

# Why do the grasslands have no trees?

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# Arid grassland



# Temperate Grassland





# Eastern Highlands Zimbabwe



# Nyika Plateau Malawi



# Madagascar



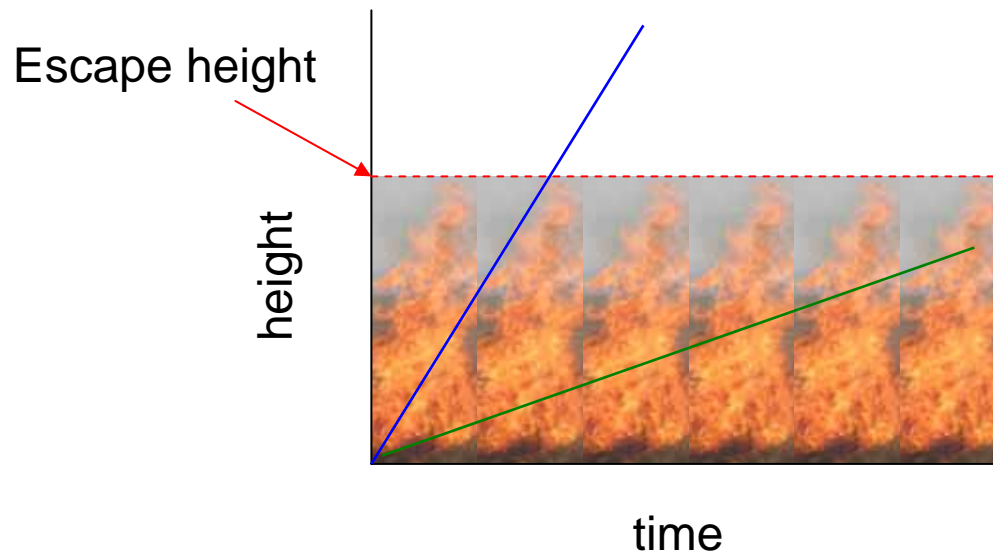
# Tall-grass prairies North America



# Campos South America



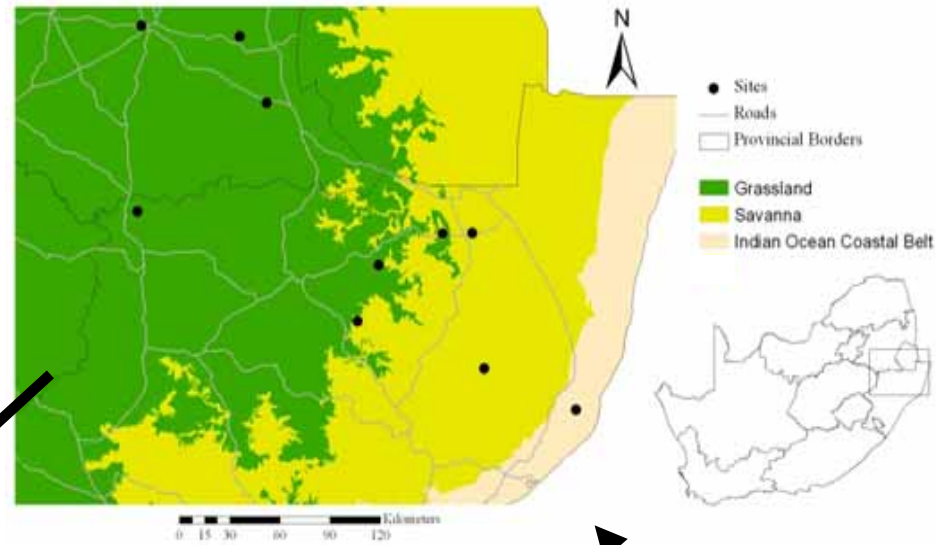
Grasslands & savannas – C<sub>4</sub> grass dominated – fire important



Saplings need to **grow fast** to escape fire in savannas

But grasslands → cold  
→ less nutrients

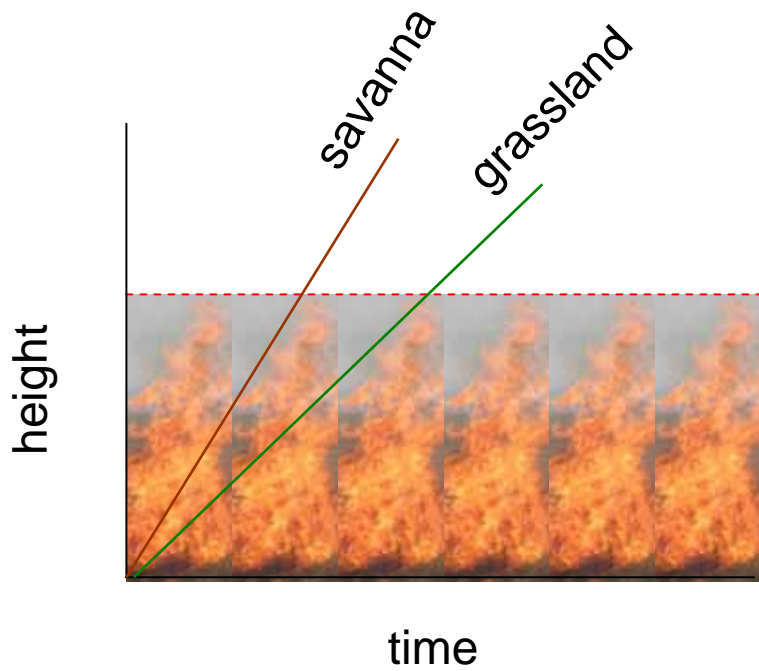
# Grassland Savanna



Soil experiment



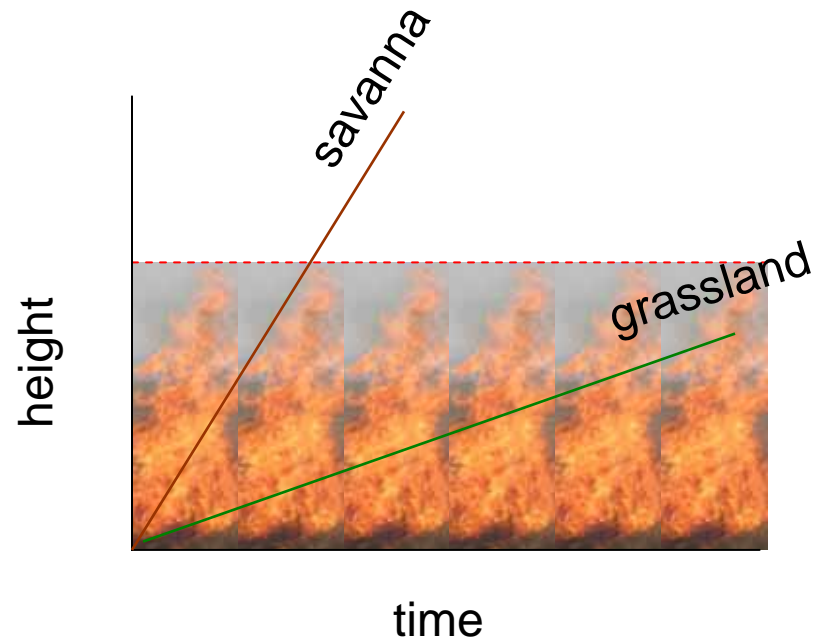
Temperature experiment



Soil experiment



Both grew fast enough to escape



Temperature experiment



Trees in grasslands grew too slowly to escape fire

A landscape photograph showing a vast, green grassy field in the foreground. In the middle ground, there are rolling hills and a small cluster of trees. The background features a range of mountains under a sky with scattered, light-colored clouds. The lighting suggests either early morning or late afternoon, with a warm glow on the horizon.

Temperature + fire  
can explain the lack of trees



# Tall-grass prairies North America



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# Climatic grassland: inverted tree-line New Zealand



# Tall-grass prairies North America

