



Genetics and genomics of adaptation to climate change in plants

	Monday 25/11.2024	Tuesday 26/11– Field work	Wednesday 27/11	Thursday 28/11	Friday 29/11
8.30	Welcome and presentation of lectures and participants	Excursion: Analysis og phenotypes <i>in situ</i> and <i>common gardens</i> . Departure from R23: 8:30 <u>Valby Hegn:</u> *Trial design and demonstration of phenotyping in <i>Quercus petraea</i> trees in common garden. *In situ and common garden based analysis of ADB tolerance in <i>Fraxinus excelsior</i> trees <u>Tjæreby:</u> *Clonal and progeny trials in <i>Fraxinus excelsior</i> trees *Provenance/progeny trial in <i>Alnus glutinosa</i> trees	Case and Exercise: analysis of data from common garden trials (Jon Kehlet Hansen/Erik Dahl Kjær). <i>Based on code and output from study of the common gardens with trees in Valby Hegn and Vejlbæk</i>	Case and Exercise: Genomic population analysis and linking genotype to phenotype by GWAS (Jill Katharina Olofsson/James Doonan/Erik Dahl Kjær) <i>Based on code and output from study of the common garden in Vejlbæk and Tjæreby</i>	Participants projects Presentations of participants own research. Discussions on how it related to genetics of climate change, and appropriate analysis tool that are applied - or can be applied.
9.15-10.00					
10.15-11.00	Lectures: <i>Adaptation of plant populations to stable or shifting climates</i> (Erik Dahl Kjær)	*Trial design and demonstration of phenotyping in <i>Quercus petraea</i> trees in common garden. *In situ and common garden based analysis of ADB tolerance in <i>Fraxinus excelsior</i> trees <u>Tjæreby:</u> *Clonal and progeny trials in <i>Fraxinus excelsior</i> trees *Provenance/progeny trial in <i>Alnus glutinosa</i> trees	*Trial design and demonstration of phenotyping in <i>Quercus petraea</i> trees in common garden. *In situ and common garden based analysis of ADB tolerance in <i>Fraxinus excelsior</i> trees <u>Tjæreby:</u> *Clonal and progeny trials in <i>Fraxinus excelsior</i> trees *Provenance/progeny trial in <i>Alnus glutinosa</i> trees	*Trial design and demonstration of phenotyping in <i>Quercus petraea</i> trees in common garden. *In situ and common garden based analysis of ADB tolerance in <i>Fraxinus excelsior</i> trees <u>Tjæreby:</u> *Clonal and progeny trials in <i>Fraxinus excelsior</i> trees *Provenance/progeny trial in <i>Alnus glutinosa</i> trees	*Trial design and demonstration of phenotyping in <i>Quercus petraea</i> trees in common garden. *In situ and common garden based analysis of ADB tolerance in <i>Fraxinus excelsior</i> trees <u>Tjæreby:</u> *Clonal and progeny trials in <i>Fraxinus excelsior</i> trees *Provenance/progeny trial in <i>Alnus glutinosa</i> trees
11.15-12.00					
	LUNCH: Canteen	<u>Arboretum:</u>	LUNCH: Canteen	LUNCH: Canteen	LUNCH: Canteen
13.00-13.45	Lecture: <i>Analytic approaches to study adaptation in long lived plants</i> (Jill Katharina Olofsson/Erik Dahl Kjær) <i>Coffee break</i> Lecture: <i>How can we measure genetic diversity and adaptive potential</i> (Erik Dahl Kjær)	LUNCH *Visit tree collection and discuss use of Arboreta collections for predicting growth in future climate and risk of new pests and pathogens. *Lecture: Genetic analysis of ecophysiology in relation to climate change (Anders Ræbild/ Jon Kehlet Hansen/ Erik Dahl Kjær).	Case and Exercise: Landscape genomics (Jill Katharina Olofsson/Erik Dahl Kjær). <i>Based on code and output from study of the common garden in Valby Hegn</i>	Follow up on the cases. Lecture and discussion: Genetic management for climate adaptation with focus on tree species (Erik Dahl Kjær)	<i>Participant projects, continued.</i> Wrapping up and evaluation Good bye 😊
14.00-14.45					
15.00-15.45					
16.00-17.00					