

# Macrophytes of Italian Volcanic Lakes Database

Mattia Martin Azzella, Leonardo Rosati, Mauro Iberite & Carlo Blasi

**Abstract:** The database was created to investigate the relationship between species composition, community distribution and physical-chemical parameters in Italian volcanic lakes in order to assess the structural heterogeneity and spatial distribution of these plant communities. We collected data on presence and coverage of macrophyte species in 9 Italian volcanic lakes (Mezzano, Bolsena, Vico, Bracciano, Martignano, Albano, Nemi, Grande di Monticchio and Piccolo di Monticchio) and measured the physical-chemical parameters of the water in each basin. We sampled 170 transects in the lakes. Transects were laid from the shore in a perpendicular direction, down to the maximum depth of macrophyte growth. Our results allowed us to identify the macrophyte communities in Italian volcanic lakes as well as their distribution. The macrophyte species composition of the lakes was found to differ reflecting the influence of environmental factors at two different scales: local (within-lake) and regional (between-lakes). Volcanic lakes are dominated by Chara meadows as deep "limestone lakes" of Central Europe. In high status of conservation three types of Chara community are present at different depth zones. This report describes the available content in the vegetation-plot database Macrophytes of Italian Volcanic Lakes Database (GIVD ID EU-IT-007).

**Keywords:** Chara-lake type.

<b>GIVD Database ID:</b> EU-IT-007		<b>Last update:</b> 2012-07-09
<b>Macrophytes of Italian Volcanic Lakes Database</b>		
<b>Scope:</b> We collected data on the presence and cover of macrophyte species in 9 Italian volcanic lakes (Mezzano, Bolsena, Vico, Bracciano, Martignano, Albano, Nemi, Grande and Piccolo di Monticchio). We sampled 170 transects in the lakes. Transects were laid from the shore in perpendicular direction, down to the maximum depth of macrophyte growth (from 3.5m to 26 m of depth, depending on the lakes). Species abundances were evaluated as the cover percentage at the sampling point taken at intervals of 1m..		
<b>Status:</b> finished	<b>Period:</b> 2010-2010	
<b>Database manager(s):</b> Mattia Martin Azzella (mattia.azzella@uniroma1.it); Leonardo Rosati (leonardo.rosati@unibas.it)		
<b>Owner:</b> Mattia M. Azzella (private)		
<b>Web address:</b> <a href="http://sweb01.dbv.uniroma1.it/">http://sweb01.dbv.uniroma1.it/</a>		
<b>Availability:</b> according to a specific agreement	<b>Online upload:</b> no	<b>Online search:</b> no
<b>Database format(s):</b> Excel, shape file (GIS on ESRI format)	<b>Export format(s):</b> Excel, CSV file, Shape file (GIS on ESRI format)	
<b>Publication:</b> Mattia M. Azzella (2012). Flora, vegetazione e indicatori macrofittici dei laghi vulcanici d'Italia. PhD thesis. <a href="http://hdl.handle.net/10805/1440">http://hdl.handle.net/10805/1440</a>		
<b>Plot type(s):</b> normal plots	<b>Plot-size range:</b> 1-50 m <sup>2</sup>	
<b>Non-overlapping plots:</b> 1,776	<b>Estimate of existing plots:</b> [NA]	<b>Completeness:</b> [NA]
<b>Total plot observations:</b> 1,776	<b>Number of sources:</b> [NA]	<b>Valid taxa:</b> 56
<b>Countries:</b> IT: 100.0%		
<b>Forest:</b> 0% — <b>Non-forest:</b> aquatic: 100%; semi-aquatic: 0%; arctic-alpine: 0%; natural: 0%; semi-natural: 0%; anthropogenic: 0%		
<b>Guilds:</b> all vascular plants: 100%; bryophytes (terricolous or aquatic): 100%; algae (terricolous or aquatic): 100%		
<b>Environmental data:</b> altitude: 100%; slope aspect: 100%; slope inclination: 100%; other soil attributes: 100%		
<b>Performance measure(s):</b> cover: 100%		
<b>Geographic localisation:</b> GPS coordinates (precision 25 m or less): 100%		
<b>Sampling periods:</b> 2010-2019: 100.0%		
<i>Information as of 2012-07-12; further details and future updates available from <a href="http://www.givd.info/ID/EU-IT-007">http://www.givd.info/ID/EU-IT-007</a></i>		

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