

## Nature Notes 20: The Battle of Dead Man's Hill

At the east end of Uppgate Common, south of the fen, there is a rise in the ground known as "Dead Man's Hill". Noting that in Norfolk anything 2m higher than "a valley" is "a hill" does anyone know the origin of this name? I wondered if I had lost a student on a field trip who then died of hyperthermia there 😊 but perhaps more likely, I wonder if it might be where the local gallows used to stand?

Although many do not realise it, there is currently a battle raging on Dead Man's Hill. The heroine is called **Heather** (otherwise known as ling or Calluna vulgare). In late summer in the 1980s - 90s Dead Man's Hill was ablaze with the purple flowers of heather but since then this "maiden in distress" has been fighting a losing battle against an array of powerful foes.



*Heather (123rt.com)*



*Purple moor grass (Davista wordpress)*

At the bottom of the "hillside", where the ground is wetter, tussocks of purple moor grass grow to over a metre high. Unless grazed, this can shade out the heather. There used to be a clear line part way up the hillside. Above it on drier ground, the heather won. Downhill the **purple moor grass** completely outcompeted the heather. The battle lines were not static. Aerial nitrogen pollution (both from industrial sources in the west and from poultry houses adjacent to the common) has gradually accumulated in the top soil. This has tipped the competitive balance in favour of the purple moor grass.

**Bring on the cavalry:** in the form of three **Dartmoor ponies** which prefer to eat grass rather than heather and so push the competitive balance back in favour of the heather. However, there are two more enemies at the gate. No sooner has our heroine beaten off attacks on one front, than that arch-enemy of biodiversity, **bracken**, has sneaked in on another front. Bracken grows up to 3 metres, even higher than purple moor grass and comes bearing a whole armoury of highly toxic "anti-cavalry" chemical defences, making eating it a potentially suicidal mission for any herbivore foolish enough to try.



*The cavalry: three Dartmoor ponies (Pressrelease.resources.com)*

Combatting bracken needs a different sort of cavalry: namely the **conservation volunteers**. If the bracken fronds are cut by hand 4-5 times a year, the sward gradually thins and eventually dies out. That takes more person power than we currently have available. A final resort could be to apply for a special licence to spray the bracken with "Azulux", a **bracken-specific herbicide**, which can kill 90-95% of the fronds.

Even then the war will not be over. Always lurking at low densities is a specialist heather herbivore: the **heather beetle**. Outbreaks of this can be devastating, defoliating stands of heather, killing them completely. To persist heather reinforcements are needed in the form of **heather seeds** lying dormant in the soil. As one patch of the plants die out, new seedlings colonise the bare ground, grow and live on to fight another day but again the equilibrium is not stable. The odds in favour of the beetle increase markedly during periods of hot dry weather.



*Heather beetle (YouTube)*

An important prediction of **global climate change models** is that in south and east England rainfall events in summer are becoming more intense but less frequent, resulting in more prolonged hot dry spells, i.e. in droughts increasing. "Hooray" say the heather beetles, "Help" says the heather 😊. A tricky problem for those managing the common.

**By Mark Hassall**