

An Introduction to Dandelions

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Introduction

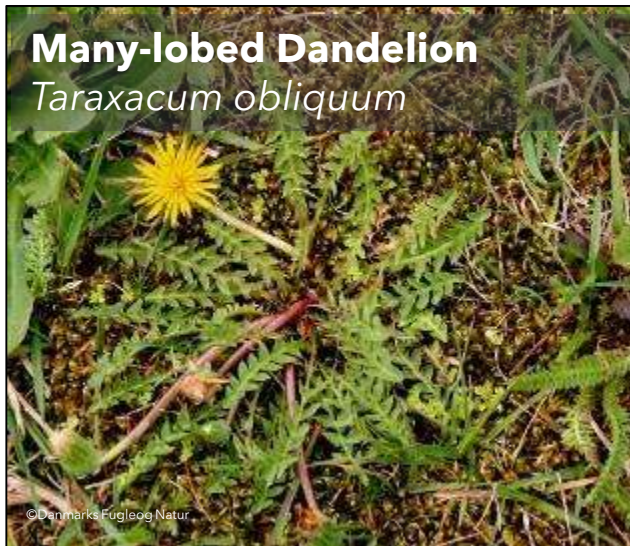
- An incredibly diverse group with c.250 species recorded in Britain, of which c.150 are likely to be extant.
- One of the least recorded vascular plant groups.
- There is such a thing as a Dandelion with good taste. They're not all 'weedy' species!



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Conservation Interest

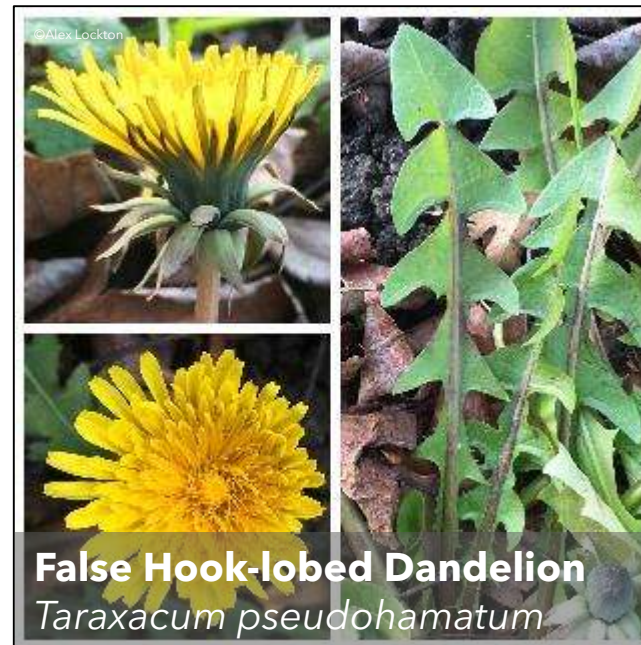
- Many are Nationally Rare or Scarce
- Endemic species
- Some are red-listed
- Under-recording means trends often can't properly be assessed



A season looking at Dandelions

- **2** nationally rare species
- **5** species new to the county
- **8** species new to the coast

**Even apparently common species
might be new to your area!**



Why so many?

- Current thinking - ancient hybridisation events with apomictic pollen bearing + sexual ancestors. Most species are apomictic in GB with few exceptions .
- **Apomixis** means that there isn't gene flow between species and populations...




But what is apomixis?

- Asexual reproduction through a process known as **agamospermy**.
- Ovules do not undergo meiosis and plants are therefore self-fertile, producing seeds which are clones of themselves.
- **van Dijk *et al*, 1999.**

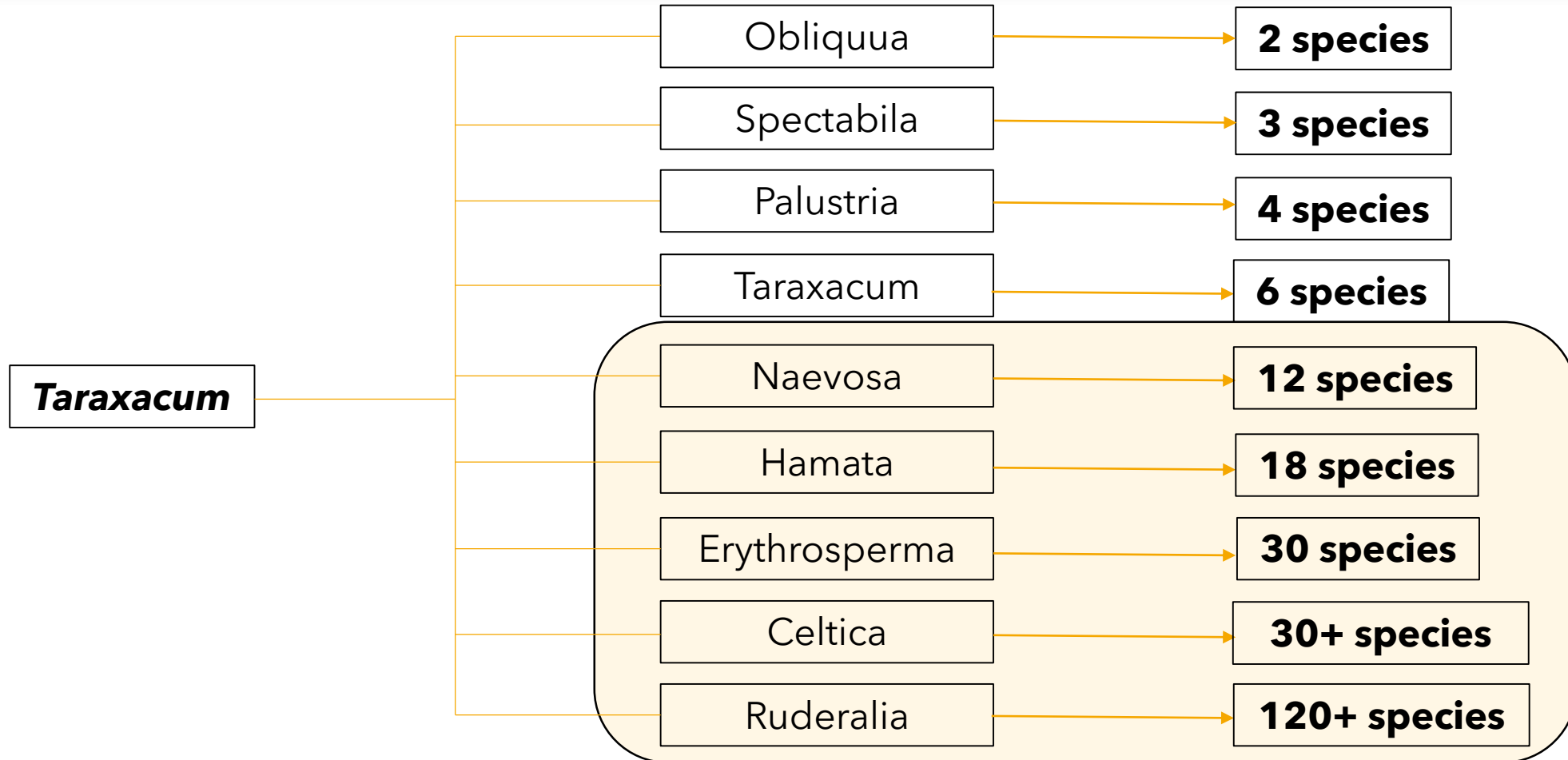


Learning Objectives

- To have obtained a basic understanding of Dandelion identification and of the resources to use
- To know some of the key differences between groups
- **To learn to LOVE DANDELIONS!!** 

So how do we make
identification of so
many species less
daunting?

Identification: Sections



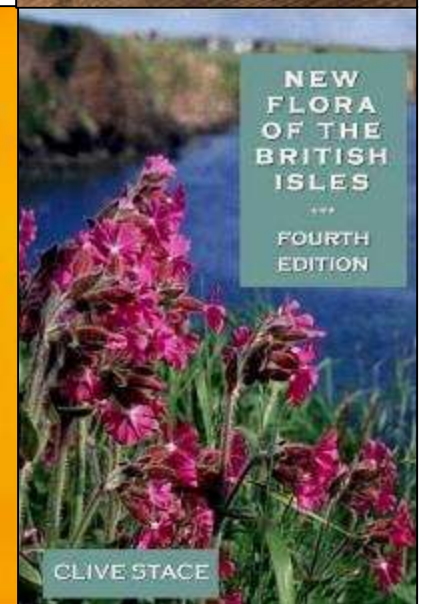
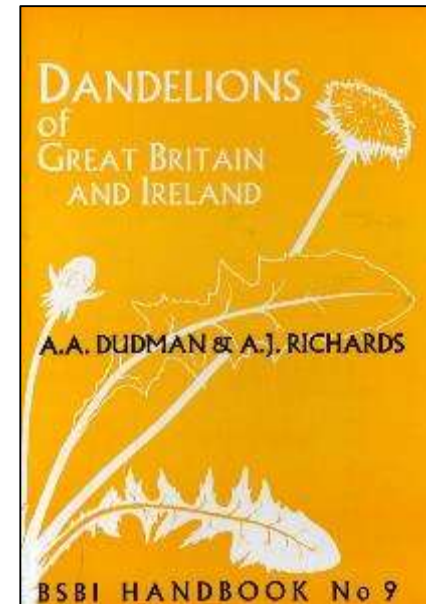
Identification: Resources

To Section

- Stace
- BSBI Dandelion Handbook

or

- Free online section key:
dandelionsectionkey.weebly.com

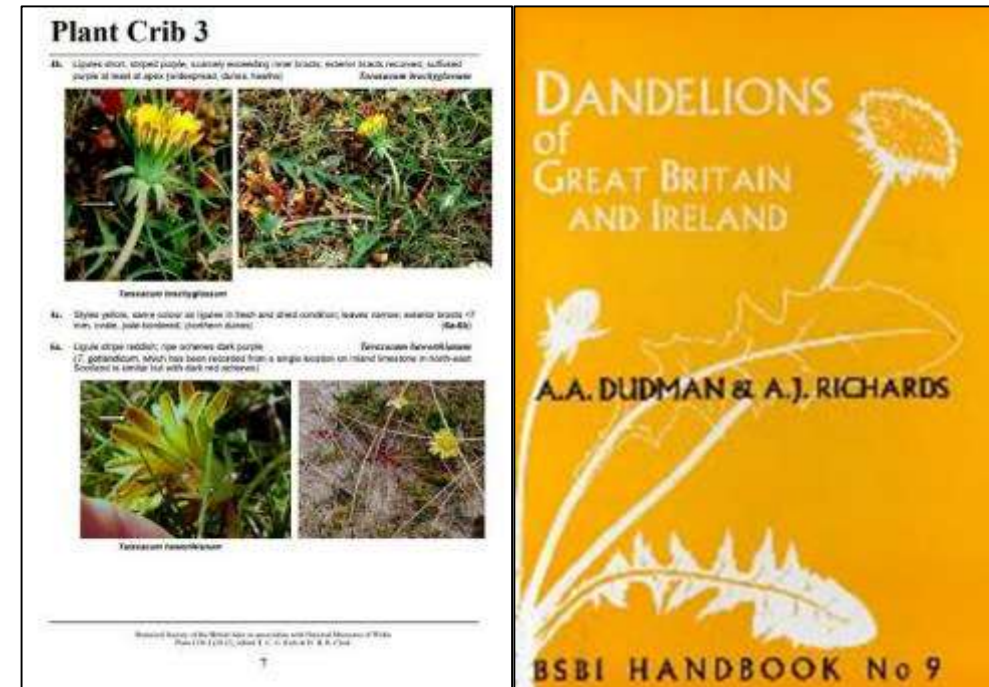


Identification: Resources

To Species

- BSBI Dandelion Handbook
- Free online plant cribs

You don't need to spend lots of money on reading material!



Identification: Resources

Collections & Research
Amgueddfa Cymru — National Museum Wales

[Collections & Research](#) [Departments](#) [Collections Online](#) [National Collections Centre](#)

Taraxacum

The Dandelions of Cardiff

The Dandelions of Cardiff
Provisional List: A-M

Dandelions of Cardiff
Provisional List: N-X

Introduction
The National Taraxacum collection is now being used to look at the local dandelion species in the Cardiff area. An amazing diversity has been discovered even in small areas — 14 species have been recorded on the lawns at the National Museum Cardiff site alone.

The list of 102 species recorded to date from the Cardiff area is given below. Coverage of Cardiff so far is very patchy, and it is hoped to expand the list over the next few years. Approximately 46 species have been recorded for the first time in Vice-county 41 (Glamorgan) between 2008 and 2010, several of which are also new to Wales.

Thanks go to John Richards for patiently naming the material, and to John Owen, Sally Whyman and Catalina Angeles for helping deal with the collection.

Provisional List for Cardiff

With the exception of the National Collections Centre at Nantgarw, all records are from the County of Cardiff. All are from vice-county 41 Glamorgan.

The following list has been compiled from the Welsh National Herbarium (NMW) and the National Taraxacum database (maintained by A. J. Richards & A. Reid). All specimens collected determined by A. J. Richards, and most of the National Taraxacum database records determined by A. J. Richards or C. C. Haworth. Other herbaria cited are the Natural History Museum. The accession number is given for all NMW specimens, and a 'T' number before the accession relates to my Taraxacum collecting numbers.

Nomenclature follows *Dandelions of Great Britain and Ireland*, BSBI Handbook no. 9, by A. A. Dudman and A. J. Richards (1997). Brief notes are given on its distribution in Britain and C introduced or endemic. The records give the locality, grid reference, collector and date and the specimen references in brackets.

View the Collection

- [Species list A-M](#)
- [Species list N-Z](#)



Taraxacum officinale

Identification: Caveats

- They are hard to begin with!!! Dandelions are **plastic!**
- **Avoid** stressed or damaged plants
- Ideal to have **Voucher Specimens** with notes for reference
- Look when plants are in late bud & early flower (March-May)
- **Verification** - BSBI referee



“But they all look so similar?”



Identification: Key features

Pollen

- Most species produce pollen, but some don't!



VS



Identification: Key features

Exterior bracts

- These scaly appendages matter...
- Erect vs recurved/reflexed
- Bordered vs unbordered



Erect



Recurved



Bordered



Unbordered

Identification: Key features

Ligules

- Can be striped in an array of different colours, from drab brown and grey, to bright red and pink dependent upon species.

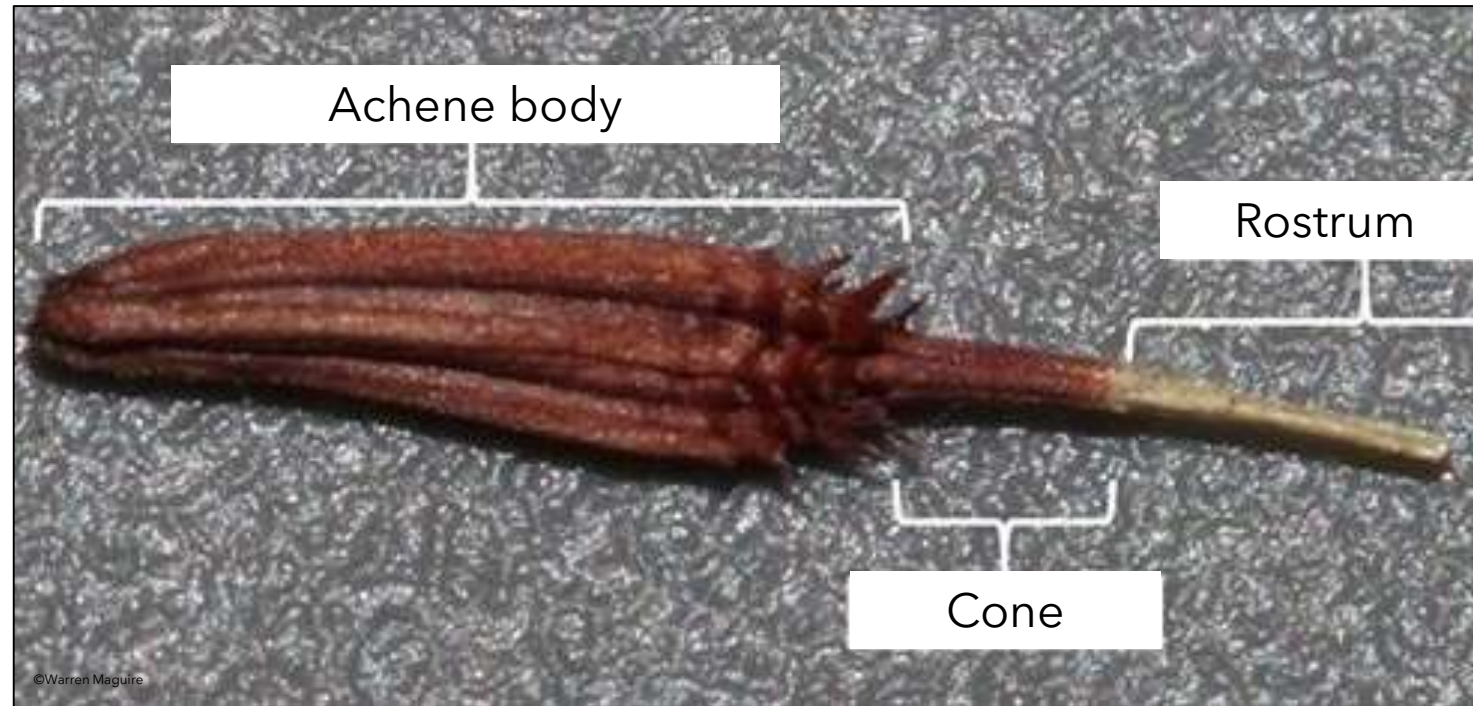
Ligule teeth

Ligule stripe



Identification: Key features

Achenes



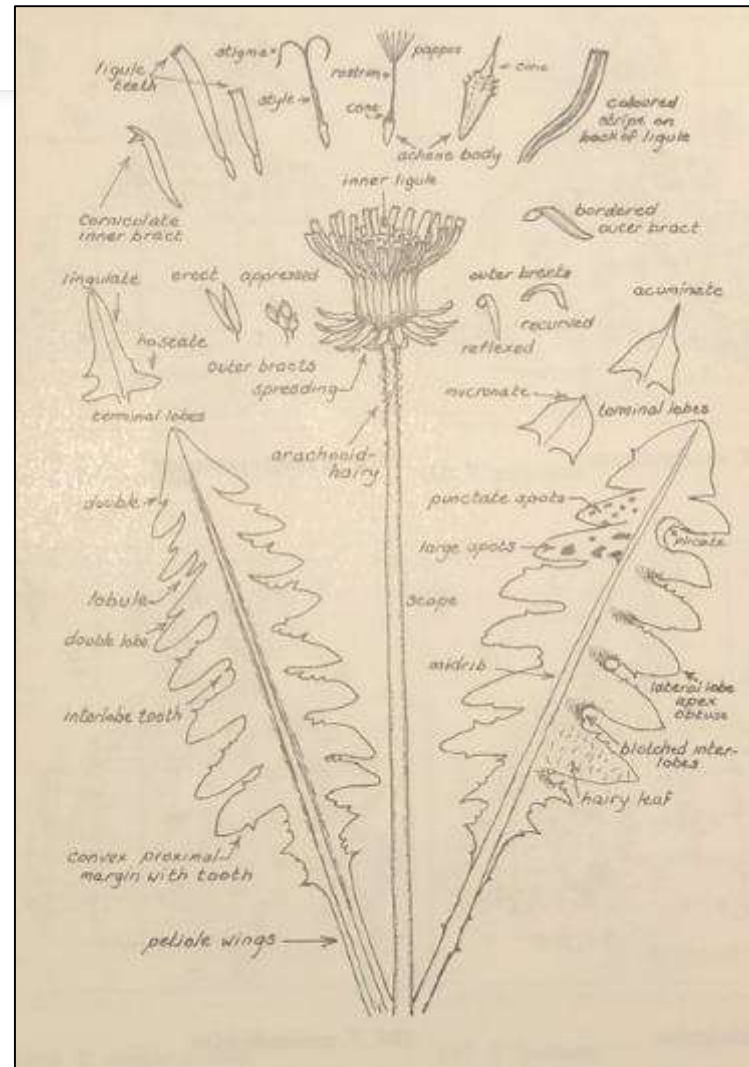
Identification: Key features

Leaves

- Dentate or not
- Midrib and petiole colour
- Deeply lobed to entire
- Terminal lobe vs lateral lobes



Identification: Key features



Identification: Key features

The image shows the Google logo in its standard multi-colored font. The letters are: 'G' (blue), 'o' (red), 'o' (yellow), 'g' (blue), 'l' (green), and 'e' (red).

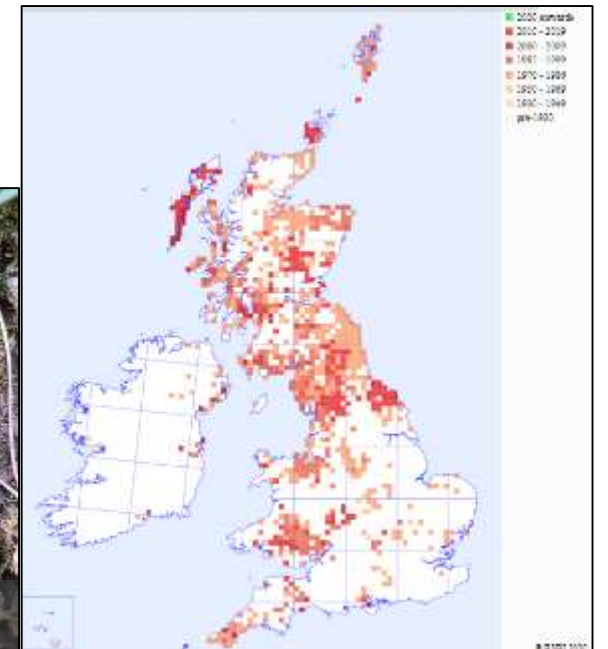
Google

So let's look at some
of the sections!



Sections: Naevosa

- The spotty dandelions!
- Leaf spotting usually **covering >10% of leaf surface**
- Commonest in the north and west
- Pollen often absent



Sections: Naevosa



Leaf damage



Interlobe blotching

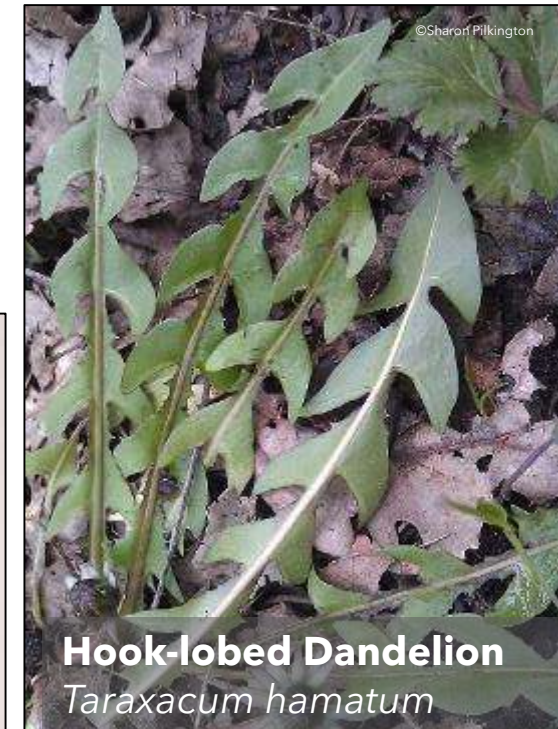
VS



Genuine leaf pigmentation

Sections: Hamata

- Ubiquitous. Often associated with 'weedy' habitats including road verges & waste ground.
- Often with **Hamate** leaf lobes
- Midrib with interwoven purple and green strands
- Exterior bracts usually spreading-recurved
- Pollen present



Sections: Erythrosperma

- The 'lesser dandelions'. This section contains Britain's smallest species – Ruddy Dandelion!
- Deeply dissected leaves
- Usually small plants with **capitula** rarely >3cm in diameter
- Widespread and typical of dry habitats



Sections: Celtica

- Stripy midribs, but rarely with **hamate** leaf lobes! Lateral lobes usually in 5-6 pairs.
- Exterior bracts typically spreading to erect
- Petioles and midribs often bright purple
- Pollen present or absent
- Plants often associated with **'good' habitats** like woodland edges, meadows and hedge banks.



Sections: Ruderalia

- **Consistently coloured midrib** - no midribs with green/purple interwoven strands.
- Exterior bracts usually recurved. Outer row often >10mm.
- Often robust plants with a tendency towards 'weedy' habitats.
- Pollen present bar four species.
- By far the commonest and widespread section, but also the **most difficult group** to identify to species level.



Sections: Ruderalia



Sections: Ruderalia

- Make a natural transition from least challenging to more difficult. Learn about sections with less species first!



Homework!

- Key **three** Dandelions to section level.
- If you find any section **Hamata**, **Celtica**, **Naevosa** or **Erythrosperma** plants, try and have a go at identification using the online Plant Cribs and BSBI handbook (if you have it).
- Post pictures of your findings to the *Dandelions (Taraxacum) of Britain and Ireland* facebook page or on twitter, using the hashtag [#DandelionFest](#)



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A close-up photograph of a pink flower with many thin, radiating petals, set against a dark green background. The text is overlaid on the top half of the image.

**Become a BSBI member
or renew your membership for 2020**

Useful Links and Further Reading

Free Online Resources

Section key: www.dandelionsectionkey.weebly.com

Species keys:

- **Celtica:** https://bsbi.org/wp-content/uploads/dlm_uploads/Taraxacum-section-Celtica-Plant-Crib-2016.pdf
- **Erythrosperma:** https://bsbi.org/wp-content/uploads/dlm_uploads/Taraxacum-section-Erythrosperma-2020.pdf
- **Hamata:** https://bsbi.org/wp-content/uploads/dlm_uploads/Taraxacum_section_hamata_Crib_3.pdf
- **Naevosa:** https://bsbi.org/wp-content/uploads/dlm_uploads/TARAXACUM-sect-NAEVOSA-Plant-Crib-2020.pdf

Useful Links and Further Reading

BSBI Blogspot

- The Dandelion ID Bug: <http://bsbipublicity.blogspot.com/2020/03/the-dandelion-id-bug-tim-says-its.html>

Apomixis literature

- **van Dijk, P. J, et al.**, 1999. 'Crosses between sexual and apomictic dandelions (*Taraxacum*). II. The breakdown of apomixis.' *Hereditary*. Available from: <https://www.nature.com/articles/6886200>
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References

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- **Stace, C.**, 2019.
- **Stroh, P. et al.**, 2014. *A vascular plant red-list for England*. Available from: https://bsbi.org/wp-content/uploads/dlm_uploads/England_Red_List_1.pdf
- **van Dijk, P. J, et al.**, 1999. 'Crosses between sexual and apomictic dandelions (*Taraxacum*). II. The breakdown of apomixis.' *Hereditary*. Available from: <https://www.nature.com/articles/6886200>