ReSurveyEurope

Project Metadata Form

When contributing data to ReSurveyEurope, please fill in this form for each resurvey project and send it to Ilona Knollová (ikuzel@sci.muni.cz) together with the database. A resurvey project is understood as repeated sampling of a certain type of vegetation in a certain study area using specific methods.

- PROJECT NAME (identical with the Resurvey Project name given in the database):
  Transects Pyrenean Acidic Snowbeds

- FULL PROJECT NAME (use if the full project name is longer than used in the database):

- REFERENCE (publication or URL or DOI of the dataset if published online):
  Not published

- DATA OWNER: person(s), institution(s):
  Estela Illa, University of Barcelona

- CONTACT E-MAIL:
  estelailla@ub.edu

- METHODS (description of sampling design and methods):
  The project aims to evaluate mid- to long-term floristic changes in Pyrenean snowbeds, highly threatened by climate change especially in southern European mountain ranges.

  Between years 2003 and 2007 we established 8 different permanent transects in the central Catalan Pyrennees, mainly in Aigüestortes i Estany de Sant Maurici national park.

  Transects are between 10 and 22 m length and follow a steep snowmelt gradient, where we find a succession from alpine grasslands ("early" snowmelt) to snowbed vegetation (late snowmelt). The starting and the ending transect points, as well as one or two intermediate points depending on the transect length, are permanently marked in the field. Alpine grasslands belong to the phytosociological associations: *Hieracio breviscapi-Festucetum airoidis* Br.-Bl. 1948*, Gentiano-Caricetum curvulae Nègre 1968, Alchemillo flabellatae-Nardetum strictae* Gruber 1975*, Trifolio alpini-Phleetum gerardii* Br.-Bl. 1948.
  Snowbed communities belong to the 1948 phytosociological associations *Anthelio juratzkanae-Salicetum herbaceae* Br.-Bl. 1948 or *Gnaphalio supini-Sedetum candollei* Br.-Bl.

The starting point of all transects corresponds in all cases to an alpine grassland (earliest snowmelting point of the gradient). The ending point, however, is located either in a snowbed, either in an alpine grassland again, depending on the local topography. Concretely, in flat or almost flat areas, snowbed vegetation is found at the transect end (the snowiest area). In concavities, snowbed vegetation is found in the bottom of the concavity (the snowiest area), which coincides with the central part of the transect, and both extremes of the transect are located on alpine grassland vegetation types.

Sampling units consist on a rectangle of 10 x 50 cm, which is regularly placed every 20 cm throughout the transect length, with the 50 cm side perpendicular to the transect direction (i.e. sampling units are located at the starting point, at 20 cm, at 40 cm, etc.). Depending on the transect length, sample units range from 50 to 110.

In each sampling unit, all vascular plants are recorded, as well as *Polytrichum* / *Polytrichastrum* bryophyte species. Species coverage is measured in three categories: < 10% (1), 10-50% (2) and > 50% (3).

All transects were established and first sampled between years 2002 and 2007, and they were resampled 10 years later (between 2012 and 2018).
Some of the transects (Creussans, Ratera, Redon) were also resampled once or twice during the first period, and one of them (Redon) was resampled twice during the second period.

In the excel file, plot coordinates for a given transect are always the same, and correspond to the beginning point (the first plot) of each transect.

- ENVIRONMENTAL DATA (list of environmental data measured):

- MANIPULATED PLOTS (description of the treatment if the plots were manipulated, e.g. mowing twice a year, fertilizing by NPK once a year, post-fire succession)

[place, date] Barcelona, 2021/01/29

[owner´s name] Estela Illa