 <i>Chaerophyllum temulum</i> (Rough Chervil)	
28'	Stems hollow; fruits 15-25mm long, with sharp, prominent ridges; fresh plant aniseed-scented.....	
 <i>Myrrhis odorata</i> Sweet Cicely)	
29	Some umbels in axils of leaves, their peduncles then shorter than rays; styles $\leq \frac{1}{4}$ length of mature fruit.....	30
29'	All umbels terminal and with peduncles longer than rays; styles $> \frac{1}{4}$ length of mature fruit.....	31
30	Stems ascending to erect, sometimes in open damp ground; lower leaves (2-)3-4-pinnate and with narrowly wedge-shaped segments; fruit $\leq 4.5\text{mm}$	
 <i>Oenanthe aquatica</i> (Fine-leaved Water-dropwort)	
30'	Stems almost never out of water and usually floating at least at base; lower leaves (1-)2(-3)-pinnate and with filiform segments when submerged; fruit $\geq 5\text{mm}$..	<i>Oenanthe fluviatilis</i> (River Water-dropwort)
31	All leaves generally with petioles longer than divided blade part; petioles with a broad central hollow; stem leaves usually all 1-pinnate, with linear segments; fruiting sub-umbels more or less globose when ripe, with unstalked fruits.....	<i>Oenanthe fistulosa</i> (Tubular Water-dropwort)
31'	Most or all leaves with petioles shorter than divided blade part; petioles solid or at most with a narrow central hollow; at least some stem leaves usually more than 1-pinnate; fruiting sub-umbels not globose when ripe, with at least some stalked fruit.....	32
32	Segments of mid-stem leaves ovate to \pm orbicular, $< 2\text{x}$ as long as wide; fruits $\geq 4\text{mm}$	
 <i>Oenanthe crocata</i> (Hemlock Water-dropwort)	
32'	Segments of mid-stem leaves \pm linear, $> 3\text{x}$ as long as wide; fruits $\leq 3.5\text{mm}$	33
33	Segments of lower leaves c. 5mm long; rays and pedicels thickening at fruiting; sub-umbels flat-topped in fruit; ripe fruit 3-3.5mm, \pm parallel-sided.....	
 <i>Oenanthe pimpinelloides</i> (Corky-fruited Water-dropwort)	
33'	Segments of lower leaves usually 10-20mm long; rays and pedicels not thickening at fruiting; sub-umbels not flat-topped in fruit; ripe fruit 2.5-3mm, a little narrowed at base.....	
 <i>Oenanthe lachenalii</i> (Parsley Water-dropwort)	
34	Sepals $\geq 0.2\text{mm}$, visible at top of fruit.....	35
34'	Sepals absent or as minute teeth or collar, hardly discernible at top of fruit.....	36
35	Fruits subglobose, c. as wide as long in side view.....	<i>Coriandrum sativum</i> (Coriander)
35'	Fruits distinctly longer than wide in side view.....	29 (<i>Oenanthe</i>)
36	Lower leaves simply pinnate, the lobes not divided as far as midrib.....	37
36'	Lower leaves 2-4-pinnate or 1-2-ternate.....	43
37	Bracts 0(-2), if present then stem mostly procumbent with only flowering stems and some leaves erect... ..	38
37'	Bracts 2-8; at least upper part of stem erect to ascending.....	41
38	Plant frequently aquatic, with with lower part of stem procumbent and rooting.....	39
38'	Plant never truly aquatic, stem erect.....	40
39	Lower leaves 2-3-pinnate, with linear segments if submerged; bracteoles without scarious margin; styles c. $\frac{1}{2}$ length of style base.....	<i>Apium inundatum</i> (Lesser Marshwort)
39'	Lower leaves 1-pinnate, even when submerged; bracteoles with whitish scarious margin; styles slightly longer than style base.....	<i>Apium nodiflorum</i> (Fool's Water-cress)

- 40 Rather glossy glabrous biennial with a strong smell of celery; lower leaves 1-pinnate, coarsely and broadly lobed; fruit < 2mm; styles recurved and ± appressed.....***Apium graveolens* (Wild Celery)**
- 40' Perennial, not glossy and often minutely hairy, with no celery smell; lower leaves very variable and sometimes 2-pinnate with narrow segments, but if 1-pinnate then either leaflets ovate and more finely toothed or, if more deeply divided, segments narrow and not coarsely or broadly lobed; fruit 2-2.5mm; styles divergent but often absent at fruiting.....***Pimpinella saxifraga* (Burnet-saxifrage)**
- 41 Styles at fruiting at least as long as style base..... 42
- 41' Styles at fruiting much shorter than style base..... 47
- 42 Lowest leaves with 2-5 pairs of leaflets, each 3-6cm long; all bracts < ½ as long as all rays; fruit subglobose.....***Sison amomum* (Stone Parsley)**
- 42' Lowest leaves with 4-12 pairs of leaflets, each 0.5-3.5cm long; longest bracts > ½ as long as shortest rays; fruit rather narrowly ovoid.....***Petroselinum segetum* (Corn Parsley)**
- 43 Bracts ≥ 4.....***Conium maculatum* (Hemlock)**
- 43' Bracts 0-2(-3)..... 44
- 44 Plant in water or on mud; stems procumbent and rooting at least near base; styles at fruiting much shorter than style base.....***Apium inundatum* (Lesser Marshwort)**
- 44' Plant not aquatic; stems erect (but rhizomes may be present); styles at fruiting at least as long as style base 45
- 45 Plant rhizomatous; leaves 1-2-ternate.....***Aegopodium podagraria* (Ground-elder)**
- 45' Plant not rhizomatous; leaves 2-3-pinnate..... 46
- 46 Easily uprooted annual; bracteoles long, strongly reflexed.....***Aethusa cynapium* (Fool's Parsley)**
- 46' Firmly rooted perennial; bracteoles absent.....***Pimpinella saxifraga* (Burnet-saxifrage)**
- 47 Plant of arable, waste and disturbed dry ground; stem solid; bracts divided to base into linear to filiform lobes, the longest > ½ as rays; upper leaves 2(-3)-pinnate.....***Ammi majus* (Bullwort)**
- 47' Waterside plant; stem hollow; bracts simple or sparsely lobed and usually not to base, < ½ as long as rays; all leaves 1-pinnate.....***Berula erecta* (Lesser Water-parsnip)**

Other species recorded in the county

<i>Astrantia major</i>	Garden outcast, recorded once (1962). Would fail at key set 3
<i>Eryngium campestre</i>	Probably native, presumed extinct, last recorded 1985. Would fail by key set 3
<i>Eryngium planum</i>	Garden escape, 4 post-2000 records. Would fail by key set 3
<i>Anthriscus cerefolium</i>	Casual, cultivation relic, recorded once (2003) Would key out incorrectly to <i>Anthriscus sylvestris</i> or fail at key set 27
<i>Smyrniium perfoliatum</i>	Alien, recorded twice (1932 and 2015). May spread into the county. Would fail at key set 3
<i>Bunium bulbocastanum</i>	Dubious record (1924), ignored by 1996 <i>Flora</i> Would most likely key out incorrectly at key set 24 or 43
<i>Pimpinella major</i>	The handful of records for this are all dubious, and if it ever occurred it is no longer extant.

	Would fail at key set 40
<i>Pimpinella affinis</i>	Casual, recorded once (last seen 1990). Would fail at key set 40
<i>Pimpinella peregrina</i>	Casual, recorded once (last seen 2006). Would fail at key set 40
<i>Sium latifolium</i>	Rare native, presumed extinct, last recorded 1966. Would fail after key set 35
<i>Oenanthe silaifolia</i>	Of very dubious occurrence in the county and not now known. The only modern record (1987) is considered an error for <i>O. lachenalii</i> . Would key out incorrectly to <i>Oenanthe lachenalii</i> at key set 33
<i>Anethum graveolens</i>	Casual, garden outcast, recorded twice (1974 and undated). Would fail at key set 10
<i>Bupleurum rotundifolium</i>	Former cornfield weed, one recent record (2009-2013) where it is a garden denizen of the cultivar 'Griffithii'. Would fail at key set 3
<i>Bupleurum subovatum</i>	Bird-seed casual, recorded once (1973-1975). Would fail at key set 3
<i>Cuminum cyminum</i>	Bird-seed and garden casual, recorded once (2004). Would fail at key set 15
<i>Trachyspermum ammi</i>	Casual, recorded once (2012). Would fail by key set 15
<i>Ammi visnaga</i>	Casual, seed contaminant, two records (2006 and 2008). Would key out incorrectly to <i>Ammi majus</i> at key set 47
<i>Carum carvi</i>	Horticultural casual. A handful of records, most recent 1983. Would key out incorrectly to <i>Pimpinella saxifraga</i> or fail at key set 46
<i>Carum verticillatum</i>	Probable native, presumed extinct. Records from two sites, one comprising only 1 plant. Most recent record 1983. Would fail at key set 24
<i>Angelica archangelica</i>	Garden outcast. Two records (2012 and 2013) Would key out incorrectly to <i>Angelica sylvestris</i> at key item 23'
<i>Peucedanum officinale</i>	Single dubious record, 1916 Would fail at key set 8
<i>Caucalis platycarpos</i>	Former arable weed, now casual. A handful of records, the most recent 1934 Would key out incorrectly to <i>Torilis</i> at key item 17

Some infraspecific taxa worth looking out for

Aethusa cynapium (Fool's Parsley)

- 1 Stem up to 80cm, grooved; leaf-lobes ovate..... 2
- 1' Stem over 100cm, terete; leaf-lobes linear-lanceolate to oblong..... 3
- 2 Stem up to 20cm; bracteoles shorter than or as long as sub-umbels..... **subsp. *agrestis***
- 2' Stem up to 80cm; bracteoles 1-2x as long as sub-umbels..... **subsp. *cynapium***
- 3 Leaf-lobes linear-lanceolate; bracteoles 1-2x as long as sub-umbels..... **subsp. *gigantea***
- 3' Leaf-lobes linear to oblong; bracteoles 2-4x as long as sub-umbels..... **subsp. *cynapioides***

Subsp. *cynapium* is a widespread plant of cultivated ground, often flowering early. Subsp. *agrestis* is more restricted to cereal crops, where it often flowers late among the stubbles. The other two subspecies appear to be recent imports in horticultural products and bird seed; so far they only appear to have a weak foothold in Britain, but may be overlooked.

Pastinaca sativa (Parsnip)

- 1 Stem terete, shortly hairy to nearly glabrous; rays of terminal umbel 5-7, nearly equal..... **subsp. *urens***
- 1' Stem angled; rays of terminal umbel 9-20, very unequal..... 2
- 2 Root not swollen; rather densely hairy, stem hairs long and flexuous..... **subsp. *sylvestris***
- 2' Root swollen; stem and leaves with sparse short hairs..... **subsp. *sativa***

Subsp. *sylvestris* is the common native plant. Subsp. *sativa* is the cultivated Parsnip, occurring as a crop relict. Subsp. *urens* is a plant mainly of S and E Europe but may be native here; so far it has been recorded only in coastal East Anglia.

Heracleum sphondylium (Hogweed)

- 1 Flowers white, pink or purple, the outer radiating..... **subsp. *sphondylium***
- 1' Flowers greenish white or yellowish-green, the outer not or scarcely radiating..... **subsp. *flavescens***

Subsp. *sphondylium* is the common and very variable plant found throughout Britain. In particular, it can vary hugely in the degree of dissection of the leaves and the breadth of the leaf segments. Subsp. *flavescens*, a plant of C and E Europe, has been found rarely in East Anglia but may not be persistent.

Umbelspeak

Here are some explanations of terms or special meanings used in descriptions of the umbellifers.

accrescent	Becoming larger after flowering
beak	An extension of the carpel beyond the seed-bearing part
bract	The leaf- or scale-like structure at the base of the rays (stalks of the secondary umbels) of the umbel
bracteole	The leaf- or scale-like structure at the base of the pedicels (stalks of the individual flowers) of the secondary umbel
carpel	One of the two seed-bearing compartments of a schizocarp
carpophore	A vascular bundle running between the two carpels and (if present) separating from them at maturity
commissure	The face by which the two carpels are joined together
compound umbel	An umbel where the first branching ends not in individual flowers but in further partial umbels (secondary of sub-umbels)
disc	A fleshy nectar-bearing structure on top of the ovary (see also stylopodium)
dorsally compressed	Flattened in the same plane as the commissure
fistular	Hollow, closed at both ends
glochidiate	Barbed at the tip
laterally compressed	Flattened at right angles to the commissure
mericarp	A one-seeded portion of a two-seeded fruit
partial umbel	A small umbel combining with other partial umbels to make the whole inflorescence in a compound umbel
pedicel	The stalk of a single flower
peduncle	The stalk of the whole inflorescence. <i>Beware! Some texts use this as a synonym for ray, i.e. the stalk of a sub-umbel</i>
pericarp	The outer wall of the carpel , often grooved, ridged or winged
radiating	The condition where the outer petals of the peripheral flowers in the umbel are larger than the others
ray	The stalk of a partial umbel , therefore at the first branching in a compound umbel



schizocarp	Fancy term for the whole fruiting structure of an individual umbellifer flower (in other words, the fruit)
stylopodium	The usually prominent base of the styles that is formed from the disc and often becomes swollen at fruiting
umbel	An inflorescence where the pedicels all arise from the same point at the top of the axis. In a compound umbel the rays also all arise from a common point at the top of the main flowering stem
vitta	An oil canal or oil body on the face of the carpel , often embedded between ridges on the pericarp

