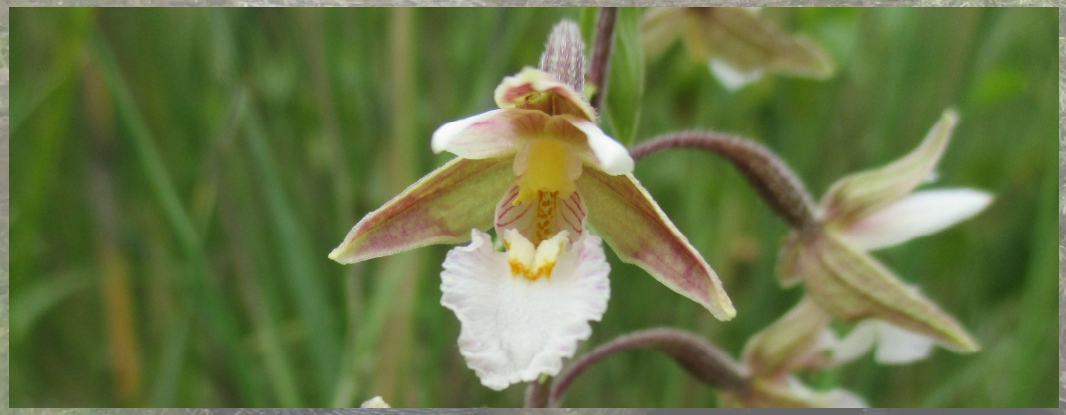
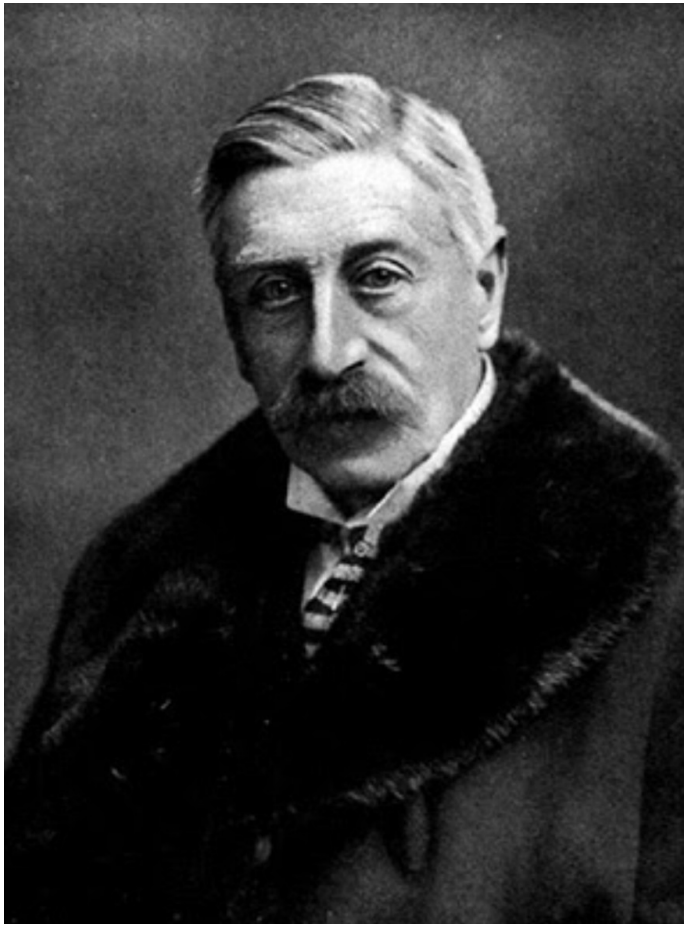
FLORA OF COUNTY MONAGHAN

Alexis FitzGerald B.A. M.Sc.

Vice-county Recorder for Co. Monaghan (H32)



- William Francis de Vismes Kane (1840–1918)
- In his presidential address to the Dublin Naturalists' Field Club on 14 January 1902 Kane spoke of the subject of natural history: '*How noble a study then is that of Natural History; opening ever afresh new vistas of an interminable past, full of wondrous energies*' (Kane 1902).

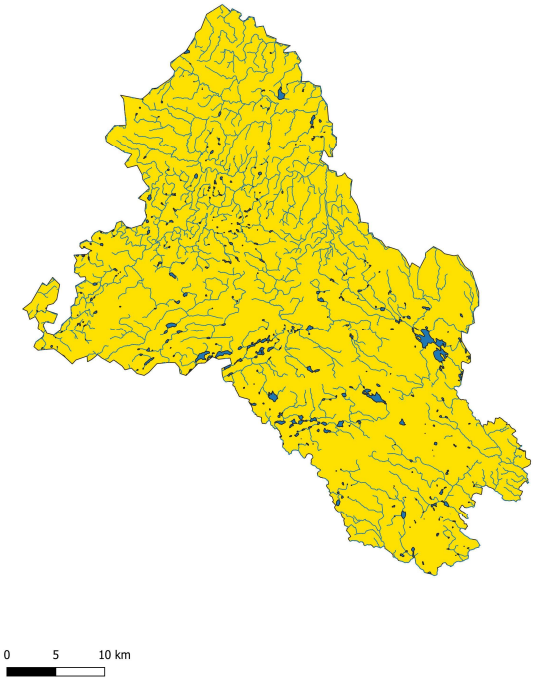


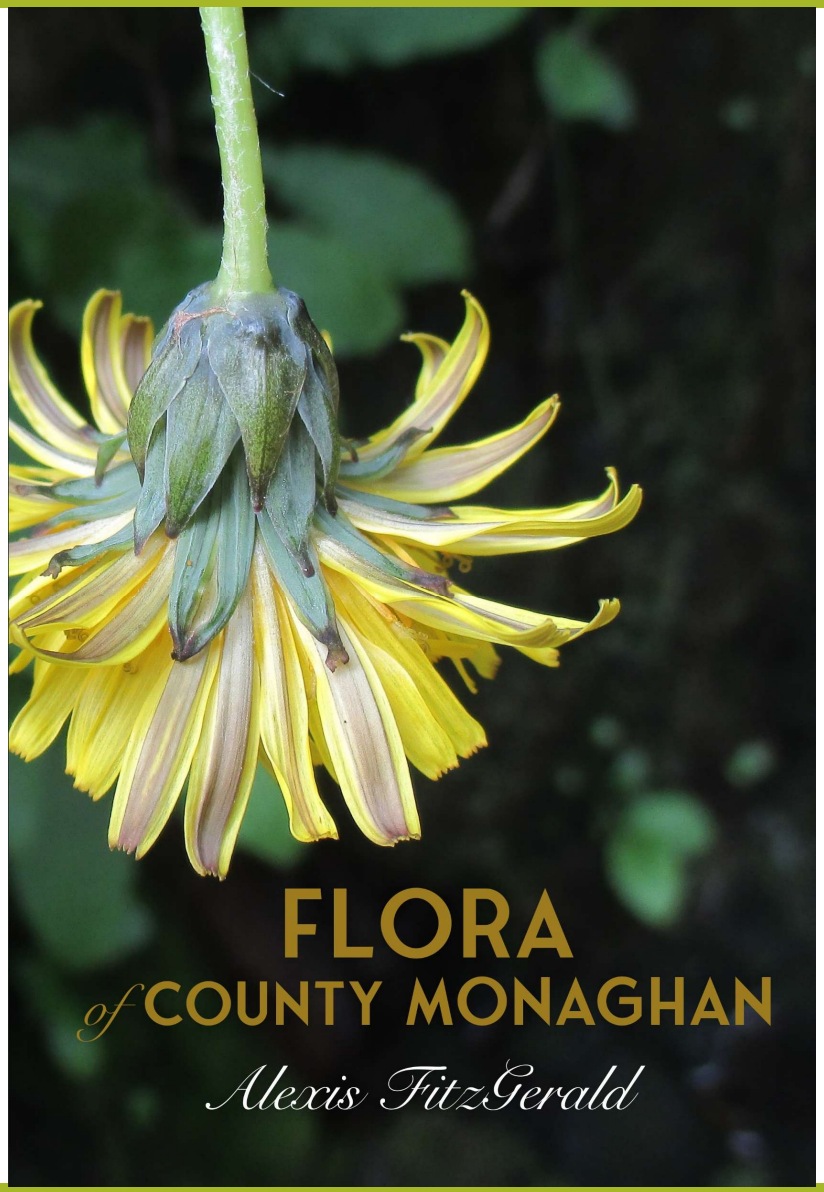
A Little About the Author

- **Botanist, Ecologist**
- BSBI Vice-county Recorder for Monaghan, since 2015
- Current President of Dublin Naturalists' Field Club
- 11+ year journey of studying plants and habitats, much of which has been intertwined with the beautiful Irish countryside of Monaghan
- Field botany is my great passion! – phytogeography, plant taxonomy and ecology

The Book – *Flora of County Monaghan*

- **The first book of its kind for County Monaghan**
- **To be published in November 2024 by Wordwell Ltd. – available in all good bookshops nationwide**
- The culmination of multiple decades of botanical research and recording work in the county by dozens of botanists
- It took me personally almost 10 years to research and write the book, complete all of the fieldwork and bring it to full completion
- Core of the book is a series of accounts of all the species that have been recorded in the county to date, with rare species given particular detail, including all of their known locations.





FITZGERALD ECOLOGY

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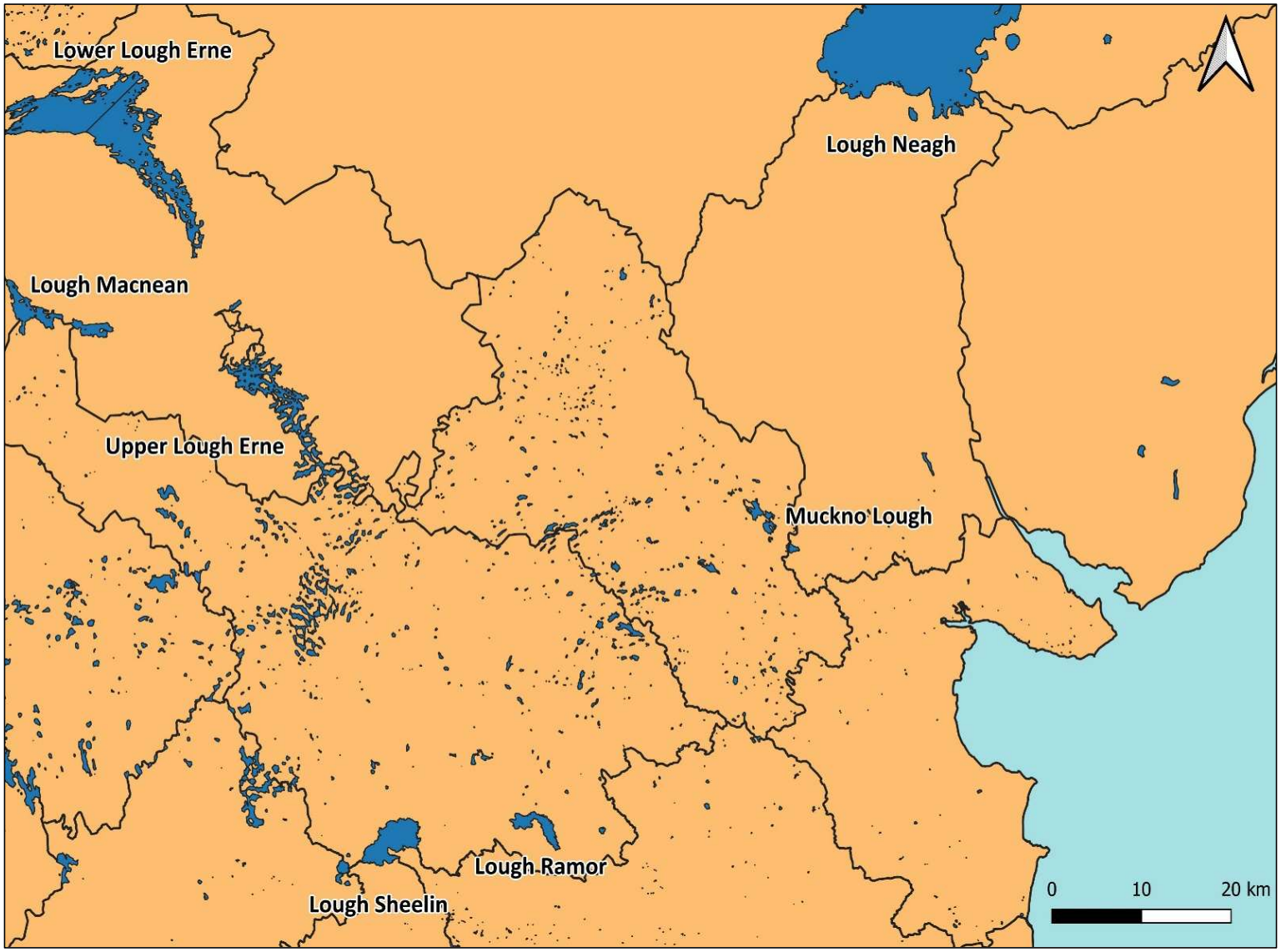

Lower Lough Erne
Lough Neagh
Lough Macnean
Upper Lough Erne
Muckno Lough
Lough Ramor
Lough Sheelin
0
10
20 km

The Book – *Flora of County Monaghan*

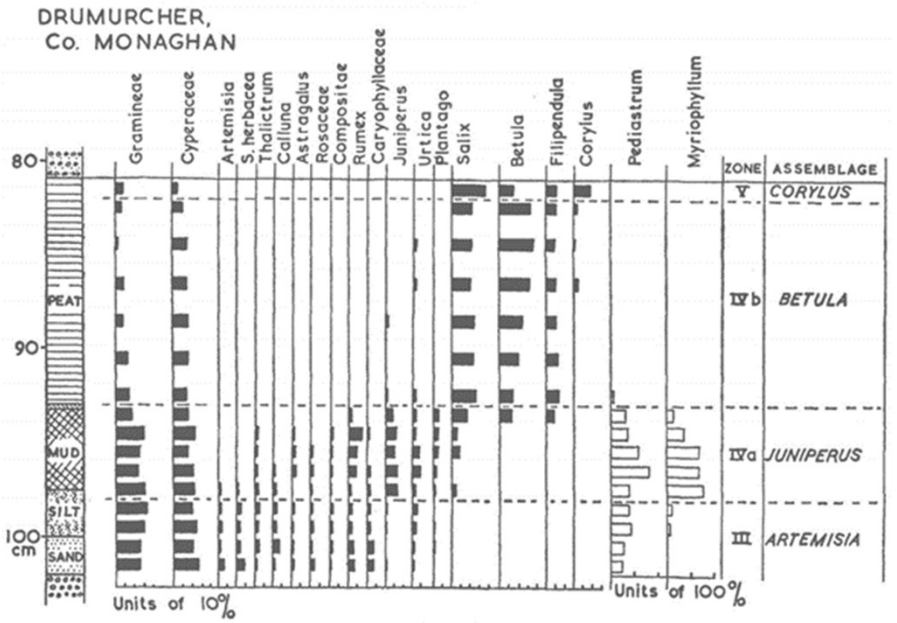
- Introductory chapters are also included covering the geology, paleobotany, land use history, climate, habitats and botanical recording history of the county; also included are accounts of 31 of the best botanical sites
- An effort has been made to uncover all of the historical literature regarding botanical records from the county, as well as all botanical specimens in herbaria across Europe – all Irish herbaria were searched in detail
- Approx. 560 pages, A4 – over 210,000 words

Book Structure

- **Nine Primary Chapters –**
- 1. THE PHYSICAL ENDOWMENT OF COUNTY MONAGHAN (Dr. Robbie Meehan)
- 2. THE CLIMATE OF COUNTY MONAGHAN (Dr. Kieran Hickey)
- 3. VEGETATION HISTORY OF COUNTY MONAGHAN (Dr. Fraser Mitchell)
- 4. PLANTS AND LAND USE IN THE HISTORY OF COUNTY MONAGHAN
- 5. THE DISCOVERERS OF THE COUNTY MONAGHAN FLORA
- 6. ANALYSIS, HABITATS AND CONSERVATION OF THE COUNTY MONAGHAN FLORA
- 7. EXPLANATORY NOTES ON THE SPECIES ACCOUNTS
- 8. SPECIES ACCOUNTS
- 9. GAZETTEER
- BIBLIOGRAPHY

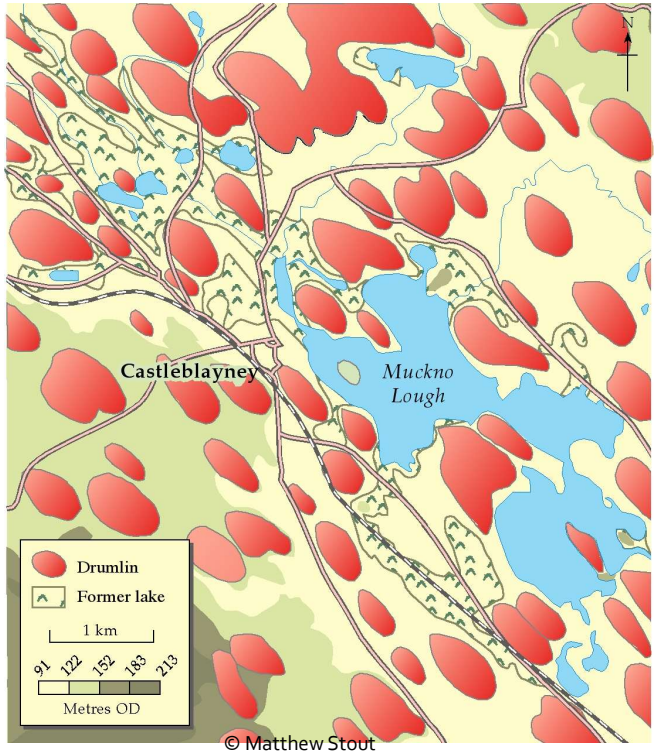
Chapter 3. Vegetation History of County Monaghan – Dr. Fraser Mitchell (Trinity College Dublin)

- A palaeobotanical exploration of County Monaghan and the wider N midlands region
- Highlight: the discussion of a deposit at Knocknacran in SE Monaghan – it represents the only substantial vegetation record from the last interglacial that has been found in Ireland to date
- The deposit persisted through the last glacial period because it is located in a karstic depression in a Permian gypsum deposit which was then capped by a drumlin
- Notable taxa found that are not native to Ireland in the current interglacial include *Picea*, *Carpinus*, *Buxus* and *Viscum*
- Vegetable debris was found (wood fragments, seeds and fruits) – including *Dulichium spathaceum* (now *D. arundinaceum*), a wetland species that is confined to North America today as a native but which had a European distribution during earlier interglacials; also *Erica mackayana*



Chapter 4. Plants and Land Use in the History of County Monaghan

- From Mesolithic/early Neolithic to the post-WW2 period in Monaghan, from a plant/vegetation and land use perspective
- Monanny and the Black Pig's Dyke
- In the years 769 and 935 an 'abundance of oak-mast' was noted in the *Annála Uladh: Annals of Ulster (to AD 1131)*
- *Coillte Glasa Triúcha ('Green Woods of Trough')* - In 1697 some 30,000 oak (*Quercus* sp.) trees, then noted as being 'the only wood in that county' (Hardy 1927), were recorded as having been felled in County Monaghan by English soldiers for use in an army camp at Dundalk, Co. Louth. This wood may have been in the vicinity of Lough Ross in south-east Monaghan, near the present-day Monaghan–Armagh border
- the 'Apothecary in Glaslough' was on the subscriber list to the rare 1727 print edition of Caleb Threlkeld's *Synopsis Stirpium Hibernicarum* (1726)
- Flax *(Linum usitatissimum*), there and gone again



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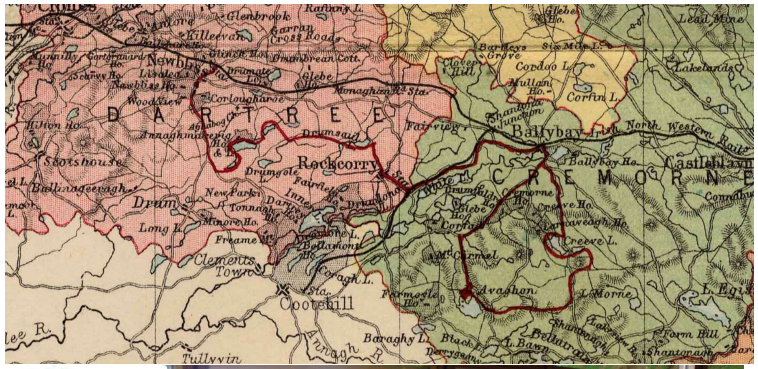
Chapter 5. The Discoverers of the County Monaghan Flora – some Anecdotes

- Revd Philip Skelton (1707–87) – *Philosophical Transactions, 1748*
- John Templeton (1766–1825) and Robert Brown (1773–1858)
- Belfast (1800s) to Dublin (1900s-2000s)
- Robert Lloyd Praeger
- Modern period: Donal Synnott, John Harron, David E. Allen, Ian McNeill, Alan Hill, etc.



Chapter 6. Analysis, Habitats and Conservation of the County Monaghan Flora

- **907 species** in total, out of 1,939 in Ireland (Faulkner 2023) – *c.* 47%
- **625 native species (and hybrids)** in total, out of 952 in Ireland (Faulkner 2023) – *c.* 66% (removing hybrids this is 56%)
- **20 native species and hybrids currently considered extinct in the county**: *Lysimachia minima, Andromeda polifolia, Botrychium lunaria, Pseudorchis albida, Carex viridula, Helosciadium × moorei, Bromopsis erecta, Huperzia selago, Omalotheca sylvatica, Scleranthus annuus, Viola canina, Leontodon hispidus, Linum bienne, Drosera anglica, Selaginella selaginoides, × Dactylodenia heinzeliana, Filago germanica, × Dactylodenia legrandiana, Antennaria dioica, Viola × contempta*

Taxon categories	Totals recorded
Species and species aggregates	907
Hybrids	92
Subspecies	65
Varieties	68
Formas	12
Cultivars	3
Total taxa (excluding apomictic species)	1,147
Total apomictic species	158
Total charophyte species	12

Total: 1,317 taxa

Chapter 6. Analysis, Habitats and Conservation of the County Monaghan Flora

- **16 archaeophytes considered extinct in the county**: *Lolium temulentum*, *Cichorium intybus*, *Urtica urens*, *Centaurea cyanus*, *Valerianella dentata*, *Ballota nigra*, *Camelina sativa* s.l., *Galeopsis speciosa*, *Anthemis cotula*, *Matricaria chamomilla*, *Scandix pectin-veneris*, *Blitum bonus-henricus*, *Malva sylvestris*, *Carum carvi*, *Chamaemelum nobile*, *Silybum marianum*
- Reasons for decline include:

1) Improved seed cleaning techniques

2) Increased herbicide application in arable fields

3) A steep decline in arable land usage locally

4) Also a sharp decline in herbalism (e.g. *Chamaemelum nobile*)

- Organic farms and community gardens are havens for arable weeds

Chapter 8. Species Accounts

- Over 1,200 species accounts
- First county record, and literature records, included
- Habitats, ecology, taxonomy and other relevant information on each species

R. acetosa L. Common Sorrel

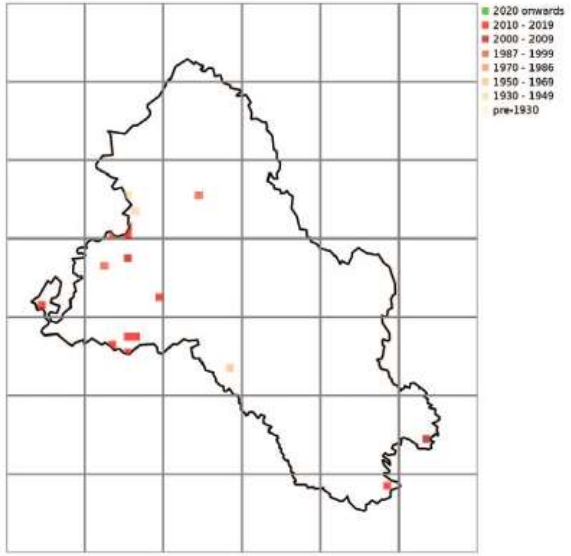
Native. Common. Meadows, pastures, lawns, riverbanks, tracksides, roadside verges, graveyards and waste ground. Only subsp. ***acetosa*** is known in the county.

SOME RECORDS: Castleblayney, 1896 (RLP; Praeger 1900b)—re-found 1935 (POC; O'Connor 1936—recorded as a fungal host plant) & 1947 (F.E. Hackett; O'Connor 1949—recorded as a fungal host plant).

R. hydrolapathum Huds. Water Dock

Native. Occasional, but locally frequent in lowland loughs east and south of Clones (see map below). Neutral to base-rich mesotrophic–eutrophic lough shores.

ALL RECORDS: Lough Avaghon, 1900 (RLP; Praeger 1901b)—re-found 1939 (RLP; Praeger 1946) & 1958 (MPHK); Derryartry, 1937–9 (E. Smyth; Dúchas 2020); Mullaglassan, 1937–9 (P. McGorman; Dúchas 2020); Drumreaske Lough, 1972 (LF)—re-found 1999 (AH & IMcN) & 2016 (AF; FitzGerald 2017a); Feagh Lough, 1988 (JF & RHN)—re-found 2007 (IMcN) & 2016 (AF); W edge of Bishop's Lough, 1988 (DMcN); S edge of Rathkeevan Lough, H539.303, 1989 (SAWM & SS); E edge of Shankill Lough, 1990 (SAWM & SS)—re-found 2003 & 2016 (IMcN); Conaghy, H55.27, 2009 (F. Devaney, N. Mills & M. O'Neill); Drumirril, H937.049, 2009 (A. Delaney & K. McNutt); Bunchy Lough, 2011 (IMcN); Killynenagh Lough, 2011 (IMcN); Drum Lough, 2015 (RHN & HN); near Drumgeeny Lough, 2017 (AF); Clonoony Lough, 2017 (AF).



Large stands of *Rumex hydrolapathum* at Feagh Lough, August 2016.

Chapter 8. Species Accounts

Epipactis palustris in flower at Kilroosky Lough, July 2015.

ORCHIDACEAE (CYPRIPEDIACEAE)

Epipactis Zinn

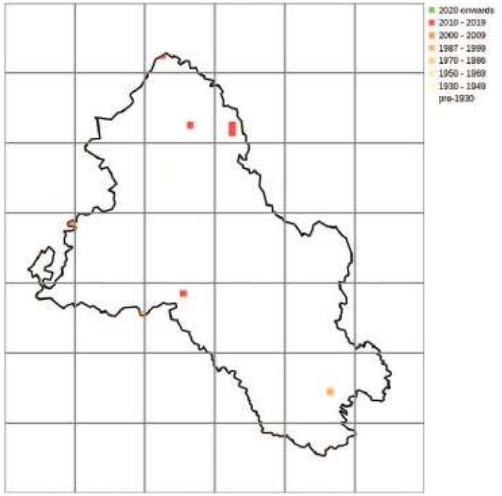
E. palustris (L.) Crantz — Marsh Helleborine

Native. Scarce. Base-rich lough shore fens, flushes and damp flushed riverside pastures.

ALL RECORDS: Killark Loughs (E lough), 1980 (BSBI; Synnott and Breen 1982)—re-found 1990 (JH) & 2012 (IMcN); Crawford's Lough, 1980 (CD & NL; Douglas and Lockhart 1983); Allagesh Lough, 1980 (CD & NL; Douglas and Lockhart 1983; Ní Lamhna 1984; Lockhart 1987; Goodwillie 1992)—this lough has since been drained and so this species is now extinct here; Kilroosky Lough, 1980 (CD & NL; Douglas and Lockhart 1983; Ní Lamhna 1984; Lockhart 1987; Goodwillie 1992)—re-found 2008 (IMcN), 2009 (BSBI; McNeill 2010b) & 2015 (AF)—the presence of the species at this site is mentioned by Faulkner and Thompson (2011); 'flushed sedgy pasture' near Finn River NW of Stone Bridge, H538.295, 1988 (DMcN & JH).

E. helleborine (L.) Crantz (*E. youngiana*, *E. latifolia*) — Broad-leaved Helleborine

Native. Scarce and largely restricted to the N of the county (see map below). Dry to damp deciduous woodlands and shaded roadside verges, on base-rich to slightly acidic soils; more rarely in wet swampy woodland margins and former railway stations. Sometimes associated with old estate woodlands in the county.



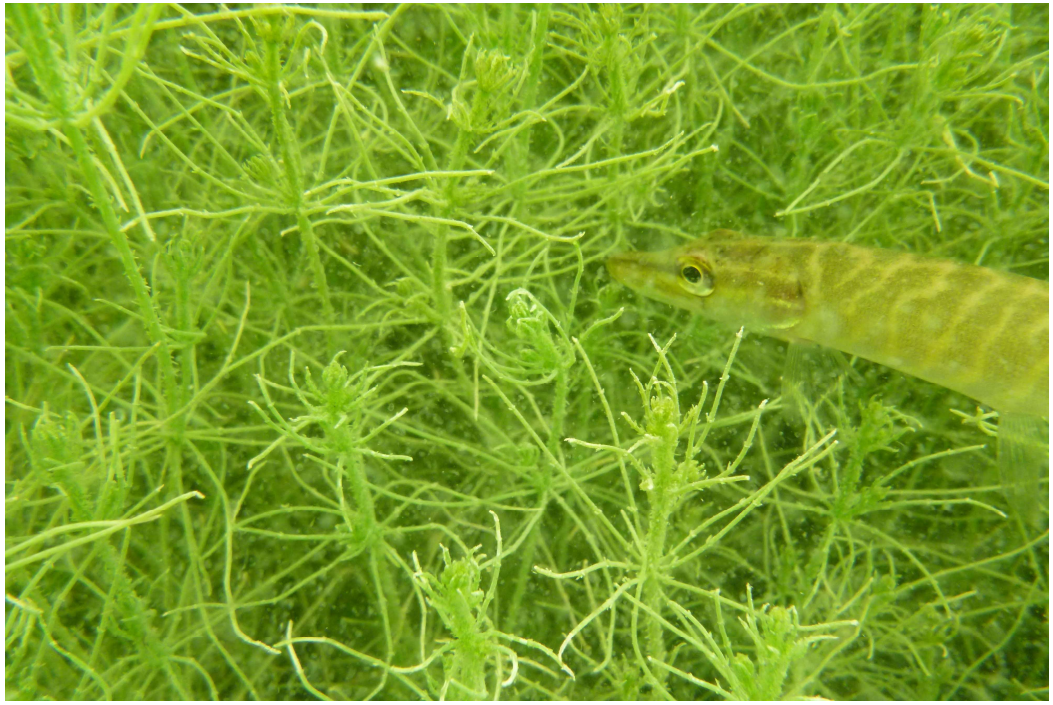
ALL RECORDS: Glaslough, 1900 (CHW; Praeger 1901b)—re-found 2017 in woodland just S of Mountain Water, NW of Glaslough, H721.422 (IMcN); Dartrey, 1900 (AS; Praeger 1901b); Drumreaske (Praeger 1901b); 'in damper than expected conditions on edge of the reeds' by Lough Corcrin, 1994 (JH); woodland by N bank of Dromore River near the New Bridge, H598.151, 1997 (AH & IMcN); Summerhill Lough, 2008 (IMcN)—re-found 2009 (BSBI; McNeill 2010b); E side of Derrygorry Forest, H624.522, 2015 (IMcN); shaded roadside verge at Scarnageeragh, H668.430, 2016 (AF); former Rockcorry railway station, H655.181, 2018 (IMcN)—this determination was made from vegetative material, and so ideally requires confirmation when in flower.

[*E. phyllanthes* G.E. Sm. Green-flowered Helleborine

A colony resembling this species was found at Summerhill Lough in 2009 by BSBI members. As McNeill (2010b) describes, most of the spikes had leaves in two ranks on opposite sides of the stems, and the florets, although mostly unopened, were somewhat pendent and creamy-green in colour, all of which features are consistent with *E. phyllanthes*. The suspected plants were on the Co. Fermanagh side of the lough (Forbes and Northridge 2012); however, on the Co. Monaghan side the plants fitted *E. helleborine* much more convincingly. This record is therefore referable to the latter species, although *E. phyllanthes* may well be found inside the Monaghan border in the future.]

Some Botanical Highlights from County Monaghan

- ***Taraxacum inclinorum***
- ***Carex elongata***
- ***Nitella mucronata***
- ***Stratiotes aloides***
- ***Salix myrsinifolia***
- ***Pyrola rotundifolia***
- ***Anacamptis morio*** **(rare in N of Ireland)**
- ***Scirpus sylvaticus & Drymochloa sylvatica*** **(rare in S of Ireland)**
- ***Elatine hexandra & Carex limosa*** **(rare in E of Ireland)**



Taraxacum inclinorum

- **New species to science in the *Taraxacum* agg., discovered by AF in north-west Co. Monaghan in 2016; officially published in 2017 by Richards & Doogue (2017)**
- An Irish sub-endemic, distantly related to others in Section Celtica
- Predominantly a species of fens and flushes, from dune slacks at sea level in Sligo to upland flushed grasslands and moors in Fermanagh and Monaghan
- Fermanagh may turn out to be its global centre of distribution
- Characteristically lacking any blackish or reddish leaf pigmentation and the leaf lobes are rounded, whilst the exterior involucral bracts are also usually green, and erect

Taraxacum inclinorum

Carex elongata

- **Found in one wet woodland/fen carr site at Dromore Lough in SW Monaghan, this area has been continuously wooded since at least the 1760s (Daniel Hanley 1768 Survey of Dartrey Demesne) – 23 *Carex* species and hybrids known from this area**
- This species is more or less confined in Ireland to the Lough Neagh and Lough Erne basins – west Monaghan is at the very outer reaches of the Upper Lough Erne system (e.g. Finn River)
- This species has low seed set and has quite specific habitat requirements – wet woodland with sparse herb layer and only transient and occasional waterlogging

Nitella mucronata

- **Discovered as new to Ireland from multiple sites in SE Monaghan in 1901 by George R. Bullock-Webster**
- Co-author of *The British Charophyta* (1920-1924)
- 'Fugitive' species, 106 years before it was re-discovered here!

Stratiotes aloides

- **An aquatic species almost restricted to the Lough Erne basin and Lough Derg in Ireland**
- Often considered non-native here; dioecious species but only females found in Ireland and Britain
- Forbes & Northridge (2012) argue it is native in Lough Erne basin of Co. Fermanagh
- 800 year old fossil evidence discovered there
- West Monaghan is at the outer reaches of the Lough Erne basin

Acknowledgements

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