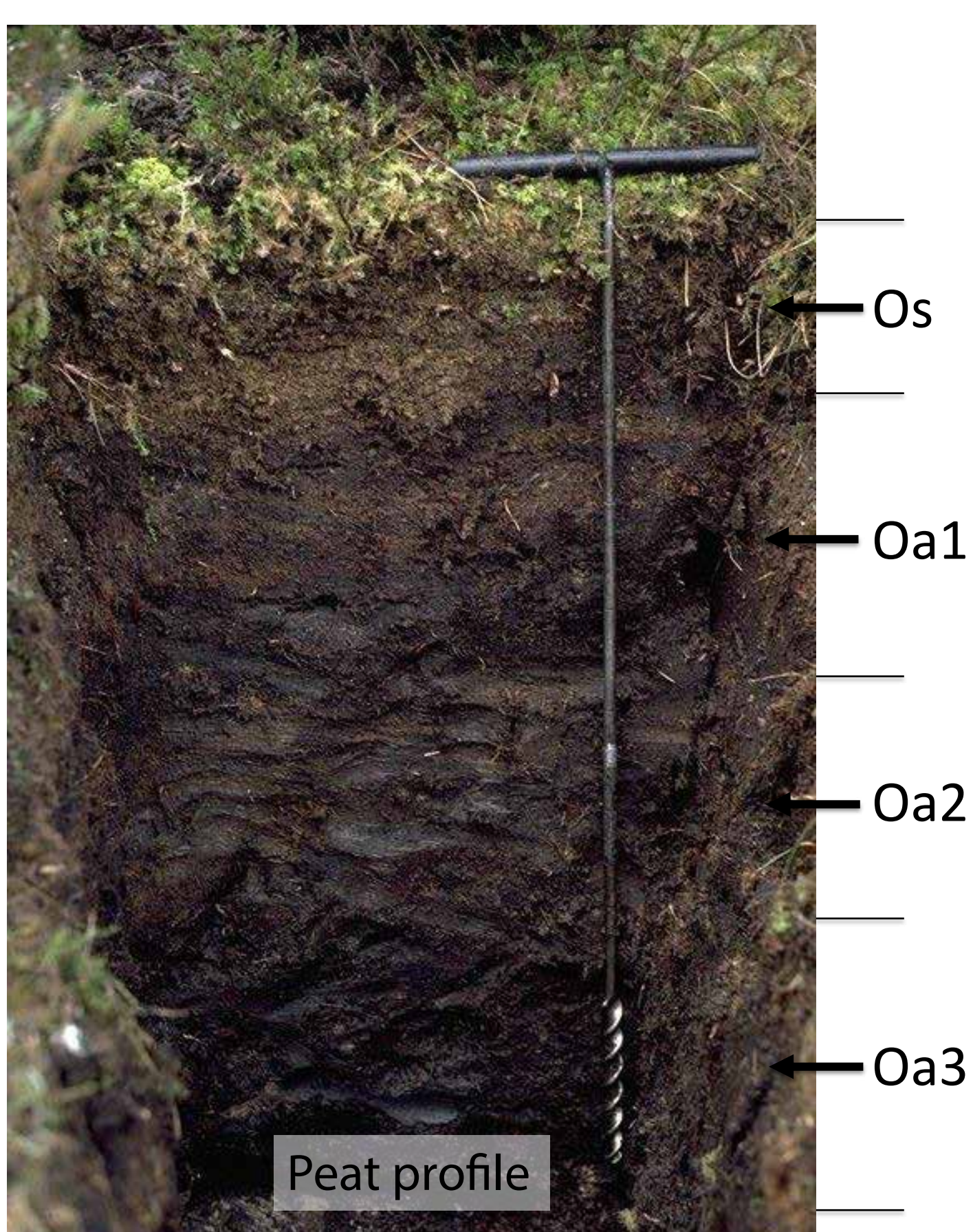


# 6. Peats

**General characteristics:** Peat soils cover nearly a quarter of Scotland. They are organic soils which form under waterlogged conditions. As organic matter (O) from dead plants decomposes it loses its fibrous nature (Of) and becomes semi-fibrous (Os) or amorphous (Oa). Under these conditions drainage is very much impeded, even on sloping ground. Once the organic matter is permanently inundated, oxygen is excluded, decomposition decreases to almost zero and the organic matter (peat) begins to accumulate. This peat is able to form a 'blanket' across undulating land and hills and is thus called blanket peat or blanket bog. Less common is basin peat or raised bog; this forms where water already accumulates in valleys, hollows and basins. Often raised bogs form on top of ancient fens. What distinguishes bogs from fens is that they receive the majority of their water from rainfall (i.e. are ombrotrophic) and not from ground water. Peat is operationally defined as an organic horizon at least 50 cm thick over the underlying mineral soil or rock. In Scotland the mean thickness is 2m but some sites can be as thick as 12m.

## SOIL FORMING FACTORS

PARENT MATERIAL	Decayed plant remains
VEGETATION/ORGANISMS	Vegetation is dominated by Common heather, Hare's tail cottongrass, Peat moss (Sphagnum), Deergrass, Cross-leaved heath, Purple moorgrass and Common cottongrass. Decomposition is mainly carried out by fungi in the surface horizons. Due to the acidity, earthworms are absent and their role is taken over by the much smaller Enchytraeid worms. Bacteria that form methane are found in the waterlogged zones.
CLIMATE	Cool, humid conditions where precipitation > evaporation and water accumulates.
TOPOGRAPHY	Peat soils are found anywhere from sea level to mountain plateaus but are generally limited to slopes < 15°.
TIME	Peat bogs have formed over the past 4,000 to 10,000 years old.



**Uses:** Peat soils have low fertility and generally a natural or semi-natural vegetation that only supports low numbers of grazing animals. Attempts to improve productivity by drainage or cultivation usually fail. Some areas are mined for peat, which is then used for horticulture or for domestic fuel. Today peat soils are regarded as a valuable carbon stock and restorative efforts are being made to avoid the carbon losses and poor water quality that result from erosion and over use. In their natural state, they are also important for the unique habitat and biodiversity they carry.