

# Run forest, run!



## Treeline Dynamics in Response to Climate Change Across Latitudinal Gradients in Norway

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### Background

The alpine treeline is highly sensitive to climate warming. In Norway, rising temperatures have pushed the treeline upward. This effect is thought to be stronger in northern regions due to stronger impacts of climate change in higher latitudes.

### Our aim

We want to investigate if treeline dynamics differs over Norway's latitudinal gradients.

These contrasts help us understand how mountain ecosystems may be affected and predict shifts in the future.

### Methods

Processed observational data from GBIF of registered occurrences of *Betula pubescens* ssp. from 1960 to 2020.

### Results

The data show no clear national trend toward an increase in the tree line of mountain birch in Norway over the past 60 years. The variation between decades appears primarily to be due to uneven and changing data coverage, especially at higher elevations where even small variations can result in large shifts in the 95th percentile. The highest occurrences of mountain birch remain throughout the time series in the same mountain areas in Southern Norway, and the level of these observations (approximately 950–1050 m) is remarkably stable.

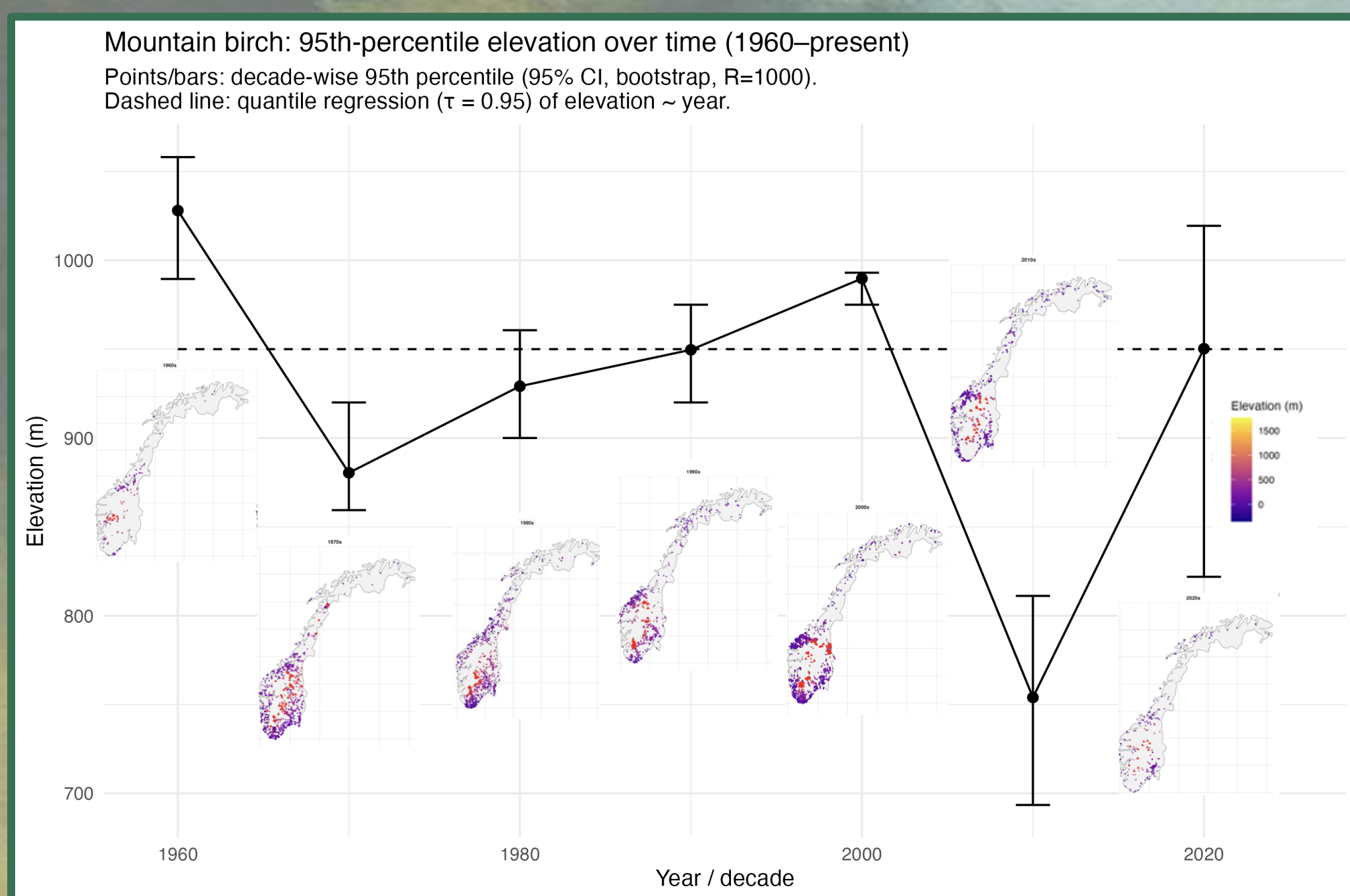


Fig. 1: Spread of *Betula pubescens* in Norway between 1960-2020.



Fig. 2: Photograph showing where the treeline ends on Mount Ulriken in Bergen.

References:  
Lisa, & Lisa. (2024, February 22). *Mount Ulriken, Bergen: Complete hiking Guide, map & video!* Fjords & Beaches. <https://www.fjordsandbeaches.com/mount-ulriken-bergen/>  
ResearchGate (2025) 'Climatically Raised Birch Lines in Southeastern Norway 1918-1968'. Available at: <https://doi.org/10.1080/00291956908542805>.



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