Peatland Biodiversity

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Value of Peatland Biodiversity

- **Largest area of semi-natural habitat in UK, much contiguous, but many lowland raised mires isolated**
- **Specialised species adapted to waterlogged, acidic, nutrient-poor conditions**
- **Internationally important bird assemblages**
- **Fixes carbon, accumulates peat**

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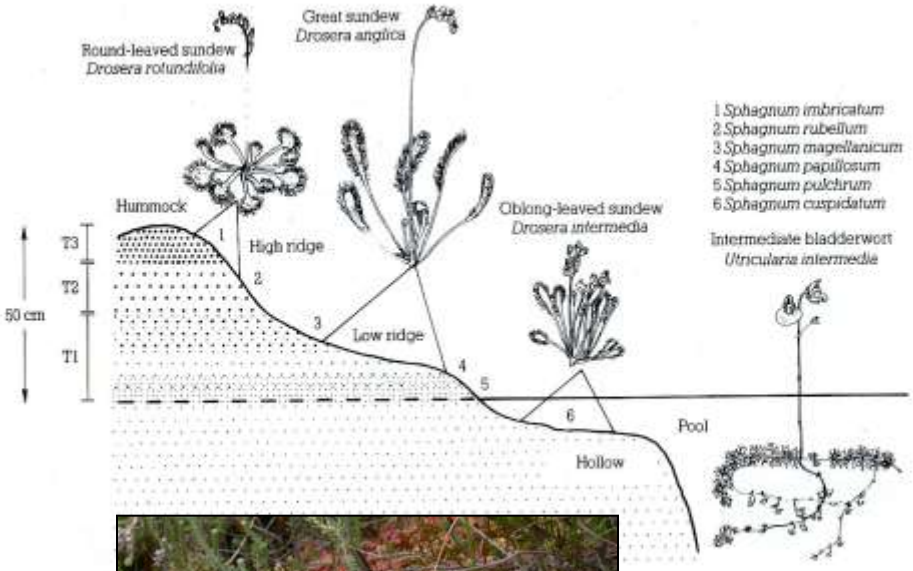
Peatland Biodiversity

Structural diversity important – small and larger scale



Macrotope
(complex mosaic of peatland systems)

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Mesotope
(individual peatland unit)

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Microtope
(small-scale surface pattern)

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Nanotope
(individual structural element - e.g. hummock)

↓

Vegetation
(individual stand of vegetation)

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Biodiversity components

* 16 NVC plant communities, some typical of degraded vegetation

* distinctive bird assemblage, 3 obligate moorland species, high proportion Annex 1 spp, 12 Red listed, 13 Amber listed, 11 UK BAP

* invertebrate species 30 x vertebrates, biomass larger, especially important for craneflies, Odonata, money spiders, ground beetles, although few are BAP spp

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Condition of peatlands

*** 18% of blanket mire in natural-near natural conditions in B. Isles**
*** c. 40% blanket mire modified**
*** c. 16 % eroded**
- loss of plant diversity
- significantly reduced *Sphagnum* cover and species
- drier
- loss of structural diversity

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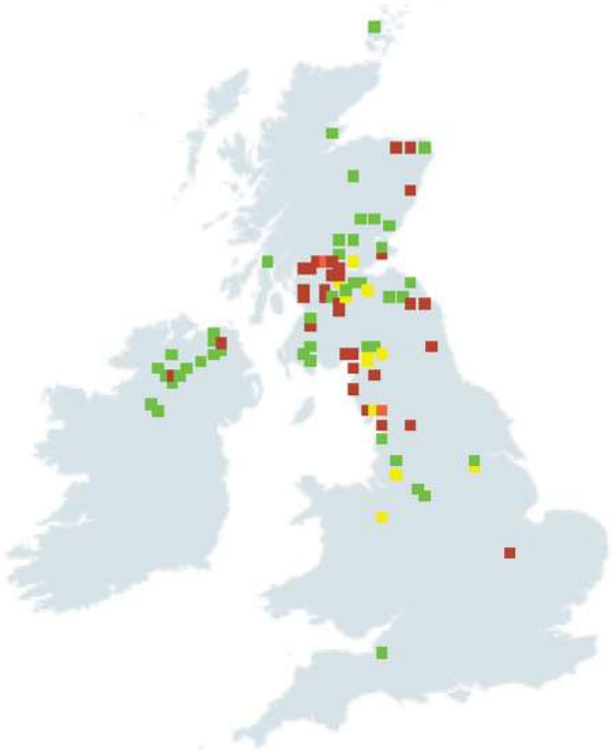
Drivers of change in peatlands

- **Significant modification last 300 years through**

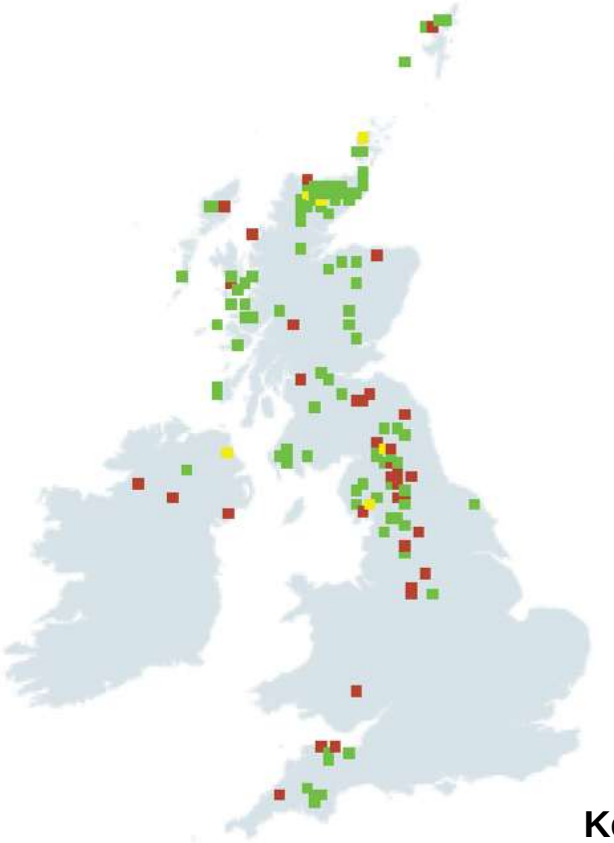
- aerial deposition
- high grazing levels, particularly sheep
- regular burning
- wildfire
- drainage
- afforestation
- peat extraction
- other developments

SSSI Condition Assessment

Lowland raised bog



Condition of SSSI/ASSI features unfavourable-recovering shown as 'favourable'



Blanket bog

Key: Proportion of assessed features on 10km squares that are favourable:

80-100% 50-80% 20-50% 0-20%

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Condition of non SSSI peatland

-Not collated nationally
- eg Yorks Dales NP - <25% fa
- Peak District similar
- proportion of peatland SSSI low in Scotland (11%)

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Trends in key species

- 14 of Priority species declining (not all just peatland spp)
- Trends in peatland birds difficult to determine

But inadequate data, not separable by habitat

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Good Management Practice

-**Grazing – low level sheep/ deer**

-**Maintain / restore hydrological integrity (peat pipes)**

-**Control scrub**

-**No burning (wildfires?)**

-**Restoration for multiple functions**

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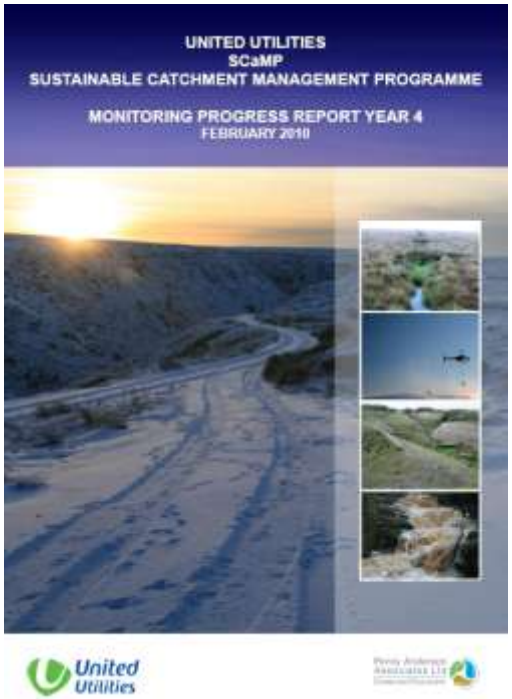
Barriers to good practice

- Good information/guidance for land managers
- ID of issues/monitoring on site
- Feedback of findings and experience
- Good ID skills for species and what they mean
- Cost – AE schemes – payment needed before grant provided
- Conflicts (perceived or not) between interests



Climate change implications

- drying, cracking, erosion, increased DOC production

- plants species likely to change (and have done in the past)

- increased resilience needed dependent on hydrological integrity for functioning peat bog

-asynchronous shifts in seasonality possible - potential effect on some birds eg golden plover

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