

PROJECT INFORMATION

Project title: Atmosphere - biosphere interactions

Project ID: 48

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PROJECT DESCRIPTION

Atmosphere-biosphere interactions

Within the project „Atmosphere-biosphere interactions“ (TUM-IAS) we want to explore the amount of fruits in the litter to investigate patterns in fructification. We already obtain data from the Bavarian forest climate stations (LWF level II plots) and data from the APS (Bayerisches Amt für forstliche Saat- und Pflanzenzucht). The ASP dataset consists of flowering projections and seed amounts and will also be analysed within this project. We want to check whether a year with a high amount of fruits (mast year) is connected with a high amount of seeds and how possible discrepancies can be explained by meteorological data. Here, we would like to use the data recorded at the ICP Forests' climate stations. We further aim to investigate whether higher spring temperatures and therefore earlier phenological onset dates increase the number of flowers produced.

Additionally, we want to analyse whether foliar nutrients influence phenological onset dates. In a field study conducted in Munich (Jochner et al. 2013) we found that especially a high concentration of potassium significantly advanced phenological onset dates of birch. Using this vast ICP Forests dataset we want to investigate whether we find similar relationships for other regions and species.

Reference: Jochner S, Höfler J, Beck I, Göttlein A, Ankerst DP, Traidl-Hoffmann C, Menzel A (2013) Nutrient status: a missing factor in phenological and pollen research? Journal of Experimental Botany, 64(7), 2081-2092.