

Database of Ephemeral Wetland Vegetation in Extra- and Oro-Tropical South America

Ulrich Deil & Miguel Alvarez

Abstract: The vegetation of seasonal wetlands in South America has always been studied on local to regional scales. A synoptic view is missing and the distribution of vegetation types is not known. We investigate the floristic patterns at spatial level on the subcontinent and the environmental factors behind these patterns. The study area included extra-tropical South America (austral-temperate and sub Antarctic climatic zones) and the orotropical biome of the Andean Highlands, because the amphibious habitats in both areas share some taxa. Tropical lowlands were excluded. To have a consistent nomenclature is a major problem, and the taxonomic treatment of a number of habitat specific taxa is insufficient. The dataset et has two shortcomings: 1) data sampling was heterogeneous concerning plot size and homogeneity of the plot, 2) data sampling concentrates in some areas, while others are unexplored. This is most obvious in the Mediterranean part of Chile. The classification resulted in a higher diversity of communities as expected. 11 clusters with precise species combinations, ecology and distribution emerged from the classification. Strong spatial pattern emerged at a continental scale, not only by vicinity effects of the matrix vegetation surrounding the small scale seasonal wetlands, but also in the habitat specific flora and vegetation. The main differentiating environmental factors on large scales are macroclimatic conditions and the trophic level of the substrate. The azonal character of seasonal wetlands becomes obvious on the supra-specific taxonomic rank by genera, which speciated within this environment and evolved geographically vicarious species with similar niches (e.g. *Isoetes*, *Limosella*, *Ranunculus*, *Hypsela*, *Oritrophium*, *Littorella*, *Lilaeopsis*, *Muhlenbeckia* and *Crassula*). This report describes the available content in the Database of Ephemeral Wetland Vegetation in Extra- and Oro-Tropical South America (GIVD ID SA-00-001).

Keywords: *Limoselletea australis*; *Nanojuncetea australis*; Neotropic ecozone; phytosociology; vernal pool.

GIVD Database ID: SA-00-001		Last update: 2012-05-06
Database Ephemeral Wetland Vegetation in Extra- and Oro-Tropical South America		
Scope: All available relevés from ephemeral wetlands in the Chilean and Argentinean Patagonia, the Andean mountainous belts (subantarctic, Mediterranean, orotropical, puna and páramo, also including the Córdoba mountains), the temperate, Mediterranean and semiarid lowlands in Chile, and semiarid steppes in North Argentina, Uruguay and South Brazil (campos sulinos).		
Status: completed and continuing	Period: 1960-2009	
Database manager(s): Ulrich Deil (ulrich.deil@biologie.uni-freiburg.de); Miguel Alvarez (malvarez@uni-bonn.de)		
Owner: Department of Geobotany, Biological Institute II, University of Freiburg		
Web address: http://www.biologie.uni-freiburg.de/data/bio2/geobotanik/index.html		
Availability: according to a specific agreement	Online upload: no	Online search: no
Database format(s): TURBOVEG	Export format(s): [NA]	
Publication: Deil U, Alvarez M, Bauer E-M & Ramírez C (2011): The vegetation of seasonal wetlands in extra-tropical and orotropical South America. <i>Phytocoenologia</i> 41: 1-34.		
Plot type(s): normal plots	Plot-size range: 1-100 m ²	
Non-overlapping plots: 514	Estimate of existing plots: [NA]	Completeness: [NA]
Total plot observations: 514	Number of sources: 26	Valid taxa: 507
Countries: AR: 54.3%; BO: 12.3%; CL: 16.2%; CO: 10.1%; PE: 5.3%; VE: 2.0%		
Forest: [NA] — Non-forest: [NA]		
Guilds: all vascular plants: 100%; bryophytes (terricolous or aquatic): 1%		
Environmental data: [NA]		
Performance measure(s): presence/absence only: 6%; cover: 93%		
Geographic localisation: [NA]		
Sampling periods: [NA]		
Information as of 2012-07-12; further details and future updates available from http://www.givd.info/ID/SA-00-001		

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