CartograTree: connecting forest tree genomes, phenotypes, and environment

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WHO?: Representatives from the Forest Tree Biology Community: Tree Physiologists, Forest Ecologists, Geneticists, Bioinformaticians

WHY?: Physiological, population genetic, and ecological data lack shared, integrated, geo-referenced data storage

HOW?: CyberInfrastructure to allow data storage, retrieval, integration, and analysis. A map-based tool to visualize the geo-referenced data

WHAT? Genetic and genomic data from resequencing, transcriptome, and SNP studies associated with individuals with GPS coordinates. Phenotypes and environmental data with GPS.

Database Resources:
- Ameriflux (Abiotic Site Data in N. America), WorldClim (Abiotic Data Globally),
- Try-DB (Biotic/Abiotic Trait Data), TreeGenes (Genomics Data)

Navigating the CartograTree Interface
Visualize geo-referenced, sequenced, genotyped, or phenotyped samples through a variety of filters and queries

Connect Genotype, Phenotype and Environmental Data

EXAMPLE: In DiversiTree (TreeGenes database), tree samples evaluated for rust resistance are queried and passed to CartograTree using the SSWAP (web services) button. After selecting the Tree Sample service from the SSWAP pipeline, a link is provided to visualize the resulting data on the CartograTree map.