

Aquatic vegetation in deep lakes: macrophyte co-occurrence patterns and environmental determinants

Mattia M. AZZELLA,^{*1} Mariano BRESCIANI,² Daniele NIZZOLI,³ Rossano BOLPAGNI,³

¹Via G. Bellucci 94, I-00156 Rome, Italy

²Institute for Electromagnetic Sensing of the Environment, National Research Council (IREA-CNR), Via Bassini 15, 20133 Milan, Italy

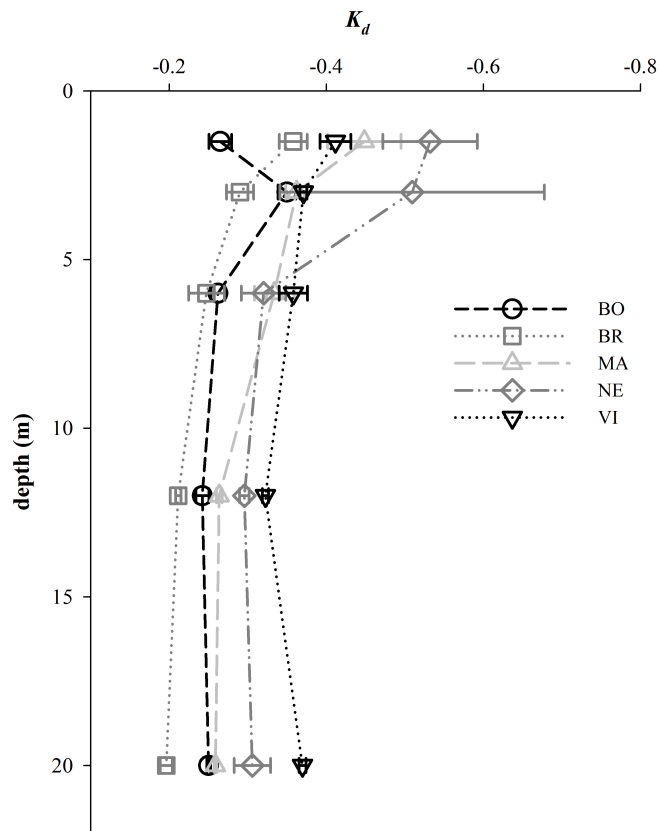
³Department of Chemistry, Life Sciences and Environmental Sustainability, University of Parma, Viale Usberti 11/A, 43124 Parma, Italy

***Corresponding author:** mattia.azzella@gmail.com

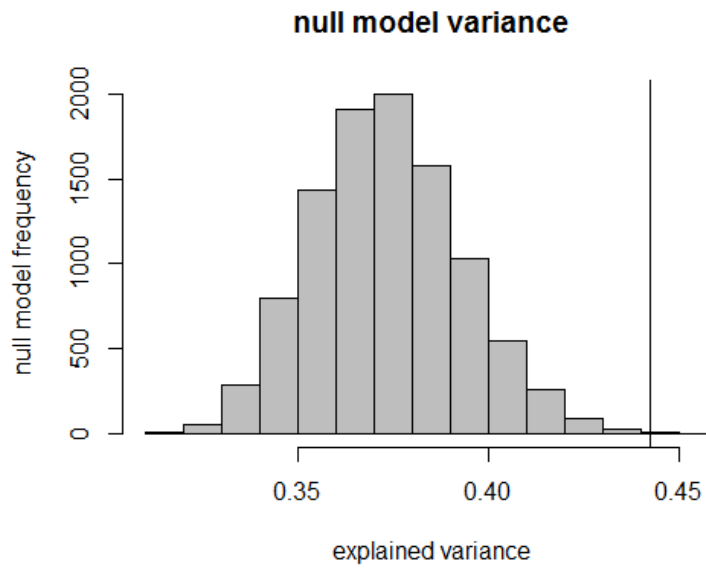
Supplementary Tab. 1. Species depth distribution and cover-abundance % values. The values refer to the mean value of the five sample plots at the sampling depth.

Lake	PD	Species																						
		Bal_ran	Cer_dem	Ch_asp	Ch_glo	Ch_his	Ch_int	Ch_pol	Ch_tom	Ch_vul	Elo_can	Fon_sq	Myr_spi	Naj_mar	Naj_min	Nel_nuc	Nit_hya	Nit_opa	Nit_obt	Pot_cri	Pot_luc	Pot_nod	Pot_pec	Pot_per
Bolsena	1.5								5															1
	3.0	2		46			2	2	18	1		1	1	2		1				2			0.2	2.2
	6.0		0.2						100															1.2
	12.0		6		72													3						
Bracciano	1.5			65		22			6	4		10.2											0.2	0.2
	3.0							97	1			1							1			4	2	
	6.0							100																
	12.0				8				28									15	1					
Martignano	20.0																1							
	1.5		7				0.2	1			20	34.2		7.4									15	26
	3.0		20		1.2		40	19			0.2	2										1	4	8
	6.0		40		3.2		34	12			0.4	1.2						2	4					
Nemi	12.0				97												1.4							
	1.5		10									14	40		6							4		
	3.0		26									42	4											
Vico	6.0		80									2	2											
	1.5		1	24		12				1		4.2					24.2		0.2					
	3.0				40.2							1							40					
	6.0		100		1																			
	12.0		0.4																					

PD, plot depth; Bal_ran, *Baldellia ranunculoides*; Cer_dem, *Ceratophyllum demersum*; Ch_asp, *Chara aspera*; Ch_glo, *Chara globularis*; Ch_his, *Chara hispida*; Ch_int, *Chara intermedia*; Ch_pol, *Chara polyacantha*; Ch_tom, *Chara tomentosa*; Ch_vul, *Chara vulgaris*; Elo_can, *Elodea canadensis*; Fon_sq, *Fontinalis squarrosa*; Myr_spi, *Myriophyllum spicatum*; Naj_mar, *Najas marina* s.str.; Naj_min, *Najas minor*; Nel_nuc, *Nelumbo nucifera*; Nit_hya, *Nitella hyalina*; Nit_opa, *Nitella opaca*; Nit_obt, *Nitellopsis obtusa*; Pot_cri, *Potamogeton crispus*; Pot_luc, *Potamogeton lucens*; Pot_nod, *Potamogeton nodosus*; Pot_pec, *Potamogeton pectinatus*; Pot_per, *Potamogeton perfoliatus*; Pot_pus, *Potamogeton pusillus*.



Supplementary Fig. 1. Vertical diffuse attenuation coefficient K_d values (mean±standard error=SE).



Supplementary Fig. 2. Distribution of total inertia explained by the 10,000 CCA performed on the 75 randomly extracted plots for the null model analysis. The black vertical line corresponds to the total inertia explained by the 75 plots belonging to lakes without a random pattern.