Divergent pattern between phenotypic and genetic variation in Scots pine - 935 genotyped from 24 populations of Pinus sylvestris across Northern Europe

SND-ID: 2020-208-1. **Version**: 1. **DOI**: https://doi.org/10.5878/8bg9-ah89

Download data

All_individuals_935.vcf.gz *(58.86 MB)*

Associated documentation

Data description and analysis_Archive.pdf *(338.31 KB)*

Data description and analysis_Bookmarks.pdf *(189.2 KB)*

Download all files

2020-208-1-1.zip *(~59.38 MB)*

Citation

Hall, D. (2021) Divergent pattern between phenotypic and genetic variation in Scots pine - 935 genotyped from 24 populations of Pinus sylvestris across Northern Europe (Version 1) [Data set]. Umeå University. Available at: https://doi.org/10.5878/8bg9-ah89

Creator/Principal investigator(s)

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Research principal

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Description

In this study, we sampled 54 Scots pine populations from the Norwegian coast over the Arctic Circle to western Russia covering 47.3 longitudes or more than 1/8th of the earth's circumference, which represents the most comprehensive coverage of Northern Europe to date. We inferred variation in autumn phenology and dormancy progression from freeze hardiness tests conducted on >5000 seedlings, of which >900 seedlings from 24 populations were genotyped using genotyping-by-sequencing (GBS). Our main goal was to evaluate adaptive responses in Scots pine at phenotype and genotype levels. Evaluation of cold hardiness along environmental and geographical gradients would contribute to an understanding of the performance of these gradients for predicting freeze damage levels. The genotype data allow evaluation of genetic variance across landscapes and thus shed light on the degree of genetic-environmental association and the recolonization history of Scots pine in Scandinavia.

SNP data of Pinus sylvestris from geneotyping-by-sequencing, Sequenced by Illumina HiSeq X. Text file as gzipped vcf (.vcf.gz). See "pheno_pop.txt" for information on each individual.

Data contains personal data

No

Language

English

Time period(s) investigated

1985 – 2017

Variables

11039

Data format / data structure

Text

Geographic spread

Geographic location: Northern Europe

Geographic description: Data from Scots pine seeds collected from Norway, Sweden, Finland, Arkhangelsk- och Komi- regions of Russia

Responsible department/unit

Ecology and Environmental Science

Research area

Bioinformatics (computational biology) (Standard för svensk indelning av forskningsämnen 2011)

Genetics (Standard för svensk indelning av forskningsämnen 2011)

Evolutionary biology (Standard för svensk indelning av forskningsämnen 2011)

Forest science (Standard för svensk indelning av forskningsämnen 2011)

Biota (INSPIRE topic categories)

Geoscientific information (INSPIRE topic categories)

Environment (INSPIRE topic categories)

Location (INSPIRE topic categories)

Keywords

Genetic population structure, Population structure, Population genetics, Scots pine, Pinus sylvestris, Gbs

Publications

Hall et al. 2021. Divergent pattern between phenotypic and genetic variation in Scots pine. Plant Communications
DOI: https://doi.org/10.1016/j.xplc.2020.100139

If you have published anything based on these data, please notify us with a reference to your publication(s). If you are responsible for the catalogue entry, you can update the metadata/data description in DORIS.

Polygon (Lon/Lat)

4.21875, 71.045528819336

4.21875, 55.776573018668

65.828277734403, 55.776573018668

65.828277734403, 71.045528819336

4.21875, 71.045528819336

Accessibility level

Access to data through SND
Data are freely accessible

Use of data

Things to consider when using data shared through SND

License

Versions

Version 1. 2021-01-29

Related research data in SND's catalogue

Divergent pattern between phenotypic and genetic variation in Scots pine - 746 unrelated genotyped Pinus sylvestris from 24 different populations across Northern Europe

Divergent pattern between phenotypic and genetic variation in Scots pine - Phenotype estimates of the genotyped individuals

Divergent pattern between phenotypic and genetic variation in Scots pine - Environmental variables and coordinates for each population

Divergent pattern between phenotypic and genetic variation in Scots pine - Results from seedlings exposure to freezing temperatures

Download metadata

DataCite

DDI 2.5

DDI 3.3

DCAT-AP-SE 2.0

JSON-LD

PDF

Citation (CLS)

File overview (CSV)

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