

Field separation of deergrasses *Trichophorum* - side 1

Although externally similar, the two species are readily separable, and very distinct on internal morphology. They are good species!

The two species can be reliably identified in the **field**, most easily when with ripe nuts. [If in doubt gather vouchers (with stem-bases), especially if the plant is thought to be *T. cespitosum* s.s. and in a new area.]

Examination of stem cross-sections should always be the final arbiter - see website (URL overleaf).

Problematically, the widespread and often abundant **hybrid** bridges the gap between the two, and at each end of the spectrum of its variation, some samples may be less clearly identifiable. It frequently outnumbers the parents. **Remember:** it is completely sterile, so it never ripens nuts!

- ⇒ **A: is your plant carrying ripe nuts?** Then it is one of the **species** - see comparison below.
- ⇒ **B: has the plant got 'bare tops' and no ripe fruits (July to September)?** Either the **hybrid** or aborted plants of either species - see side 2.

⇒ **A: Separation of RIPE plants (i.e. the species) in the field**

Common Deergrass *T. germanicum*

- **typically larger in all its parts** but can mimic *T. cespitosum* if dwarfed
- **tussocks** often robust, tall, dense. (But can be short, and diffuse like *cespitosum*.)
- **stems** thicker - often up to **1 mm** (but beware: can be much less)
- **heads** usually with more nuts (often more than 4, but can be only 1-2)
- topmost **leaf-sheath opening** strongly oblique, and therefore long, longer axis **2 mm**, or more, (but measure at least four)
- ripe **nuts** brown, and often with a grey bloom
- in wet heath and acidic peat communities of various kinds; usually on thinner peats or peaty mineral soils; even flushed acid rock ledges
- **proliferous** plants quite frequent

Northern Deergrass *T. cespitosum*

- always **strikingly slender, insubstantial**
- **tussocks** less tall and less dense; can be diffuse with scattered stems, and then inconspicuous
- **stems** thinner - *ca.* **0.45-0.70 mm**; often flexuous, '**wispy**'
- **ripe heads TINY, very** inconspicuous with **few** nuts (mostly 1-4)
- topmost **leaf-sheath opening** transverse, or to *ca.* 45°, and longer axis *ca.* **1 mm** across (but measure at least four); can look almost circular
- ripe **nuts** dark brown (look blackish in the field) and usually shiny
- two very different and distinct habitats: i) ± **mineral-rich** seepage communities; ii) in runnels and sphagnum lawns on **deep peat mires**
- **rarely** (ever?) proliferous

⇒ **Hybrid Deergrass, *T. ×foersteri***

**** The hybrid is completely sterile - no nuts! ****

In the period July to September, when plants of either species should have ripening or ripe nuts, populations of the hybrid are obvious in having '**bare tops**' - the aborted fruits and glumes having been shed. White bristles, filaments, and styles may remain. (Proliferous plants can be frequent in some populations both of this and *T. germanicum*.)

However, plants of either species **often fail to ripen fruits**. Even whole populations can abort. If this is suspected, then use sheath-opening angle and length, stem-width, or (better) resort to stem cross-

Hybrid Deergrass

T. ×foersteri

- **tussocks** vary much in size and vigour, depending upon habitat: can be robust, tall, dense when with *T. germanicum*; can be small and weak in calcareous habitats with *T. cespitosum s.s.*
- **heads** soon abort (during July) and drop fruits and glumes leaving '**bare tops**' (note aborted spikelets of the *species* often retain glumes longer)
- **nuts** never ripen - whitish or greenish and never filled out, although can elongate before being shed
- **best character in the field:** topmost **leaf-sheath opening** oblique, between the parents, typically **ca. 1.4-1.6** mm across (but measure at least four)
- **stem-widths** vary: typically **ca. 0.65-0.85** mm (*cespitosum* often narrower; *germanicum* often wider)
- in **acidic** peat communities of various kinds, usually wetter than the *germanicum* parent, and also accompanies the *cespitosum* parent in both its mineral-seepage and its peat-mire habitats; can **greatly outnumber** both
- **proliferous** plants quite frequent (as in *germanicum* but not *cespitosum*)

Stem cross-section is diagnostic in almost all cases.

Please also visit

<http://www.edencroft2.co.uk>

for much more information. Please also comment with your experiences.

Jeremy Roberts, November 2017