

TRY – global database of plant traits

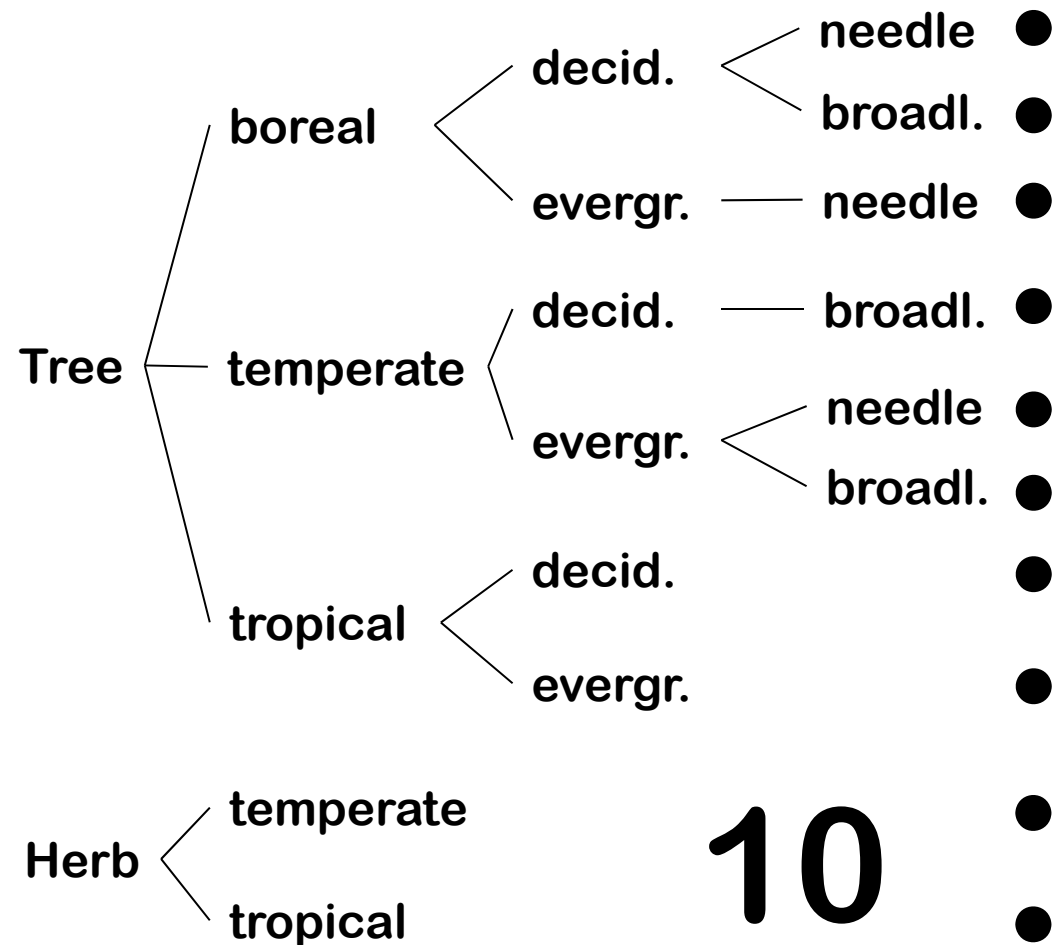
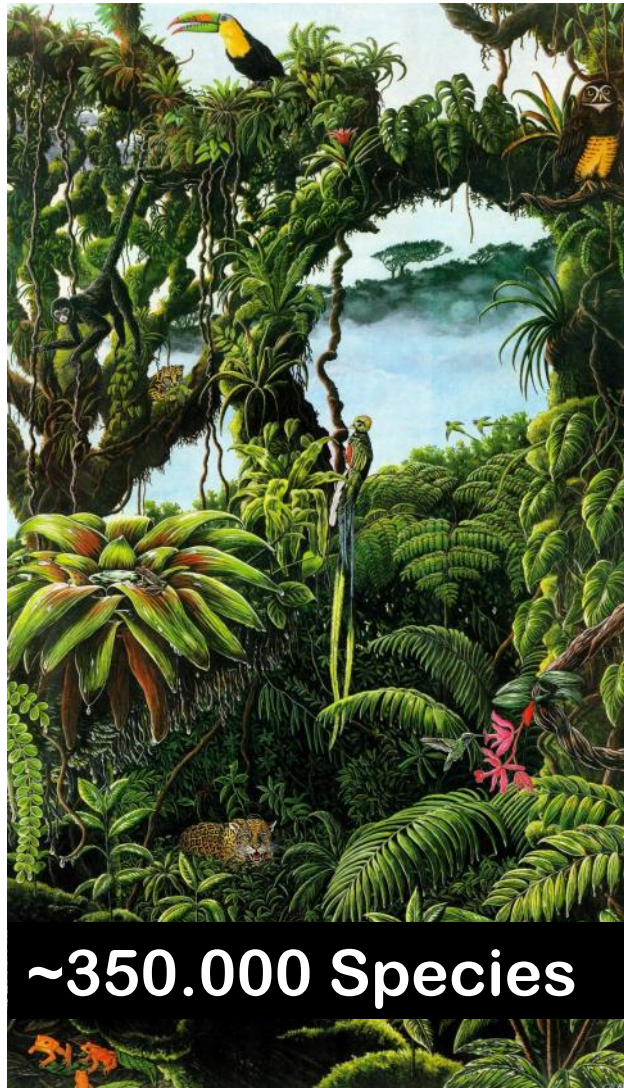
Jens Kattge, Christian Wirth, Gerhard Bönisch, Sandra Diaz,
Sandra Lavorel, Colin Prentice, Paul Leadley
and all members of the TRY initiative



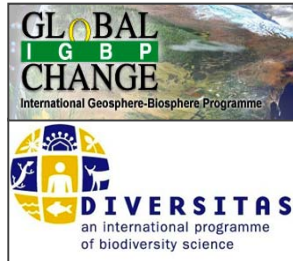
Max Planck Institute
for Biogeochemistry



Biodiversity and Dynamic Global Vegetation Models (DGVM)



2007

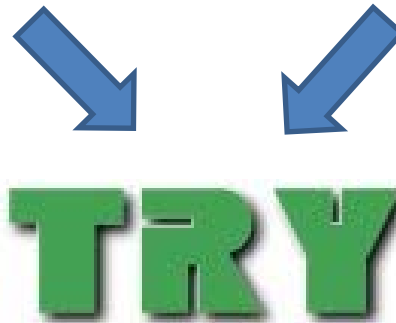


Fast Track Initiative on Refining Plant
Functional Classifications



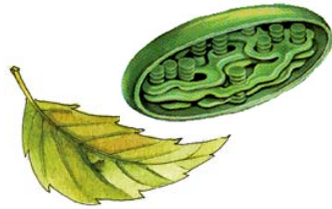
Sandra Díaz
Sandra Lavorel
Colin Prentice
Paul Leadley

Christian Wirth
Gerhard Bönisch
Jens Kattge



Goal: A global database of plant traits for
ecology and vegetation modelling

Plant Traits



Physiology

Photosynthesis type
N-fixation capacity
Assimilation rate
Respiration rates
Stomatal conductance
Leaf longevity
Foliar chemistry
Nutrient concentrations
Secondary chemistry
Stomata density
Frost tolerance
Shade tolerance
Nutrient acquisition rates
Retranslocation
...



Morphology

Woodiness
Plant Growth form
Leaf type
Specific leaf area
Leaf density
Wood density
Vessel diameter
Sapwood fraction
Maximum rooting depth
Specific root length
Max. height
Max. diameter
Bark thickness
Crown transparency
...



Demography

Resprouting capacity
Longevity
Mortality rate
Fire resistance
Relative growth rate
Seed mass
Seed terminal velocity
Seed longevity
Serotiny
Time to maturity
Fecundity
Mast cycles
...



Ecosystem

Mycorrhizal association
Leaf decomposition rate
Wood decomposition rate
Interception
VOC emission
Palatability
Browsing susceptibility
...

Intellectual Property Guidelines

Data ownership

- Data ownership remains with contributors

Data access

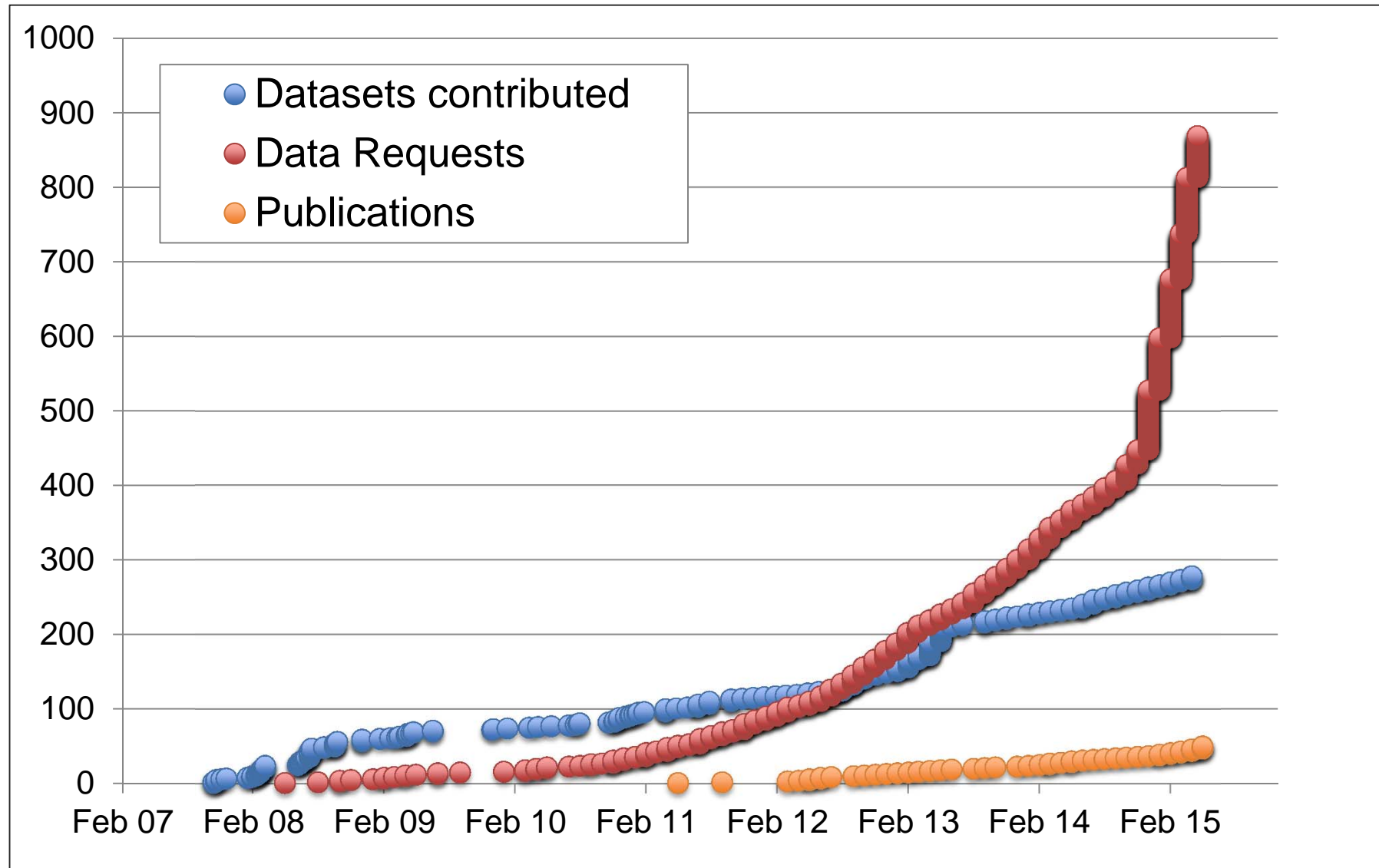
- Public since 2015
- Restrictions by contributors possible

Incentives for data sharing

- References being cited
- Authorship in publications

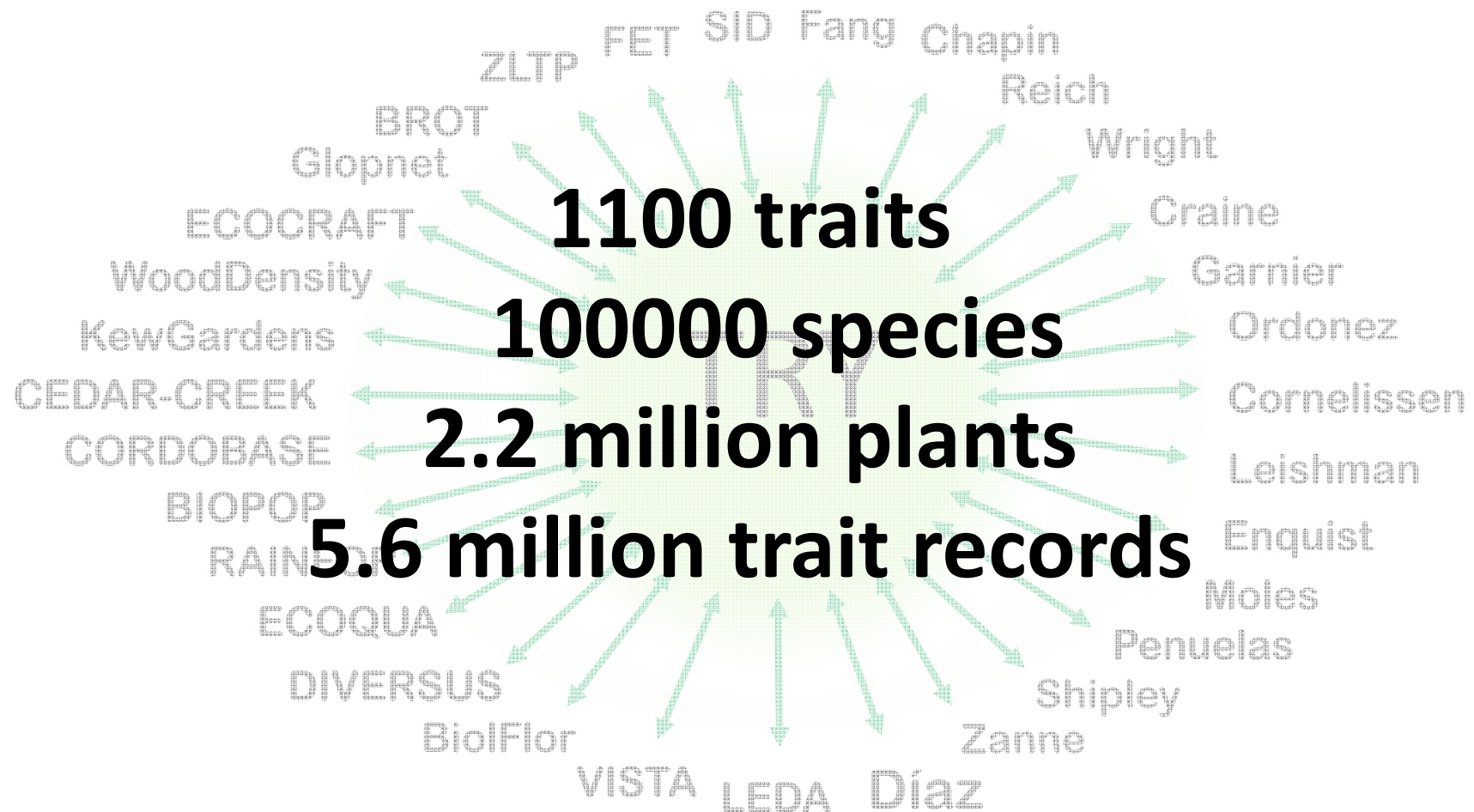
TRY

TRY has gained momentum



TRY – a global database of plant traits

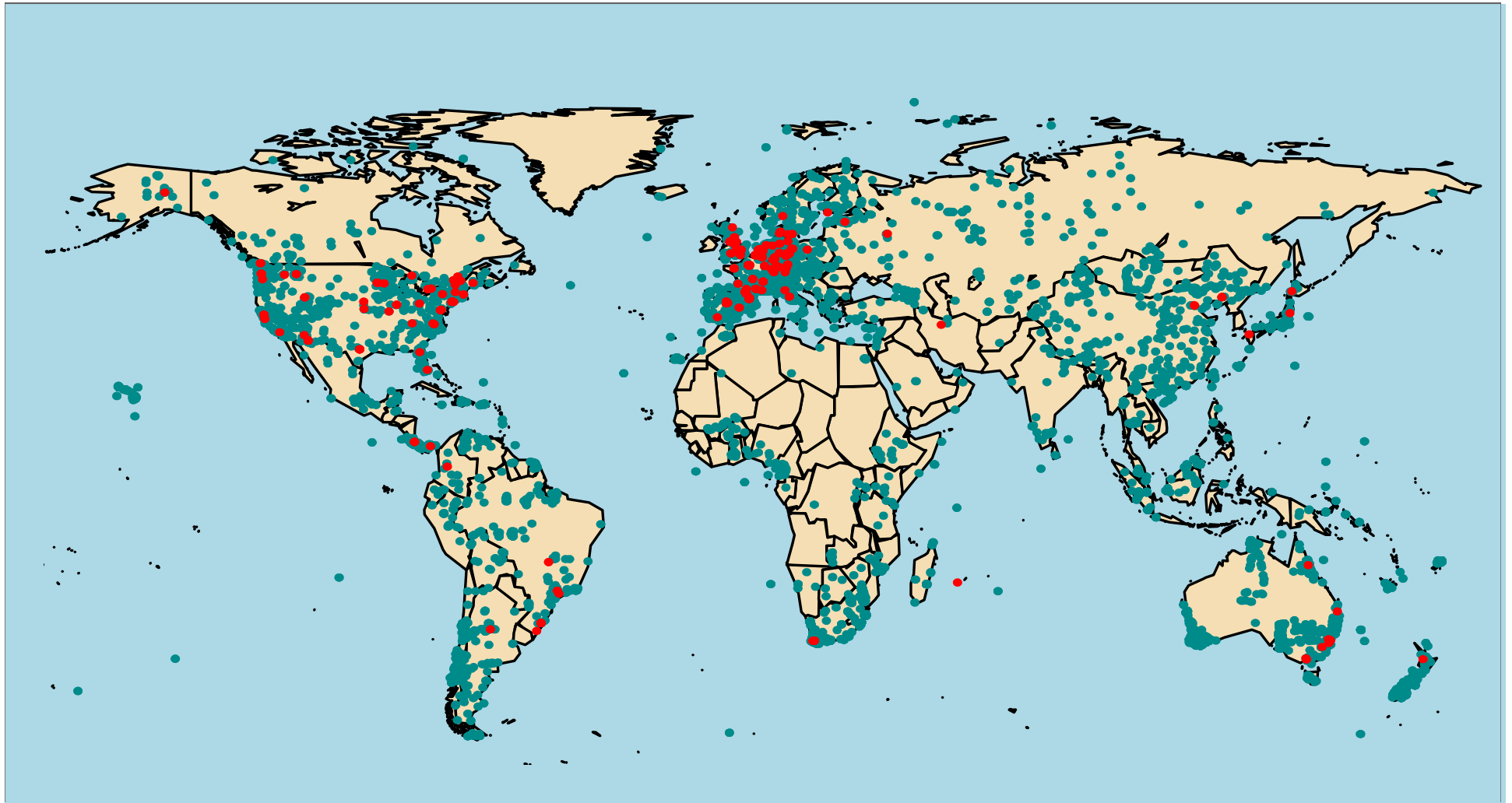
Second generation of data pooling



TRY – a global research network

167 institutes contributing data

12,361 measurement sites (50% of data georeferenced)

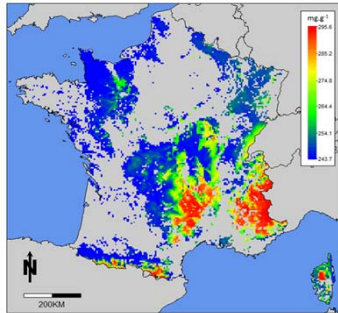


Data processing & quality control

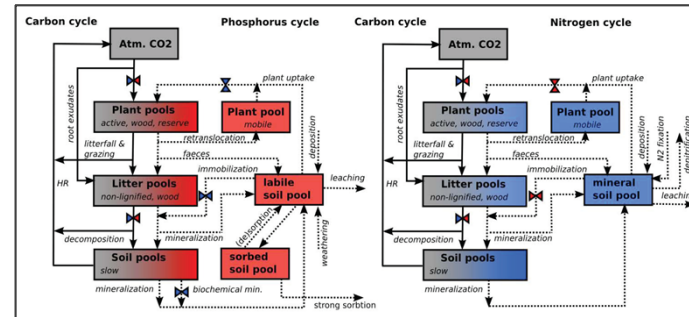
- 1. Cleaning of trait names, context information and taxonomy**
- 2. Standardization of units**
- 3. Correction of errors**
- 4. Identification of duplicates and outliers**

TRY

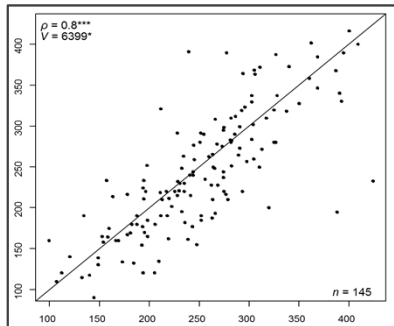
Application of the trait data



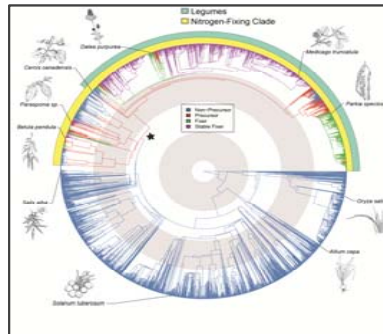
Biogeography
13 Publications



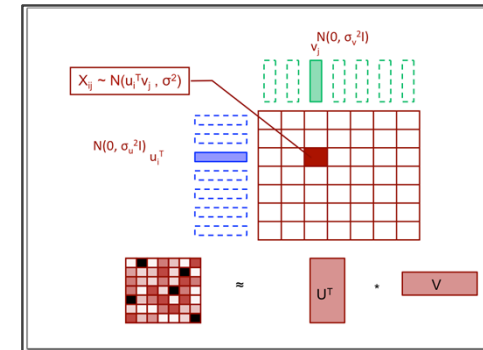
Vegetation modeling
9 Publications



Ecology
12 Publications



Evolution
2 Publications



Informatics
3 Publications



Complementarity with respect to compilation of traits

TRY

- Global screening of traits and species
- Global pattern of plant trait diversity

ICP Forests

- Intensive monitoring of selected traits and species across Europe
- Intraspecific variation across Europe in time

TRY



Plant Trait Database

Galanthus elwesii
7 traits
Photo by A. Günther

[Home](#)[About TRY](#)[Data Portal](#)[Contact](#)[Registration](#)

Quantifying and scaling global plant trait diversity

TRY is a network of vegetation scientists headed by [DIVERSITAS/IGBP](#), and the [Max Planck Institute for Biogeochemistry](#), providing a global archive of curated plant traits.

5.6 million trait records
100,000 plant species
largely open access

[Data Portal](#)

PhotosyntheticPathway
Respiration LeafArea NfixationCapacity
SLA RegenerationCapacity PlantLifespan
WoodDensity GrowthForm
PhenologyType LeafN
LeafP LeafLongevity PhotosyntheticCapacity
MaxPlantHeight SeedMass

Thank you

News

Research Fellowship at KEW Gardens (2015-02-02)

KEW Gardens is looking for an Early Career Research Fellow (PostDoc, 3-years, extendable to 5) to work on the theme of seed 'behaviour' prediction. Experience in up-to-date statistical modelling (including Bayesian approaches) and data mining is of advantage. Closing date for applications is 15 February. In case of interest please contact John Dickie (j.dickie@kew.org) or follow the link. ([link](#))

Paper published (2015-01-19)

Atkin et al.: Global variability in leaf respiration among plant functional types in relation to climate and leaf traits. *New Phytologist*. ([link](#))

Registration Table Cleaned (2015-01-09)

Since we literally had thousands of invalid registrations in TRY, we had to clean the registration table. Preserved were all registrations of TRY members and people who have downloaded files from TRY. In case you can no longer log in, please register again. Sorry for the inconvenience! ([link](#))

TRY 3.0: more traits, public data, new

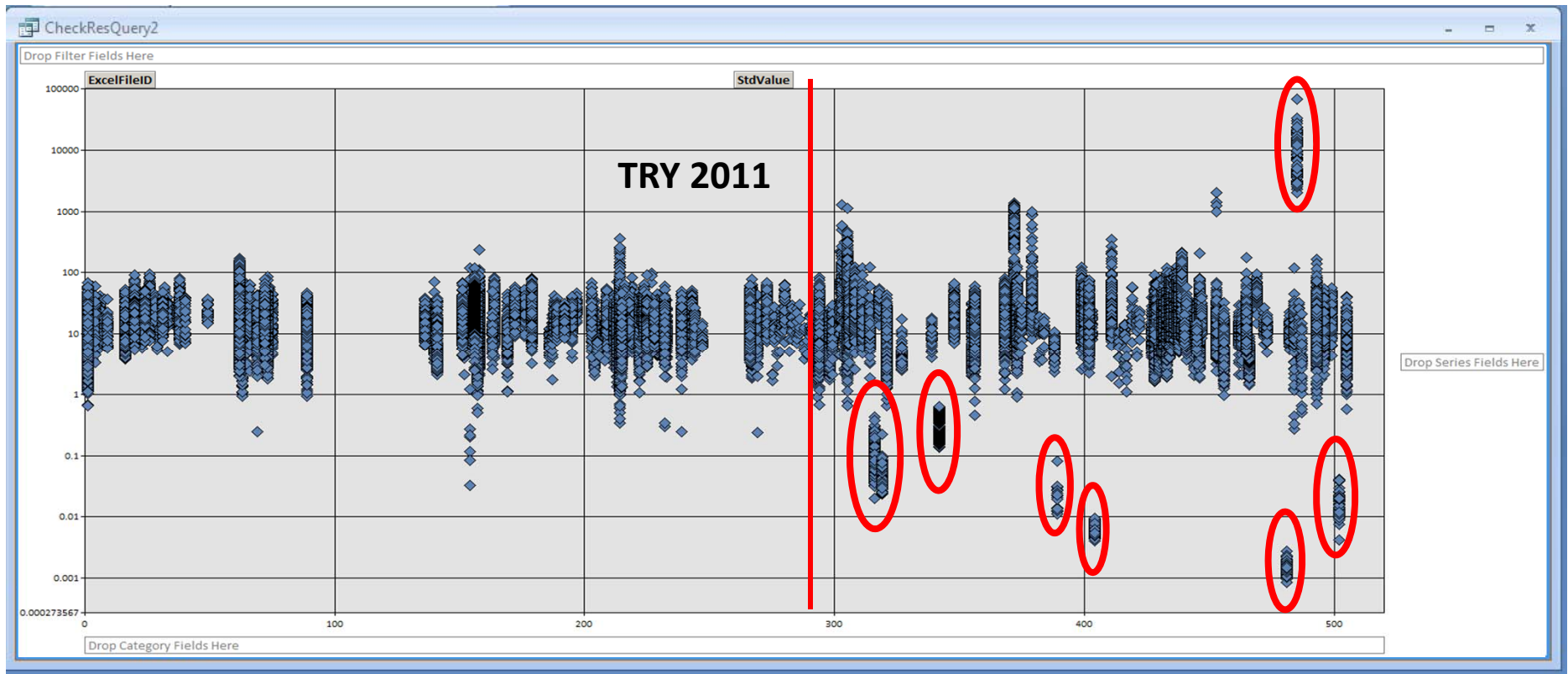
base (2014-12-09)
The new version of the TRY database is online (2014-12-09). It contains all traits contributed by spring 2014 and provides public data. TRY includes more than 5 million trait records, of which more than 2.7 million are already public. ([link](#))

www.try-db.org

Max Planck Institute
for Biogeochemistry



Something's wrong here



e.g. specific leaf area (~90 new files)