

Research Unit Forest Dynamics - colloquium

Date: 21.05.2024

Time: 10:30

Room: Engler-Saal

Duration: 25 minutes

Author: PD Dr. Günter Hoch, University Basel

Title: **Hydraulic constraints at low root temperatures might hold the answer for the cold limit of tree growth**

Abstract:

Although the restriction of plant water uptake and transport by low, but non-freezing, soil temperatures are a well-known phenomenon, it so far received only little attention with respect to the ongoing search for a physiological mechanism behind the cold limits of tree growth. In this presentation, I will summarize our recent studies about low root temperature effects on the water and carbon relations of trees and present new evidence that the species-specific sensitivity of root water uptake against low temperatures might be a critical factor for the cold distribution limits of temperate tree species.