



National Plant Monitoring Scheme

Species Identification Crib



Introduction

The objective of this Crib is to provide an additional resource for NPMS volunteers as a supplement to the NPMS Species Identification Guide.

The intention is that the Crib will be developed over time to include additional species within the NPMS Species Identification Guide. The revision box below will list additions and amendments each time a new version is released on the NPMS website.

Acknowledgements

Information has been drawn from various resources to assist with the production of the Crib. Whilst no direct acknowledgement has been given within the various tables etc. a broad acknowledgement is provided via the bibliography below.

Oli Pescott (CEH) and Kevin Walker (BSBI) for their helpful comments.

Revision Table

DATE	REVISION	NOTE
26-Apr-17 & 22-May-17	<p>Asteraceae: Mayweeds & Chamomiles:- Stinking Chamomile <i>Anthemis cotula</i> Scented Mayweed <i>Matricaria chamomilla</i> Scentless Mayweed <i>Tripleurospermum inodorum</i> Prickly Lettuce <i>Lactuca serriola</i> Trifid Bur-marigold <i>Bidens tripartita</i> Small Cudweed <i>Filago minima</i></p> <p>Lamiaceae: Yellow Archangel <i>Lamiastrum galeobdolon ssp. montanum</i></p> <p>Rhamnaceae: Buckthorn <i>Rhamnus cathartica</i></p> <p>Valerianaceae: Common Cornsalad <i>Valerianella locusta</i></p>	All additions – initial version.



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Asteraceae

Mayweeds and Chamomiles

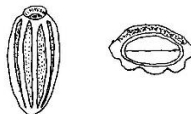
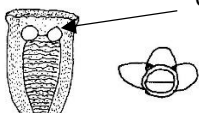
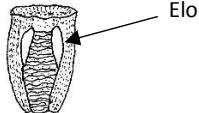
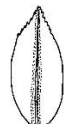
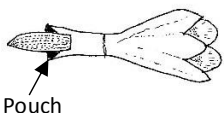
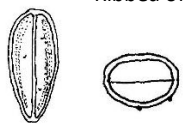

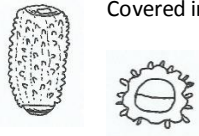
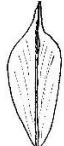
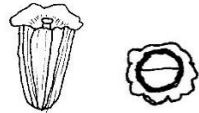
NPMS Species Identification Guide

- Stinking Chamomile *Anthemis cotula* – page 4
- Scented Mayweed *Matricaria chamomilla* – page 20
- Scentless Mayweed *Tripleurospermum inodorum* – page 32

In the vegetative state, the mayweeds and chamomiles are generally recognised by their alternate leaves which are pinnately divided into long thin, hair-like segments. In flower, they have daisy-like inflorescences formed by yellow disc-florets and, with one exception, white ray-florets. One species lacks ray florets, and these can occasionally be absent in other species.

The table overleaf will help to sort the three NPMS species out from other similar looking members of this group.



	Ray Florets Present?			
<i>Matricaria discoidea</i> Pineappleweed	No	Ray florets may occasionally be absent in some other species but none have the sweet pineapple scent of Pineappleweed.		
<i>Anthemis tinctoria</i> Yellow Chamomile	Yes Yellow			
		Receptacle scales present	Receptacle shape & longitudinal cross section	Disc achenes (mature) & transverse cross sections.
<i>Matricaria chamomilla</i> Scented Mayweed	Yes White	No	Conical & hollow	
<i>Tripleurospermum inodorum</i> Scentless Mayweed	Yes White	No	Dome-shaped & solid	 Circular oil-glands
<i>Tripleurospermum maritimum</i> Sea Mayweed	Yes White	No	Dome-shaped & solid	 Elongated oil-glands
		Receptacle scales present	Disc flowers with a short pouch at end of tube?	Disc achenes (mature) & transverse cross sections.
<i>Chamaemelum nobile</i> Chamomile	Yes White	Yes Elliptic shape 	Yes  Pouch	Ribbed on one face only 
<i>Anthemis cotula</i> Stinking Chamomile	Yes White	Yes Linear shape 	No	Covered in tubercles 
<i>Anthemis arvensis</i> Corn Chamomile	Yes White	Yes 	No	No tubercles 

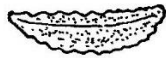



Asteraceae

Prickly Lettuce *Lactuca serriola*

NPMS Species Identification Guide – page 43.

Prickly Lettuce is very similar in appearance to Great Lettuce *Lactuca virosa* and these two species can be encountered in the same habitat (waysides and rough or disturbed ground), although *L. serriola* tends to be more the more common of the two. They can be most reliably separated by their ripe fruits (achenes). In the absence of fruits if a few leaves are crushed the resulting smell is also a good character to separate these species.

	Ripe Achenes		Smell if plant crushed
	Colour	Cross section	
Prickly Lettuce <i>Lactuca serriola</i>	Olive grey	Hardly winged 	Acrid, like Opium Poppy <i>Papaver somniferum</i>
Great Lettuce <i>Lactuca virosa</i>	Purple when fresh Blackish when dry	Distinctly winged 	Like Garden Lettuce <i>Lactuca sativa</i>

An additional character that can help to separate the two species is the colour of the leaf veins:

- Great Lettuce - often deep purple
- Prickly Lettuce - yellow


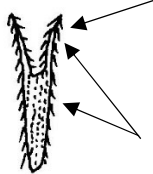

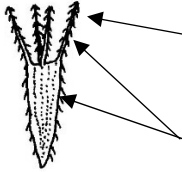
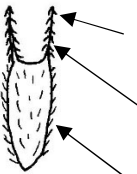


Asteraceae

Trifid Bur-marigold *Bidens tripartita*

NPMS Species Identification Guide – page 33.

Trifid Bur-marigold can easily be confused with Nodding Bur-marigold *Bidens cernua* and both species are found in similar habitats (the edges of watercourses and standing water, and in marshy habitats) and often grow together. Confusion is also possible with a third species, Beggarticks *Bidens frondosa*, which occurs in similar habitats, but this is much less common than the other two species and has a more restricted distribution (Birmingham and Cheshire are key areas). Separating these species can be troublesome as there can be overlap between key features. The following should enable reliable identification of most specimens that are likely to be encountered.

	Leaves	Achenes (ensure you look at ones taken from the centre of the capitulum)
Trifid Bur-marigold <i>Bidens tripartita</i>	 Most plants have many leaves that have 1-2 distinct lobes	 Normally 2 bristles but sometimes with a 3 rd or 4 th rudimentary bristle Barbs on bristles and achene body pointing downwards
Nodding Bur-marigold <i>Bidens cernua</i>	Leaves not lobed 	 Normally with 4 (but sometimes 3) equal length bristles Barbs on bristles and achene body pointing downwards
Beggarticks <i>Bidens frondosa</i>	Most plants have many pinnate leaves with 1-2 leaflets	 Normally two bristles Barbs on bristles pointing downwards. Hairs on achene body pointing upwards.

There are three other Bur-marigolds; London Bur-marigold *B. connata*, Black-jack *B. pilosa* and Spanish-needles *B. bipinnata*, which occur in Britain; like *B. frondosa*, these are introduced species. However, these are rare casuals and therefore unlikely to be encountered - for more details see Stace (2010).

Nick Law - 26-Apr-17

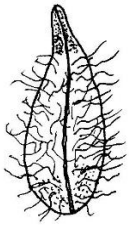
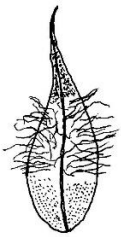


Asteraceae

Small Cudweed *Filago minima*

NPMS Species Identification Guide – page 36.

Of the six cudweeds that occur in Britain and Ireland the two most abundant and widely distributed are Small Cudweed and Common Cudweed *Filago vulgaris* and these are found in similar habitats. Small Cudweed is the less common of the two species and is confined to acid soils, whereas Common Cudweed occurs on infertile acid and calcareous soils. All of the cudweeds are similar in appearance but these two species can be separated from one another by a couple of key characters. For more detail about cudweeds see Rich & Rose (1998).

	Number of capitula/head	Tips of outer phyllaries
Small Cudweed <i>Filago minima</i>	2-8 (can have up to 14)	Blunt 
Common Cudweed <i>Filago vulgaris</i>	8-40 (can have as few as 5)	Drawn out into a long point 

Reference:

Rich, T.C.G. & Rose, F. (1998). *Filago/Gnaphalium uliginosum*, Cudweeds. In: Rich, T.C.G. & Jermy C. (1998). Plant Crib 1998. London:Botanical Society of the British Isles.

Nick Law - 22-May-17



Lamiaceae

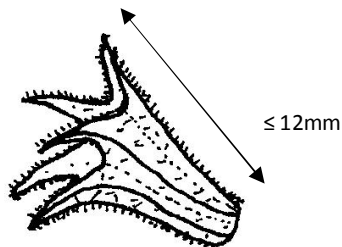

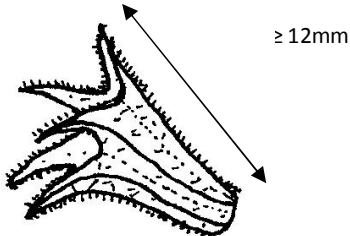
Yellow Archangel *Lamiaeastrum galeobdolon* ssp. *montanum*

NPMS Species Identification Guide – page 43.

Yellow Archangel and Garden Yellow Archangel *Lamiaeastrum galeobdolon* ssp. *argentatum* are often confused. Separating these two subspecies is important as it is only Yellow Archangel (ssp. *montanum*) that the NPMS Species ID Guide and NPMS Species Lists refer to. So only record this subspecies.

Garden Yellow Archangel is a garden escape which is now widely naturalised. Its vigorous growth habit has resulted in its inclusion on Schedule 9 of the Wildlife and Countryside Act (1981), which makes it an offence to cause it to grow in the wild.

There is a third Yellow Archangel subspecies, *Lamiaeastrum galeobdolon* ssp. *galeobdolon*, but this is very rare and unlikely to be encountered.

	Leaf Marking	Length of fruiting calyx (measure 10 and use the average)
Yellow Archangel <i>Lamiaeastrum galeobdolon</i> ssp. <i>montanum</i>	Small amounts of silver/white marks on leaves (as shown in the NPMS Species Guide); normally only from late summer. No brown/maroon marking.	
Garden Yellow Archangel <i>Lamiaeastrum galeobdolon</i> ssp. <i>argentatum</i>	Wide band of silver/white on leaves all-year round.  In the winter there is often a brown/maroon marking along the mid-rib.	

Nick Law - 22-May-17

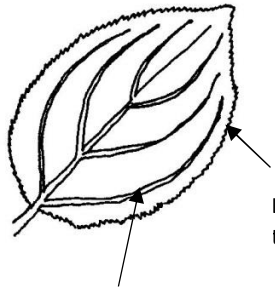
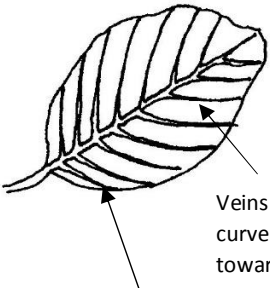
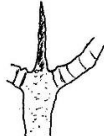


Rhamnaceae

Buckthorn *Rhamnus cathartica*

NPMS Species Identification Guide – page 151.

Superficially, Buckthorn and Alder Buckthorn *Frangula alnus* look similar; they can however be separated using some simple features.

	Buckthorn <i>Rhamnus cathartica</i>	Alder Buckthorn <i>Frangula alnus</i>
Leaf arrangement	Opposite	Alternate
Leaf veins and margins	 <p>Leaf margin toothed</p> <p>Veins curve up towards leaf tip</p>	 <p>Veins do not curve up towards leaf tip</p> <p>Leaf margin not toothed</p>
Thorns	 <p>Twigs have thorns</p>	No thorns
Flowers	4 green/white petals	5 green/white petals

Buckthorn can also be confused with Dogwood *Cornus sanguinea* which also has opposite, oval leaves with curving veins and small flowers with 4 white petals; but Dogwood leaves have un-toothed margins.



Valerianaceae

Common Cornsalad *Valerianella locusta*

NPMS Species Identification Guide – page 102

There are five species of Cornsalad that occur in Britain and Ireland. They are all very similar in appearance and can only be reliably separated from one another using ripe fruits. Common Cornsalad and Keeled-fruited Cornsalad *Valerianella carinata* are the two species most likely to be encountered and they can occupy similar habitats (open, disturbed ground such as paths and tracks). However, Keeled-fruited Cornsalad is now the more common of the two species in urban areas and Common Cornsalad is very much a plant of semi-natural habitats.

The other three species are much rarer.

Fruits (whole and in cross section)	
<p>Keeled-fruited Cornsalad <i>Valerianella carinata</i></p>	<p>Fertile cell lacks thick spongy outer wall</p> <p>Deep groove between the 2 sterile cells</p> <p>Fruits distinctly longer than wide</p>
<p>Common Cornsalad <i>Valerianella locusta</i></p>	<p>Very shallow groove between the 2 sterile cells</p> <p>Fruits wider than long</p> <p>Fertile cell has a thick spongy outer wall</p>

Nick Law - 22-May-17