



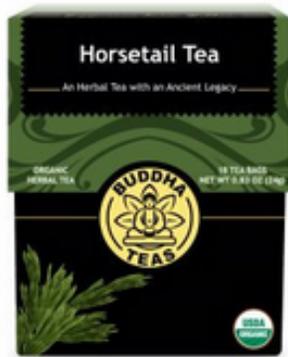
# Horsetails (*Equisetum* species) in Ireland

John Conaghan (County Recorder H16)

Introduction to horsetails (c. 30 mins)

Examination of herbarium specimens (c. 20 mins)

- Very old plant group. Giant horsetail species (*Calamites*) contributed to Carboniferous coal beds (360 to 300 mya).
- c. 20 species worldwide.
- In Ireland 8 species and 4 hybrids.
- Mostly confined to damp, open habitats.
- Life cycle similar to ferns, sporophyte and gametophyte stages present.
- Young shoots can be eaten, but poisonous in large amounts. Extracts used in herbal medicines. Leaves used to clean pots and pans. Cultivars of *Equisetum hyemale* are popular garden plants.



## Organic Horsetail Tea

★★★★★ 25 Review(s) | [Add Your Review](#)

Horsetail tea comes from a unique feathery reed-like plant with a history that goes back to prehistoric times. It is light in flavor and aroma.



### Buy 1 Box

List Price: ~~\$8.99~~

Your Price: **\$6.99**

You Save: \$2.00

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.39¢ per cup.

### Buy 3 Boxes

List Price: ~~\$26.97~~

Your Price: **\$17.82**

You Save: \$9.15 (34%)

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33¢ per cup.

### Buy 6 Boxes

List Price: ~~\$53.94~~

Your Price: **\$33.24**

You Save: \$20.70 (38%)

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31¢ per cup.

Receive an additional 5% off your entire purchase!

Use Coupon: **TODAY** at Checkout.

Availability: In stock

### Horsetail Tea Health Benefits

- ✔ Optimizes Urinary Tract Health
- ✔ Promotes Hair Growth
- ✔ Supports Bone Development
- ✔ 18 Bleach Free Tea Bags / Box



### Steeping Instructions

Fresh water is essential for brewing a great cup of tea.

- 1 Use 1 teabag per cup of boiling water.
- 2 Cover and steep for 3 to 6 minutes
- 3 Remove tea bag and enjoy!

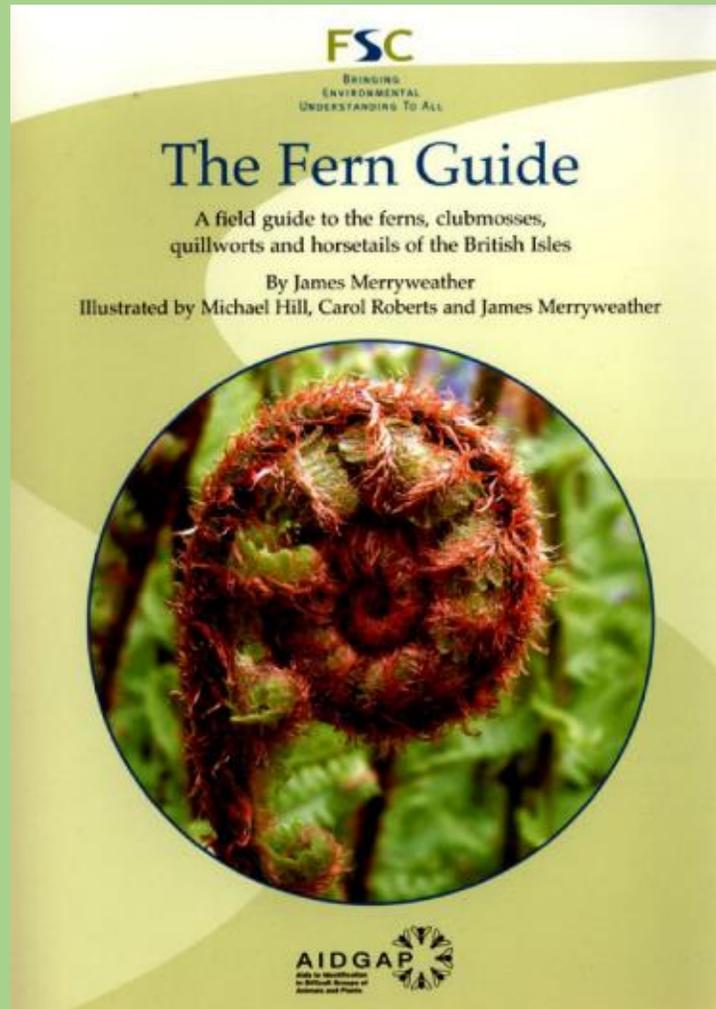
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# Essential reading



## Plant Crib

### EQUISETUM

*Equisetum* is divided into two distinct subgenera (which by some European botanists are accepted at generic rank, with good reason): *Equisetum* and *Hippochaeris* (Milde) Baker. Hybrids are formed between most species but not between species in different subgenera. Normally hybrids are found where the two putative parents *grow* together but *E. x moorei* is often found well beyond the present range of *E. ramosissimum*. Page & Barker (1985) discuss the biology and geography of hybrids in *Equisetum*. Page (1997) describes in detail the morphology of *Equisetum* stem in the British Isles.

Hybrids so far found in the British Isles are given below.

**Subgenus Hippochaeris**

```

graph TD
    E_r[E. variegatum] --> E_h[E. x hochstedeni]
    E_r --> E_hy[E. hyemale]
    E_m[E. ramosissimum] --> E_h
    E_m --> E_mo[E. x moorei]
    
```

**Subgenus Equisetum**

```

graph TD
    E_p[E. perlate] --> E_m1[E. x molleoides]
    E_p --> E_jg[E. x josteggen]
    E_p --> E_r[E. ramosissimum]
    E_a[E. arvense] --> E_m1
    E_a --> E_m2[E. x molle]
    E_m1 --> E_m2
    E_m2 --> E_f[E. flavatile]
    E_m2 --> E_w[E. x wellsi]
    E_w --> E_r
    E_r --> E_m3[E. x moorei]
    E_r --> E_m4[E. x wellsi]
    E_r --> E_m5[E. x roushani]
    E_m5 --> E_t[E. tylosioides]
    E_m5 --> E_m6[E. x wellsi]
    E_m6 --> E_m7[E. x wellsi]
    E_m7 --> E_p[E. pratense]
    
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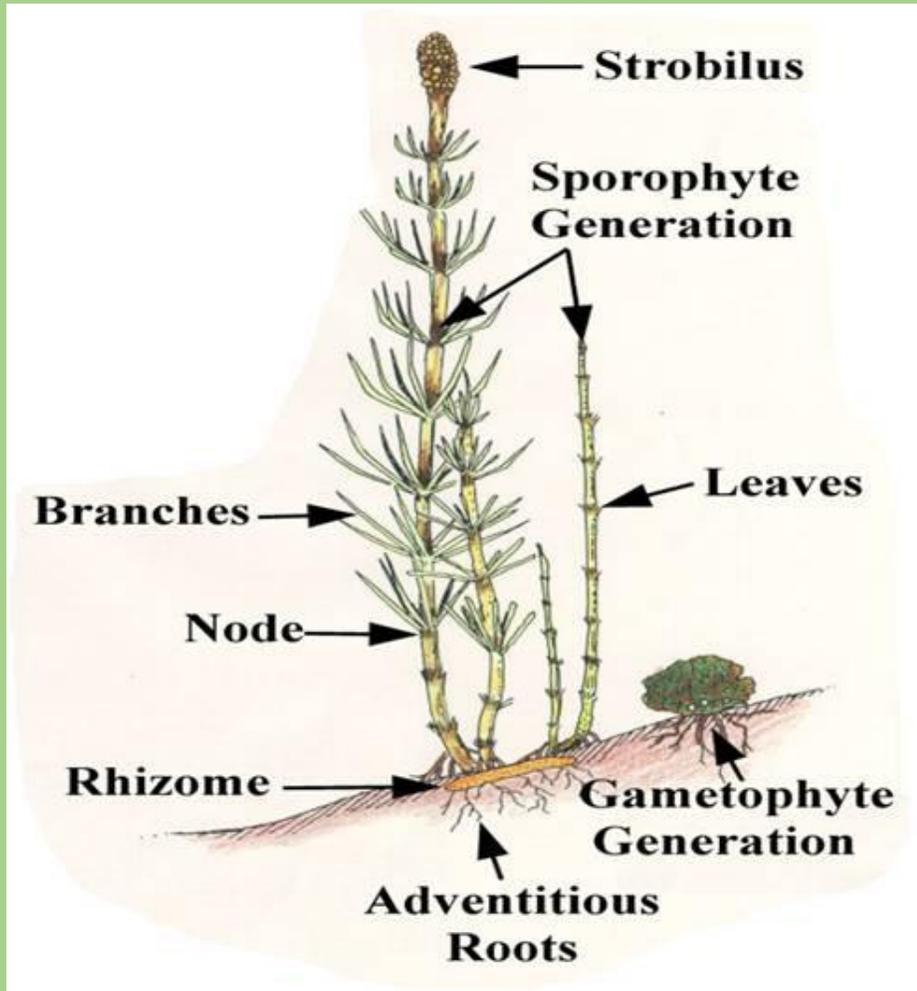
#### 1. *Equisetum hyemale* / *E. ramosissimum* / *E. x moorei*

*E. ramosissimum* is protected under the Wildlife and Countryside Act 1981. It is generally accepted that the Lancashire population of that species was introduced. However, that in Somerset was misidentified for many years (Pitt-Clerk & Jermy 1987) and it is possible that the species may turn up elsewhere. *E. x moorei*, the putative hybrid between *E. ramosissimum* and *E. hyemale*, is spasmodic in its appearance throughout Europe and is recorded so far only from V.C. HD0. Any stand of an *Equisetum* that might pass as *E. hyemale* but which has no or few cones should be looked at more closely.

T.S. of stem innodes: (a) *Equisetum hyemale*, (b) *E. x moorei*, (c) *E. ramosissimum*.

Botanical Society of the British Isles in association with National Museum & Galleries of Wales  
Plant Crib edited T. C. G. Rick & A. C. Jermy. Produced by M. D. B. Kich.

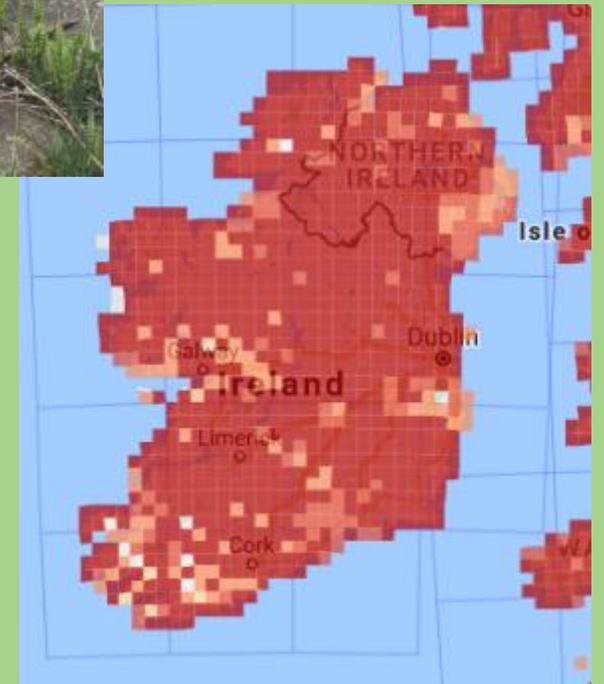
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Mare's tail – *Hippurus vulgaris*

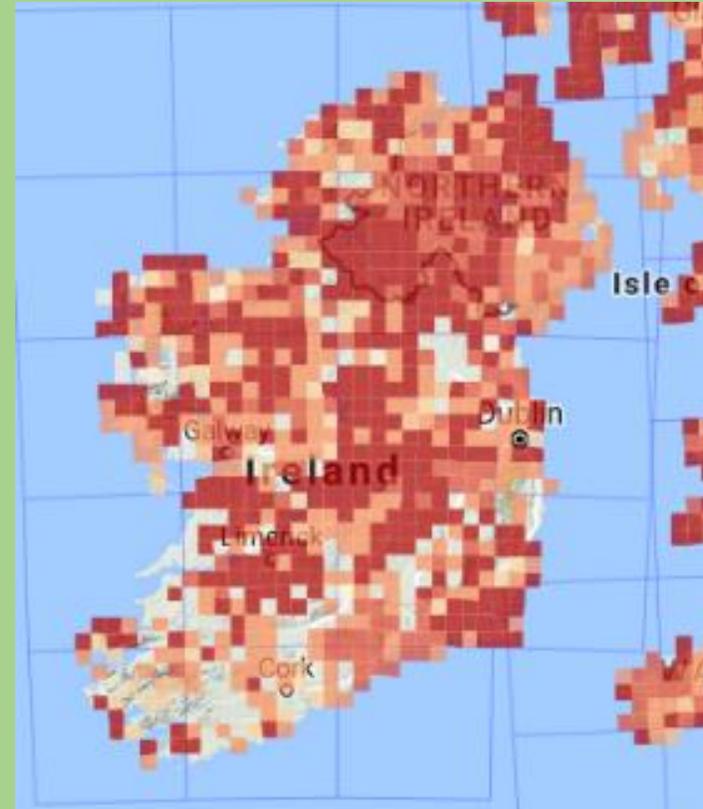
## *Equisetum arvense* (Field horsetail)

- Most common horsetail species
- Spreads via extensive rhizomes, untidy appearance.
- Roadsides and disturbed areas.
- Very common and widespread weed species.



## *Equisetum palustre* (Marsh horsetail)

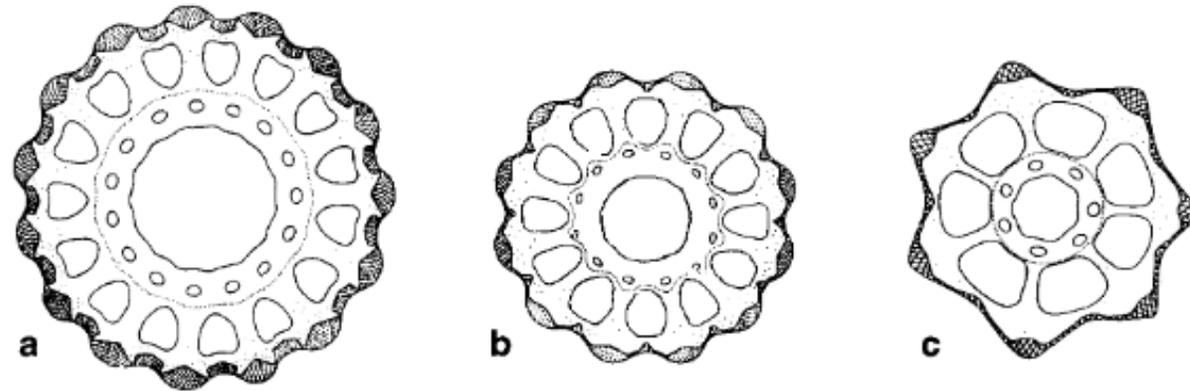
- Resembles a tidy version of *E. arvense*
- Marshes, fens and wet ditches.
- Common species of wet areas, widespread distribution.
- Possible confusion with *E. arvense*.



## Most useful differences between *Equisetum arvense* and *E. palustre*

- *E. arvense* – stem sheaths with 6 to 18 teeth. Teeth entirely back.
- *E. palustre* – stem sheaths with 4 to 9 teeth. Black with white, membranous margins.

# Stem cross-sections of *E. arvense* and *E. palustre* from Plant Crib.



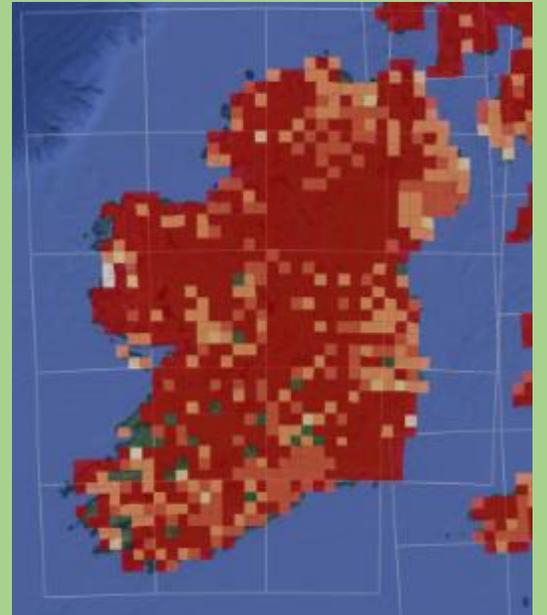
T.S. of stem internodes: (a) *Equisetum arvense*, (b) *E. × rothmaleri*, (c) *E. palustre*. (Partly after Page, 1997, with the permission of Cambridge University Press.)

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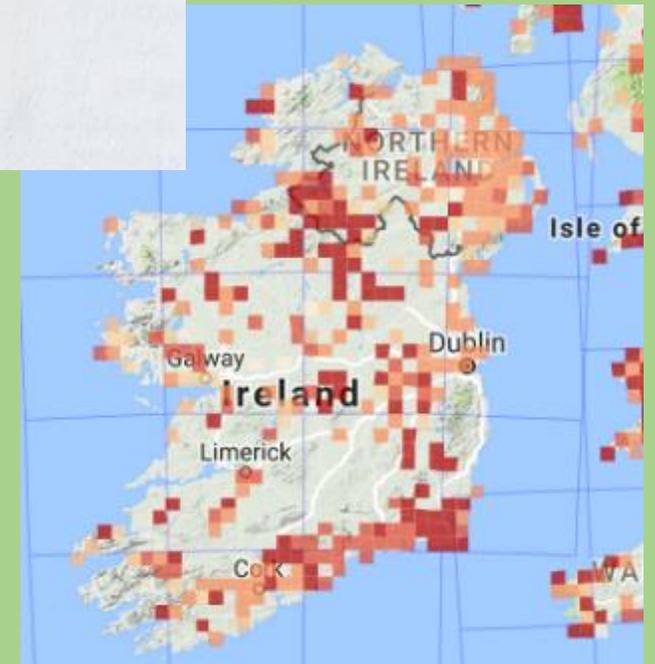
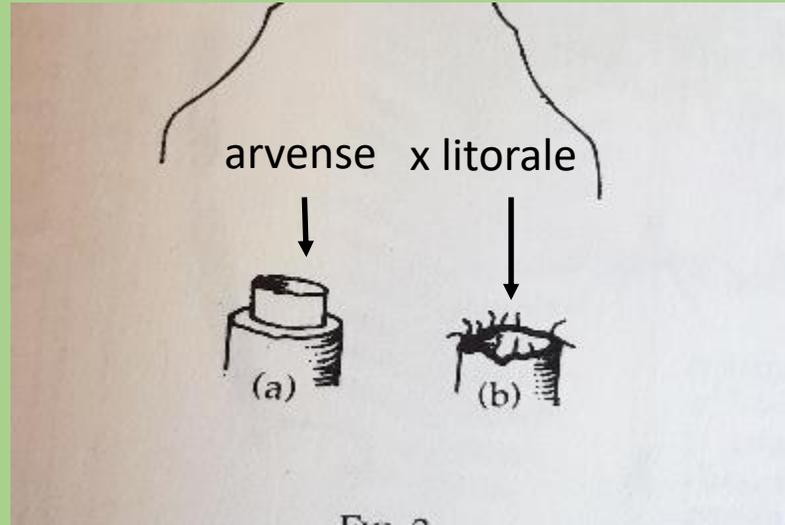
## *Equisetum fluviatile* (Water horsetail)

- Hollow stem, can be easily squashed.
- Short branches.
- Open water along lake margins. Often found in floating rafts of vegetation.
- Wide range of water pH and trophic status
- Widespread distribution.



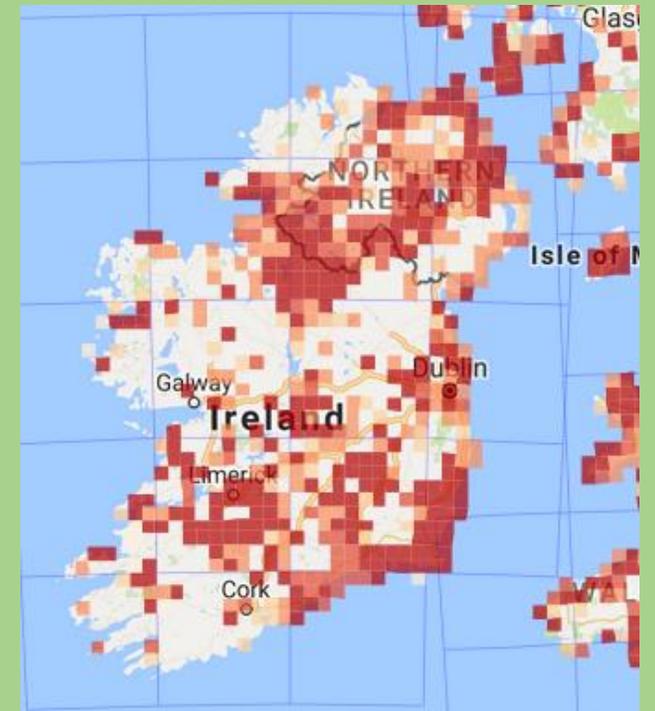
## *Equisetum x litorale* (Shore horsetail)

- Hybrid between *E. fluviatile* and *E. arvense*, looks more like *arvense*.
- When stem is broken no white inner stem cylinder is revealed, only a ragged torn edge.
- Rocky lake shores and ditches.
- Widespread distribution, probably under-recorded.



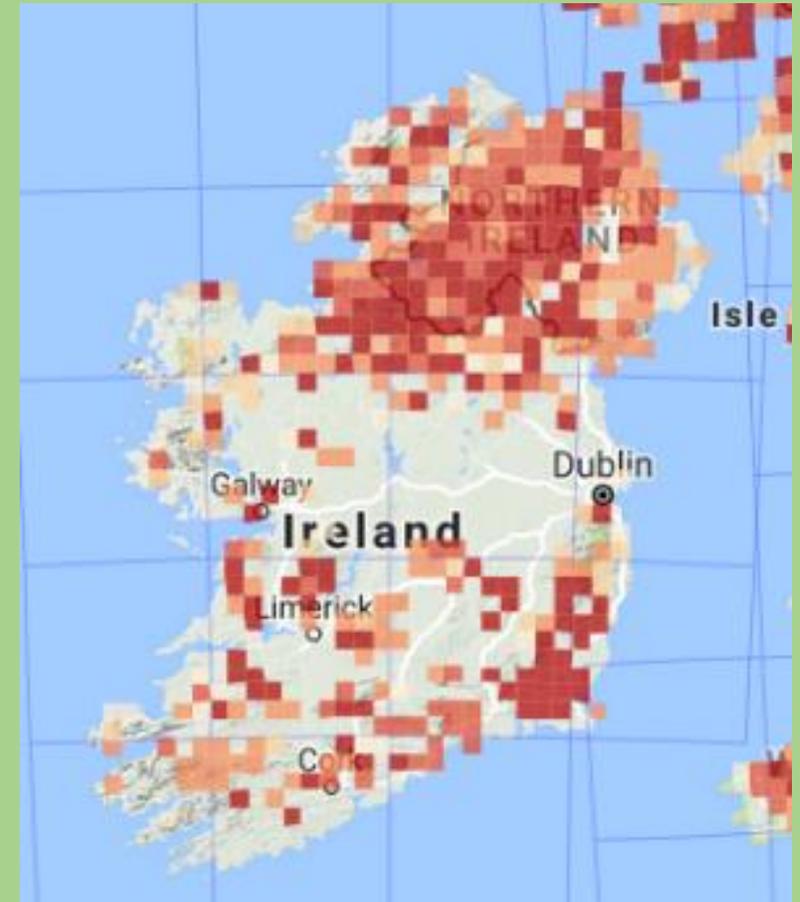
## *Equisetum telmateia* (Great horsetail)

- Very tall and robust – up to 1.5m
- Forms extensive clumps
- Flushes and springs
- Base-rich soils, high pH
- Widespread though locally rare



## *Equisetum sylvaticum* (Wood horsetail)

- Low-growing species of woods and flushes.
- Very feathery appearance
- Branched
- Wide range of soil types
- Widespread though locally rare. Most frequent in the north and south-east.



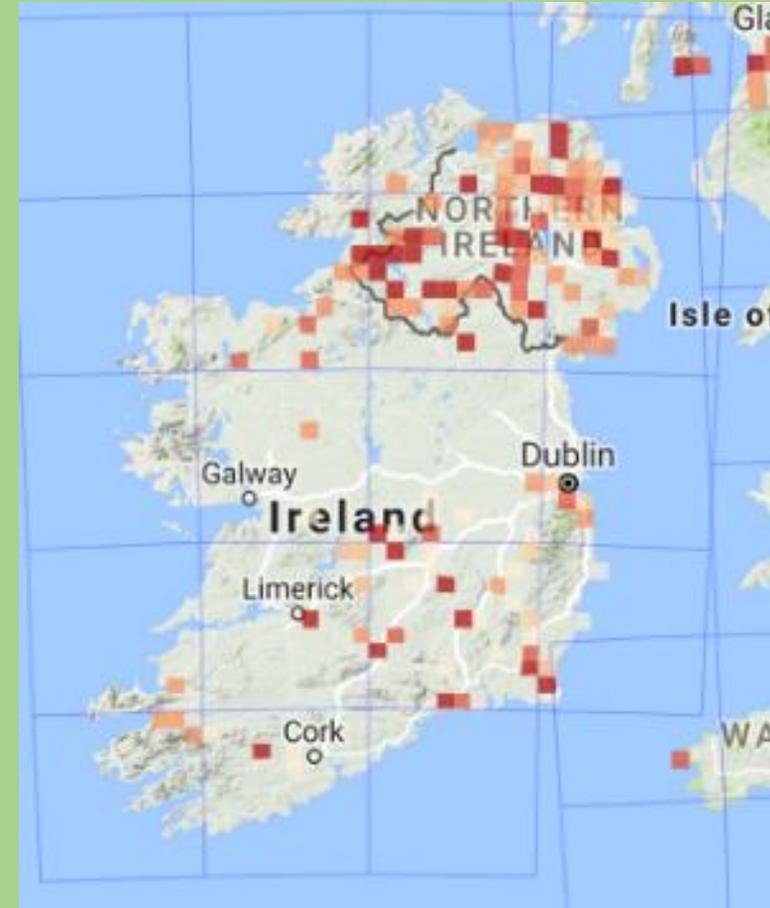
## *Equisetum pratense* (Shady horsetail)

- Similar to *E. sylvaticum* but not as feathery.
- Terminal segment of main stem nodding when fully expanded.
- Branches mostly triangular in cross-section
- Wooded stream banks and upland flushes.
- Very rare. Legally protected in ROI.



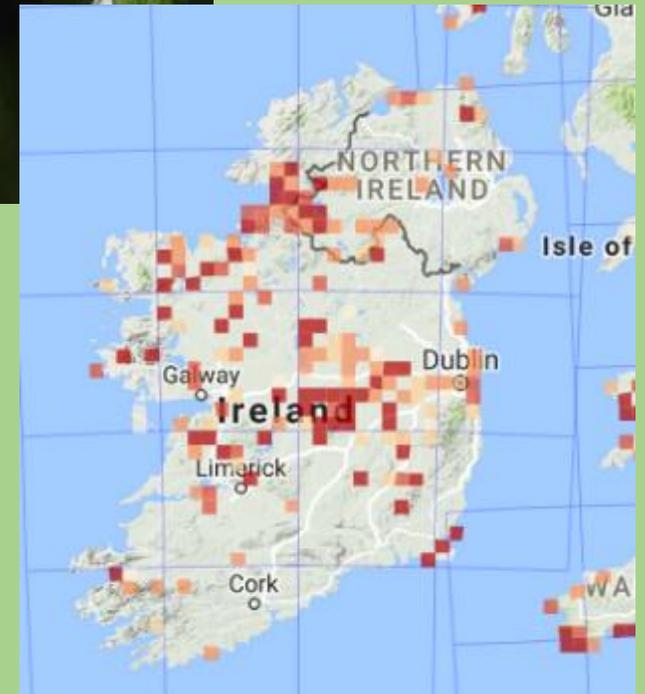
## *Equisetum hyemale* (Dutch rush)

- Tall (50 to 100cm), hollow, reed-like stems.
- Narrow sheath at each joint, whitish with a black band.
- Very rough, used for scouring pots in the past.
- River margins and wet woods
- Quite rare. Most frequent in Ulster.



## *Equisetum variegatum* (Variegated horsetail)

- Low-growing, often creeping. Much less robust than *E. hyemale*.
- Narrow stem sheath. Teeth have conspicuous white margins.
- Generally confined to lake margins, flushes and dune slacks. Base-rich habitats.
- Uncommon species, widely scattered. Most frequent in midlands and north-west.

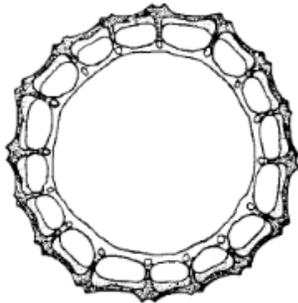
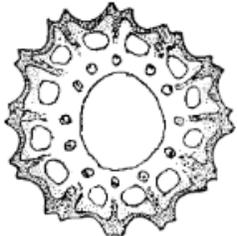
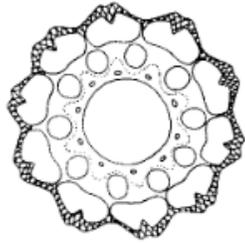


## *Equisetum x trachyodon* (Mackays horsetail)

- Hybrid between *E. hyemale* and *E. variegatum*.
- Like *hyemale* but stems not hollow.
- Stems erect generally <5mm with black leaf sheaths.
- Usually along river banks.
- Uncommon hybrid, widely scattered. Mostly in the northern half.



# Stem cross-sections – from Plant Crib

	<i>Equisetum hyemale</i> L.	<i>E. × trachyodon</i> A. Braun	<i>E. variegatum</i> Schleich. ex F. Weber & D. Mohr.
Cone	Not apiculate but sharply pointed, 7-15 mm long, partly concealed by teeth of uppermost sheath	Apiculate at apex, 4-5 mm long, usually remaining half within the uppermost sheath	Apiculate at apex, 5-7 mm long
Stem	Deep green, erect, unbranched, less than 12 mm wide, with 10-30 ridges; stem feels soft, hollow $\frac{2}{3}$ – $\frac{3}{4}$ diameter of stem; winter-green. 	Deep green; erect or becoming procumbent, sometimes branched on previous year's stems and then very much like <i>E. variegatum</i> , 8-13 acutely bi-angled ridges, hollow $\frac{1}{2}$ diameter of stem; winter-green 	Deep to mid-green, usually prostrate or ascending, occasionally erect, with 6-8 bi-angular ridges, hollow c. $\frac{1}{3}$ diameter of stem; winter-green 

## *Equisetum x moorei* (Moore's horsetail)

- Hybrid between *E. hyemale* and *E. ramosissimum*.
- Like *E. hyemale* but less robust and not usually wintergreen.
- Sand dunes and clay banks along the sea.
- Rare and legally protected. Confined to coastal parts of Wicklow and Wexford.

