



# National Plant Monitoring Scheme

## Introduction to Lowland Grassland: Dry Calcareous presented by Dominic Price



UK Centre for Ecology & Hydrology



Botanical Society of Britain & Ireland



JNCC



Northern Ireland Environment Agency  
[www.daera-ni.gov.uk](http://www.daera-ni.gov.uk)



An Agency within the Department of Agriculture, Environment and Rural Affairs  
[www.daera-ni.gov.uk](http://www.daera-ni.gov.uk)



# National Plant Monitoring Scheme

## Introduction to Lowland Dry Calcareous Grassland

Dominic Price



UK Centre for Ecology & Hydrology



Botanical Society of Britain & Ireland



JNCC



NIEA Northern Ireland Environment Agency  
[www.daeira-ni.gov.uk](http://www.daeira-ni.gov.uk)



An Agency within the Department of Agriculture, Environment and Rural Affairs  
[www.dae](http://www.dae)





## General Characters

- Base rich, formed by weathering of rocks
- Thin porous soils = low nutrients
- Thin swards, often with bare patches
- Very high diversity ( $\uparrow 40$  sp/m<sup>2</sup>)
- Fine rather than coarse grasses
- Can be quite ‘mossy’





## Location

Mostly in south of England

Chalk grassland in the Brecks

To the north tends to occur on hard limestone



*Avenula pratense*  
Meadow Oat-grass



- Rigid leaves



*Avenula pratense*  
Meadow Oat-grass



Oaty heads





## *Brachypodium pinnatum* Tor Grass

- Big yellow clumps
- Rough leaves
- Stripy heads





## *Briza media* Quaking Grass

- Droopy, loose pyramidal head of dancing sugar-puffs
- Bottom leaves in opposite pairs coming out at 90°





## *Bromopsis erecta* Upright Brome

- Flowers red-tinted when fresh, borne on thin stems so they nod in the slightest breeze.
- Leaves with long individual hairs (camel's eyelashes) in loose tussocks.
- Can form quite dense tussocks in low-grazed habitats



# *Campanula rotundifolia* Harebell

- Delicate nodding blue flowers
- Basal leaves lobed





*Cirsium acaule*  
Dwarf Thistle

- Very prickly
- Prostrate on ground
- Flower sits in leaf axis



*Cirsium arvense*  
Creeping Thistle





*Filipendula  
vulgaris*  
Dropwort

- Rows of opposite toothed leaves
- Head of fluffy cream flowers





*Galium album*  
Hedge Bedstraw

- Whorls of leaves
- Doesn't stick to you
- Multitude of creamy flowers
- Sweet honey odour





## *Gymnadenia conopsea* Fragrant Orchid

- Tall pink/purple spikes
- Long hypanthia
- Fragrant





*Hypochaeris radicata*  
Common Cat's-ear

- Small black-tipped 'cat's-ears' on stem
- Filaments on leaf base
- Hairs on leaves unforked





*Hippocrepis comosa*  
Horseshoe Vetch

- Leaflets in opposite rows
- Multiple flowers in horseshoe or even full circle
- Crazy seedpods



*Leucanthemum vulgare*  
Oxeye Daisy

- Giant daisy heads
- Spatula shaped leaves becoming more divided





*Linum catharticum*  
Fairy Flax

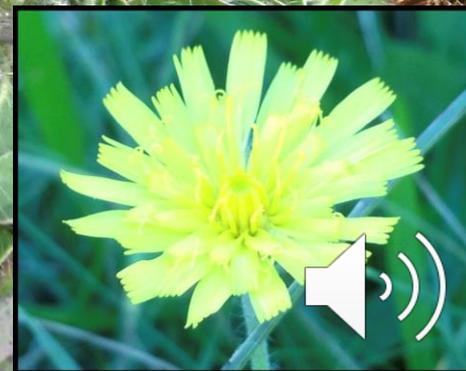
- Threadlike stems with pairs of tiny oblong leaves
- Delicate flowers ripening to hard stripy seedpods





*Pilosella officinarum*  
Mouse-ear Hawkweed

- Leaves very hairy with white undersides
- Sulphur yellow flowers





*Plantago media*  
Hoary Plantain

- Leaves oval
- Beautiful pinky white clustered flower





*Primula veris*  
Cowslip

- Heads of nodding tubular flowers
- Leave has clear stem at base





*Ranunculus  
bulbosus*  
Bulbous  
Buttercup



- Leaf intermediate between Creeping and Meadow
- Bulbous stem base
- Backwards sepals





# *Thymus vulgaris* Thyme

- Mat forming with small opposite slightly hairy leaves
- Tightly bundled light purple flowers
- Mildly scented





# National Plant Monitoring Scheme

All photos Dominic Price except the following:

Cirsium acaule	By Bernd Haynold - Own work, CC BY 2.5, <a href="https://commons.wikimedia.org/w/index.php?curid=2551061">https://commons.wikimedia.org/w/index.php?curid=2551061</a>			
Thymus vulgaris	CC BY-SA 3.0, <a href="https://commons.wikimedia.org/w/index.php?curid=210523">https://commons.wikimedia.org/w/index.php?curid=210523</a>	By Stefan.lefnaer - Own work, CC BY-SA 4.0, <a href="https://commons.wikimedia.org/w/index.php?curid=85074207">https://commons.wikimedia.org/w/index.php?curid=85074207</a>	By Wilhelm Zimmerling PAR - Own work, CC BY-SA 4.0, <a href="https://commons.wikimedia.org/w/index.php?curid=91046427">https://commons.wikimedia.org/w/index.php?curid=91046427</a>	
Pilosella officinarum	By Stitchingbushwalker - Own work, CC BY-SA 4.0, <a href="https://commons.wikimedia.org/w/index.php?curid=87667221">https://commons.wikimedia.org/w/index.php?curid=87667221</a>	CC BY-SA 3.0, <a href="https://commons.wikimedia.org/w/index.php?curid=180880">https://commons.wikimedia.org/w/index.php?curid=180880</a>		
Pilosella officinarum	By Rudolphous - Own work, CC BY-SA 4.0, <a href="https://commons.wikimedia.org/w/index.php?curid=93277669">https://commons.wikimedia.org/w/index.php?curid=93277669</a>			
Linum catharticum	By Stefan.lefnaer - Own work, CC BY-SA 4.0, <a href="https://commons.wikimedia.org/w/index.php?curid=96224723">https://commons.wikimedia.org/w/index.php?curid=96224723</a>			



# National Plant Monitoring Scheme

Filipendula vulgaris	By Stefan Lefnaer - Self-photographed, CC BY-SA 3.0, <a href="https://commons.wikimedia.org/w/index.php?curid=20866526">https://commons.wikimedia.org/w/index.php?curid=20866526</a>	By Krzysztof Ziarnek, Kenraiz - Own work, CC BY-SA 4.0, <a href="https://commons.wikimedia.org/w/index.php?curid=76895866">https://commons.wikimedia.org/w/index.php?curid=76895866</a>	By Stefan.lefnaer - Own work, CC BY-SA 4.0, <a href="https://commons.wikimedia.org/w/index.php?curid=65397003">https://commons.wikimedia.org/w/index.php?curid=65397003</a>		
Linum catharticum	By Fornax - Own work, CC BY-SA 3.0, <a href="https://commons.wikimedia.org/w/index.php?curid=4221895">https://commons.wikimedia.org/w/index.php?curid=4221895</a>	By Krzysztof Ziarnek, Kenraiz - Own work, CC BY-SA 4.0, <a href="https://commons.wikimedia.org/w/index.php?curid=66359497">https://commons.wikimedia.org/w/index.php?curid=66359497</a>	By Biodehio - Own work, CC BY-SA 3.0, <a href="https://commons.wikimedia.org/w/index.php?curid=40509644">https://commons.wikimedia.org/w/index.php?curid=40509644</a>		
Plantago media	By No machine-readable author provided. Taka assumed (based on copyright claims). - No machine-readable source provided. Own work assumed (based on copyright claims)., CC BY-SA 3.0, <a href="https://commons.wikimedia.org/w/index.php?curid=237533">https://commons.wikimedia.org/w/index.php?curid=237533</a>	By Robert Flogaus-Faust - Own work, CC BY 4.0, <a href="https://commons.wikimedia.org/w/index.php?curid=84218251">https://commons.wikimedia.org/w/index.php?curid=84218251</a>	CC BY-SA 3.0, <a href="https://commons.wikimedia.org/w/index.php?curid=109209">https://commons.wikimedia.org/w/index.php?curid=109209</a>		



# National Plant Monitoring Scheme

<b>Galium album</b>	By H. Zell - Own work, CC BY-SA 3.0, <a href="https://commons.wikimedia.org/w/index.php?curid=10188375">https://commons.wikimedia.org/w/index.php?curid=10188375</a>	By Hectonichus - Own work, CC BY-SA 3.0, <a href="https://commons.wikimedia.org/w/index.php?curid=27211167">https://commons.wikimedia.org/w/index.php?curid=27211167</a>	By AnRo0002 - Own work, CC0, <a href="https://commons.wikimedia.org/w/index.php?curid=40383613">https://commons.wikimedia.org/w/index.php?curid=40383613</a>		
<b>Leucanthemum vulgare</b>	By Quartl - Own work, CC BY-SA 3.0, <a href="https://commons.wikimedia.org/w/index.php?curid=10609462">https://commons.wikimedia.org/w/index.php?curid=10609462</a>	By Harry Rose from South West Rocks, Australia - Leucanthemum vulgare habit4, CC BY 2.0, <a href="https://commons.wikimedia.org/w/index.php?curid=40471240">https://commons.wikimedia.org/w/index.php?curid=40471240</a>	By Harry Rose from South West Rocks, Australia - Leucanthemum vulgare leaf6, CC BY 2.0, <a href="https://commons.wikimedia.org/w/index.php?curid=40471252">https://commons.wikimedia.org/w/index.php?curid=40471252</a>		
<b>Hippocrepis comosa</b>	By Robert Flogaus-Faust - Own work, CC BY 4.0, <a href="https://commons.wikimedia.org/w/index.php?curid=89453370">https://commons.wikimedia.org/w/index.php?curid=89453370</a>				
<b>Thymus vulgaris</b>	CC BY-SA 3.0, <a href="https://commons.wikimedia.org/w/index.php?curid=210523">https://commons.wikimedia.org/w/index.php?curid=210523</a>	By Stefan.lefnaer - Own work, CC BY-SA 4.0, <a href="https://commons.wikimedia.org/w/index.php?curid=85074207">https://commons.wikimedia.org/w/index.php?curid=85074207</a>	By Wilhelm Zimmerling PAR - Own work, CC BY-SA 4.0, <a href="https://commons.wikimedia.org/w/index.php?curid=91046427">https://commons.wikimedia.org/w/index.php?curid=91046427</a>		