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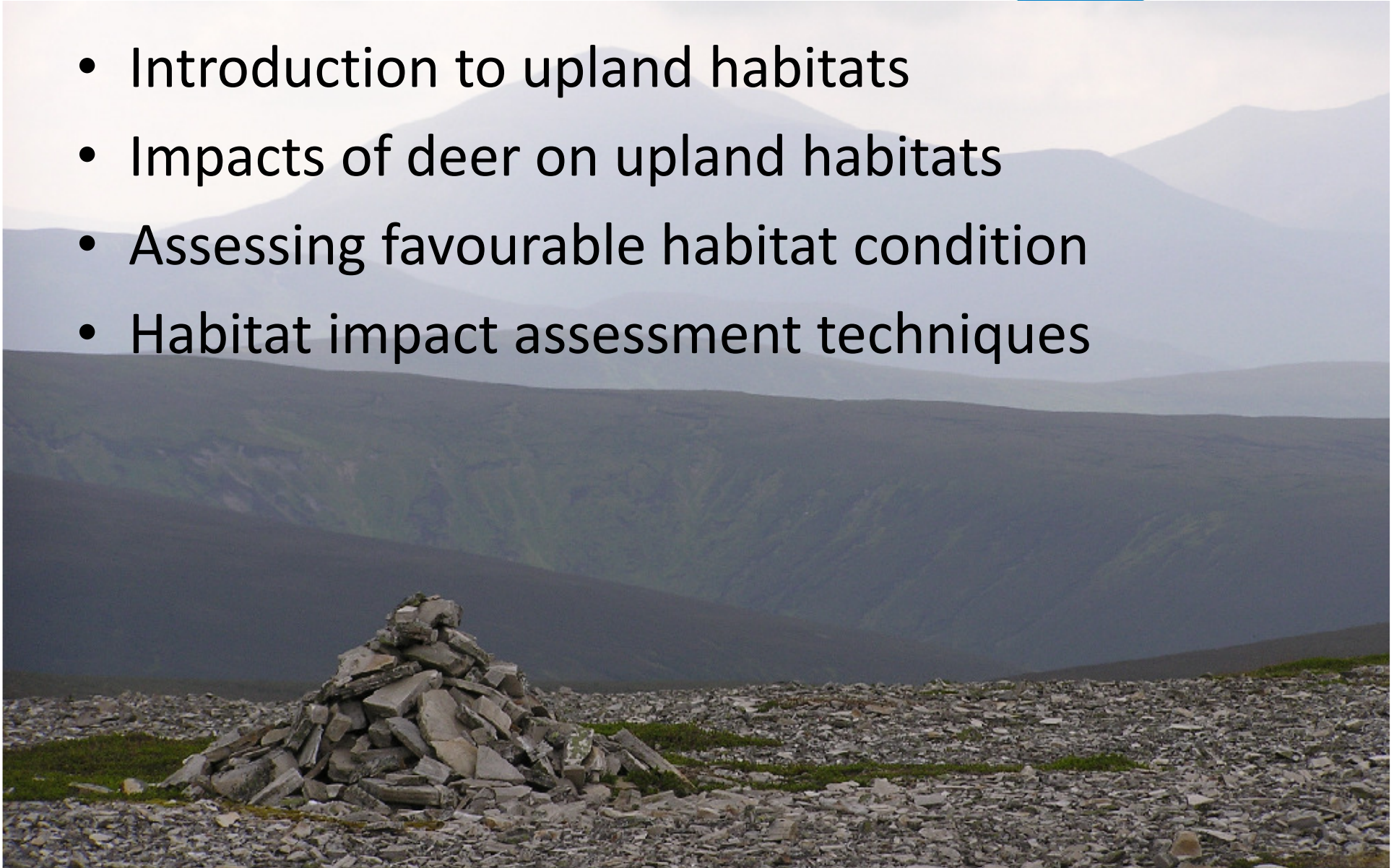
# Impacts of Deer on Upland Habitats

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# Aims

- Introduction to upland habitats
- Impacts of deer on upland habitats
- Assessing favourable habitat condition
- Habitat impact assessment techniques



# Upland / Montane habitats



- ‘Upland’
  - Above the limit of agricultural enclosure
  - Over 300m above sea level
  - ‘Naturally’ wooded, but now also home to a wide range of semi-natural open habitats
- ‘Montane’ habitats
  - Above the natural tree-line
  - Above c.600m above sea level (lower in NW)
  - Most natural and undisturbed habitats in UK

# Importance of Upland and Montane habitats



- Contribute to high value landscapes
- Support scarce plant and animal species
- Provide grazing resource
  - heather provides winter forage for browsers
- Ecosystem Services
  - e.g. water catchment protection (reducing water run-off speed during flood events, reducing impacts of acid deposition)



# Deer impact



- An impact on a habitat is not necessarily 'damage' – may be beneficial
- 'Damage' thresholds will vary depending on habitat type and management aims
- Common standards are required to objectively assess damage
- Damage is likely to be taken more seriously in sites of high conservation value
  - Section 7 control agreements

# Deer impacts / damage



- Grazing (can reduce height and structural diversity of vegetation)
- Browsing
  - Reduces woodland regeneration(+/- effect)
  - Can reduce heather cover (- effect for winter browsers)
- Trampling / erosion (can destroy vegetation/habitat)



# Upland Habitats



‘Moorland’ supports different habitats depending on:

- Soil type (deep peat / shallow peat / mineral)
- Drainage (free draining or waterlogged)
- Water supply
  - Rainfall only (nutrient poor)
  - Groundwater or surface water fed (more nutrients)



# Dwarf Shrub Heath - Dry



**Found on freely draining soils with little or no peat**

**>25% cover of heather / blueberry / cowberry  
(usually much higher cover)**



# Dwarf Shrub Heath - Wet



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**Found on poorly drained soils with up to  
50cm peat**

**>25% cover of heather / cross-leaved heath**

**Deer-grass, Molinia and Bog Asphodel**



# Dwarf Shrub Heath



**Low grazing pressure: rank heather,  
loss of plant diversity**



# Dwarf Shrub Heath



**Low grazing pressure: tree and shrub  
regeneration (if seed present)**



# Dwarf Shrub Heath





# Blanket Bog



**Found on gently-sloping deep peat (> 0.5 m)**

**Nutrient poor (rainfall fed)**

**Sphagnum moss often abundant**

**Heather and Harestail Cotton grass usually dominant**



# Blanket Bog



- Particularly vulnerable to overgrazing and erosion from trampling



# Blanket Bog



Particularly vulnerable to overgrazing and erosion from trampling



# Other habitats



## Flushes and springs





# Other habitats

## Native Woodland





# Grazing preferences of large herbivores



Species	Biting Method	Selectivity	Minimum sward height grazed	Preferences
Sheep	Biting / Shearing	Highly selective	3 cm	Generally avoid Mat grass and rushes
Red Deer	Biting / Shearing	Selective	4 cm	More likely to eat heather and trees than are sheep
Cattle	Pulling / biting / shearing	Slightly selective	> 6cm	More likely to eat mat-grass and purple moor grass than sheep or deer



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Scottish Government  
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# Guideline Deer Densities and upland habitats (approximate)



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<b>Habitat</b>	<b>Deer/km<sup>2</sup></b>
Dwarf-Shrub Heath (Dry)	10-20
Dwarf-Shrub Heath (Wet)	5-15
Blanket Bog	<2-4
Woodland Regeneration	<2-4