EVOLTREE Mobility – Back To Office Report

Short field trip to ISS Punkaharju (Finland)

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Host: Dr Egbert Beuker (P21b; METLA, Finland).

Time span: from 28th of June to 4th of July 2009.

The aim of this trip was to exchange experiences between people who are involved in collecting samples of needles, young leaves or buds of target tree species on ISS (Intensive Study Sites) within a framework of Evoltree ISS project. On each of seven ISS in Europe the permanent sample plots are established where 250-500 trees of major tree species and about 50 trees of minor tree species are selected along a certain gradient (elevation, water availability, management intensity, etc.). From each tree a small sample of DNA material is collected. The samples are sent to the Repository Centre in Vienna, where the basic library of DNA material of the target tree species from each ISS is created. This material can be used at any time for any further researches.

The samples of DNA material of trees on ISS in Punkaharju have been collected in the end of winter and in the beginning of spring, when the air temperature was still below 0 degree Celsius. Needles of Conifer species and dormant buds of Broadleaves species were collected to the plastic bags and then were storage in the fridges and sent frozen to the Repository Centre.

The trees on permanent sampling plots were chosen to make a cross section of dimensions and social position of the trees in the stand. The samples were harvested using some kind of mobile lift powered by the diesel engine. The basket on the top of this lift can take 2 people up to the height of 21 meters. The horizontal range of this lift from one position is about 11 meters circle around. The disadvantage of this machine is that it can be used only on flat and stabile ground. When the conditions are harder, the oldest machine is used - a tractor aggregated with extended ladder on the back, which can be prolonged to 18 meters up. In the mountainous areas or in dense stands, where any machines can not be used, samples are collected using scissors installed on 8-parts-joined pole, which can also reach the height of 18 meters, the same as ladder on the tractor, and can be shortened depending on needs.

The sampled trees are marked on the height of approximately 1.5 meter with yellow plastic bands affixed to the bark using stapler and the laminated piece of paper with consecutive number is also attached. Additionally, the aluminium label with the same number is also attached at the base of the stem using the nail.

The methods of samples collecting and marking the trees, described above, are a bit different than those used in Poland, what Tarja Salminen from METLA in Punkaharju has had possibility to see, when she has been visiting ISS Blizyn in Poland a week before my trip to Finland.