

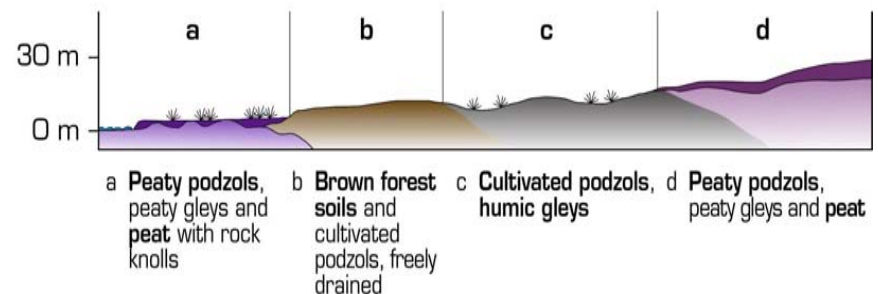
Soil Catenas

In Scotland, in general, podzols are found in the north east and brown earths in the east and south east. However, there can be huge variations in soil types across a small area.

This can be seen through a section diagram across an altitude range - called a 'catena'.

In a catena, the sequence of soil profiles which develop down the slope relate to the relief and altitude of the land.

Changing slope alters drainage, and the leaching and gleying processes, whilst altitude strongly influences the climatic effects in soil formation.





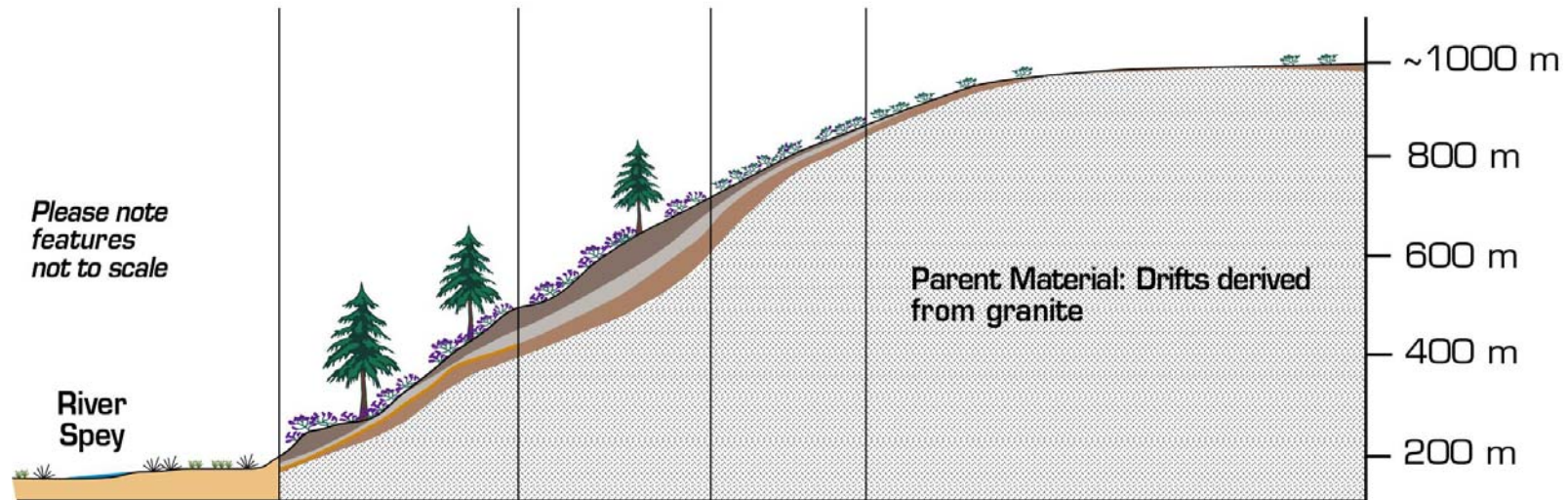
Soil Catenas

Soils form a continuum in the landscape; catenas demonstrate that although soils are classified into type (i.e. brown earth, podzol, gley, peat etc), they exist as a continuum.

- On the flat summits of the Southern uplands and Ayrshire, the blanket peat can reach a depth of over 4 metres due to the cool, wet conditions and gently sloping topography, which leads to organic matter accumulation and very poor drainage
- Below the summit peat in the Southern uplands, podzols are formed on the increasing slopes
- Where there are iron pans formed, or where slopes are less steep, water is prevented from penetrating below and gleying conditions can persist above the iron pan
- On the steepest slopes organic horizons tend not to develop, and brown earths with mineral surface horizons are found
- Alluvial soils are developed on the recent alluvium deposits adjacent to rivers

Catena – The Cairngorms

THE CAIRNGORMS



Alluvial soils
Improved pasture
and wetland

**Humus-iron
podzols**
Heather
moorland and
woodland
250-450m

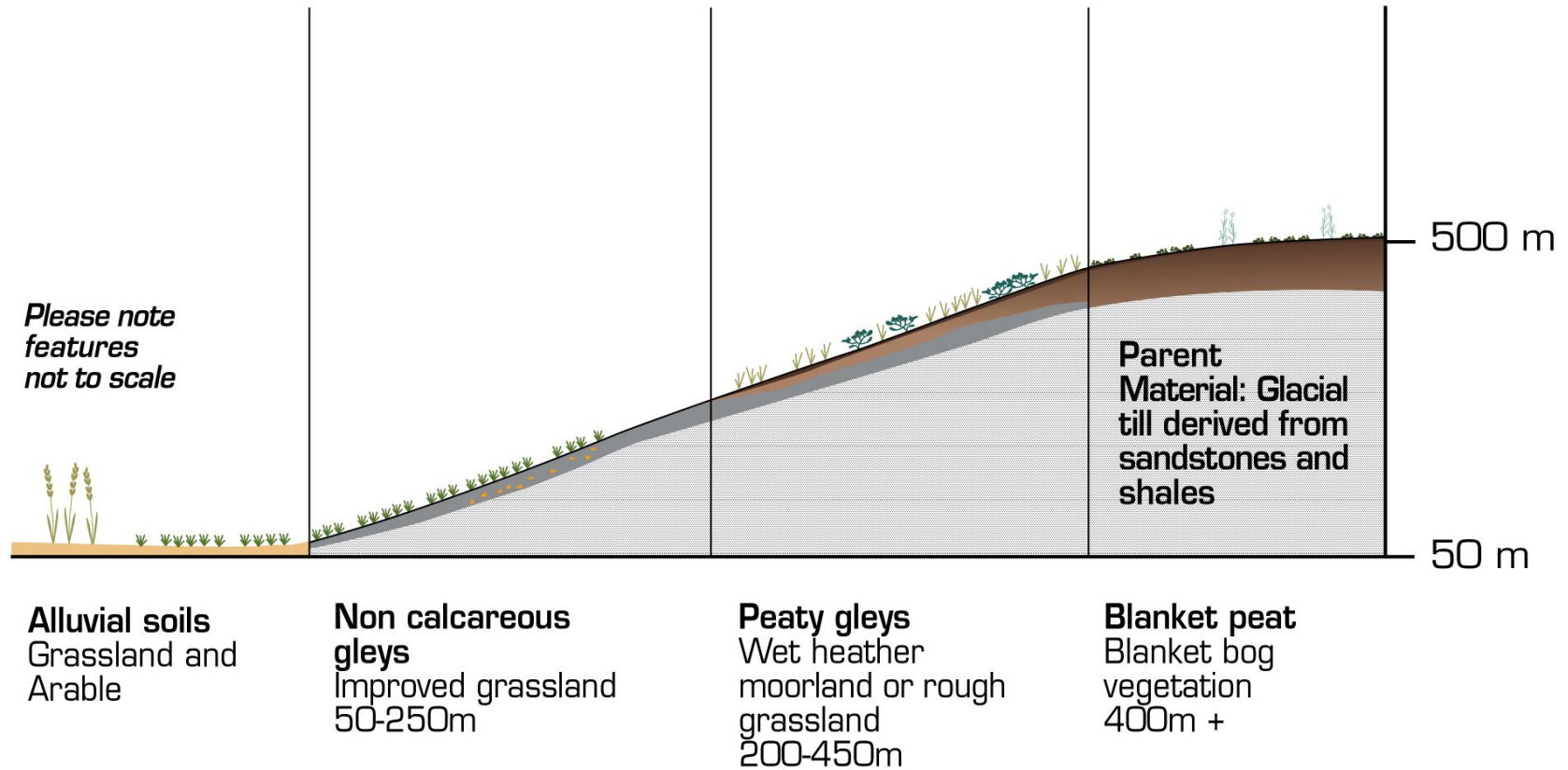
**Peaty
podzols**
Heather
moorland
and
woodland
350-600m

**Subalpine
podzols**
Wind
clipped
heather
550-850m

Alpine podzols and lithosols
Bare ground and alpine heaths
850m +

Catena – Ayrshire

AYRSHIRE



Catena – Southern Uplands

SOUTHERN UPLANDS

