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Phenological observations since the Linnean time in Finland

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The Finnish National Phenological Network was established in 1996 by the Finnish Forest Research Institute in collaboration with other research institutes and universities. The Network investigates the timing of phenological phases of forest plants in relation to climate factors, develops real time information to the internet and studies digital techniques as tools for monitoring. Monitoring is done troughout the growth period, focusing on nine forest tree species and two dwarf shrubs. The results can be followed in real time at: http://www.metla.fi/metinfo/fenologia/index-en.htm. The results indicate that spring phenophases usually advanced with respect to climatic conditions, but there were also differences between the years. The research period started in 1995 is relatively short and the results indicates that long-term monitoring is needed in order to detect true trends in the impacts of climate on plant phenology. The Finnish National Phenological Network has therefore collaborated with the Finnish Museum of Natural History and analysed historical phenological data based on voluntary monitoring.

The oldest phenological observation series based on voluntary observers started in Finland in 1752. The long-term data shows an advancement in the timing of bud burst by five days per 100 years in Prunus padus. The onset of flowering in the rowan (Sorbus aucuparia) has become correspondingly earlier in Finland at the rate of three days per century. In the conference the focus is on a historical long-term dataset as well as on the newer Finnish National Phenological Network established for monitoring annual phenological events taking place in the same individual plants. The latest results of the network will be updated with the earlier presented historical data. Phenological monitoring is nowadays more important than ever especially in boreal regions, where spring temperatures are elevated. Compilation and documentation of observations on plant phenophases play a key role in working out the rate of global dimate change. The timing of spring phenolgy will be discussed in the conference.