

Supplementary Materials

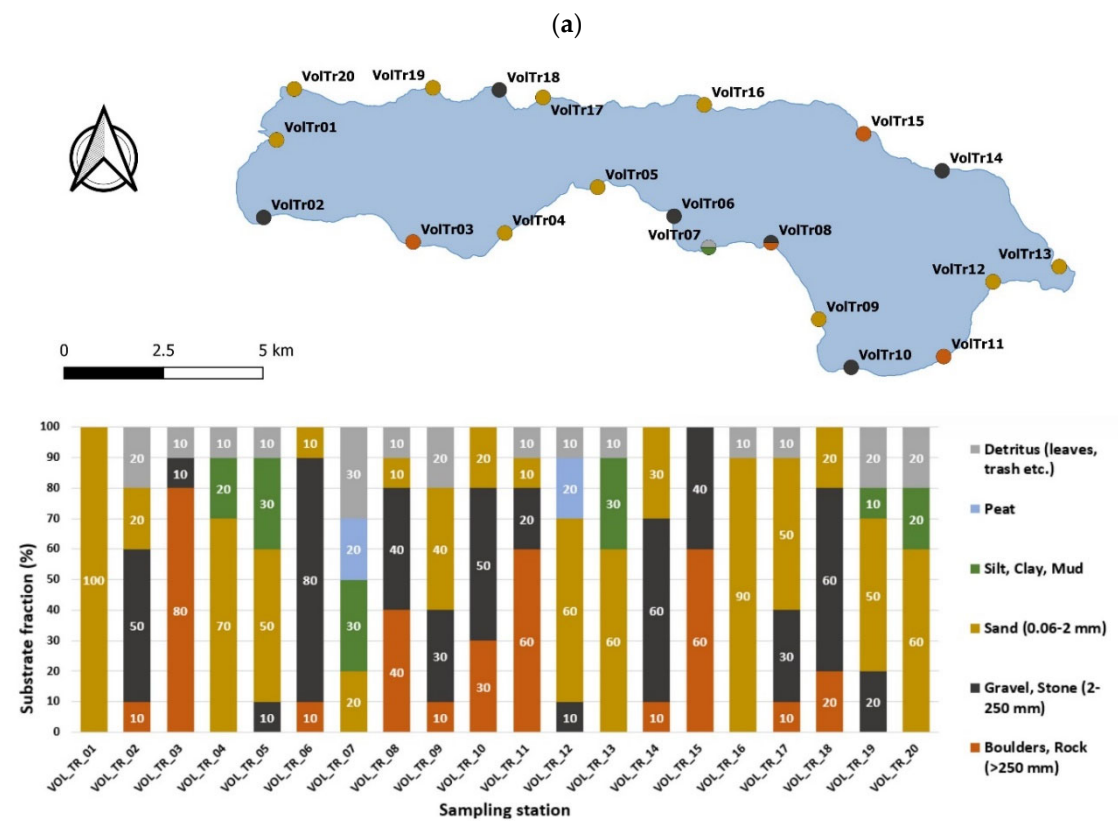
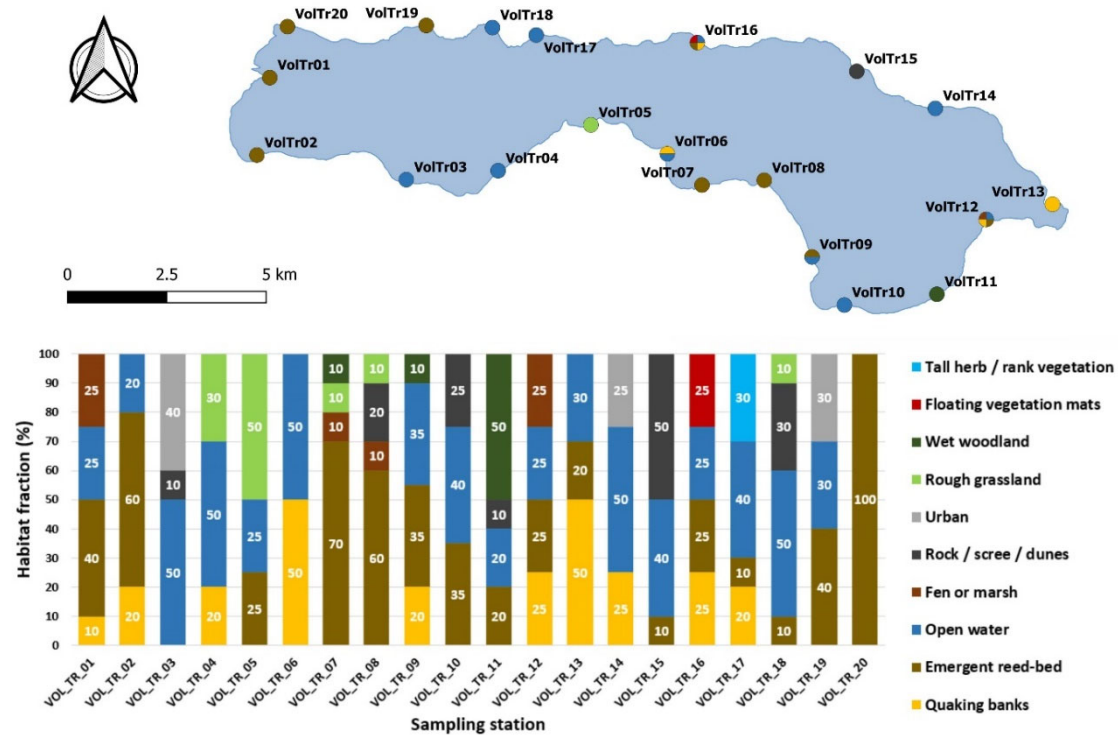
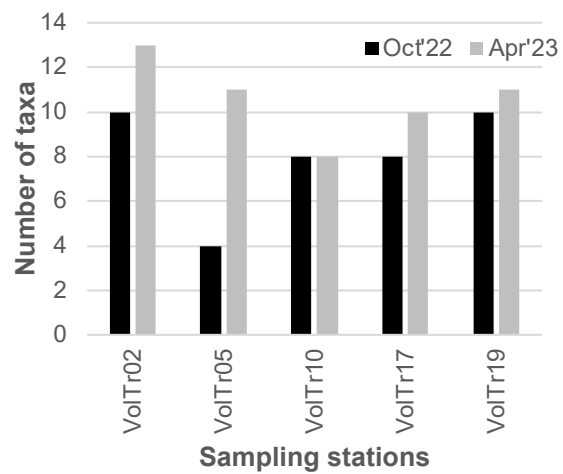
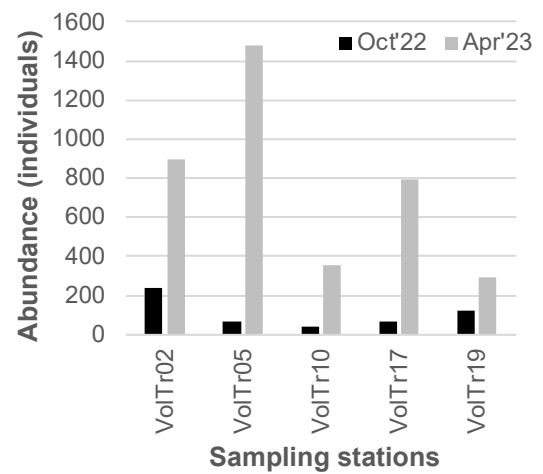


Figure S1. Percent coverage of different a) habitat types and b) granulometry ranks at each of 20 vegetation sampling stations in Lake Volvi for the year 2016, updated in 2023.

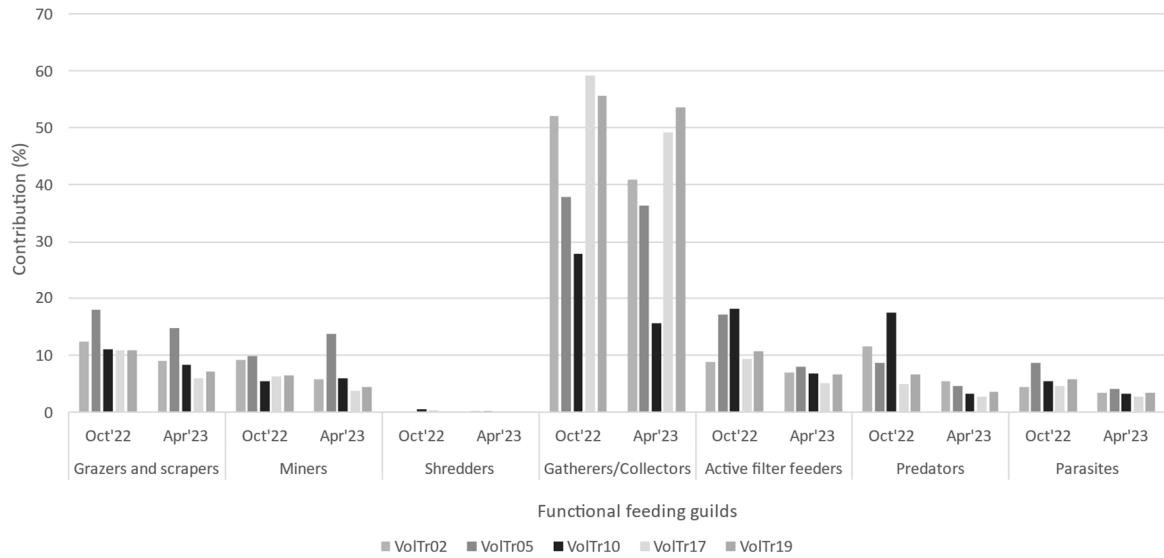


(a)

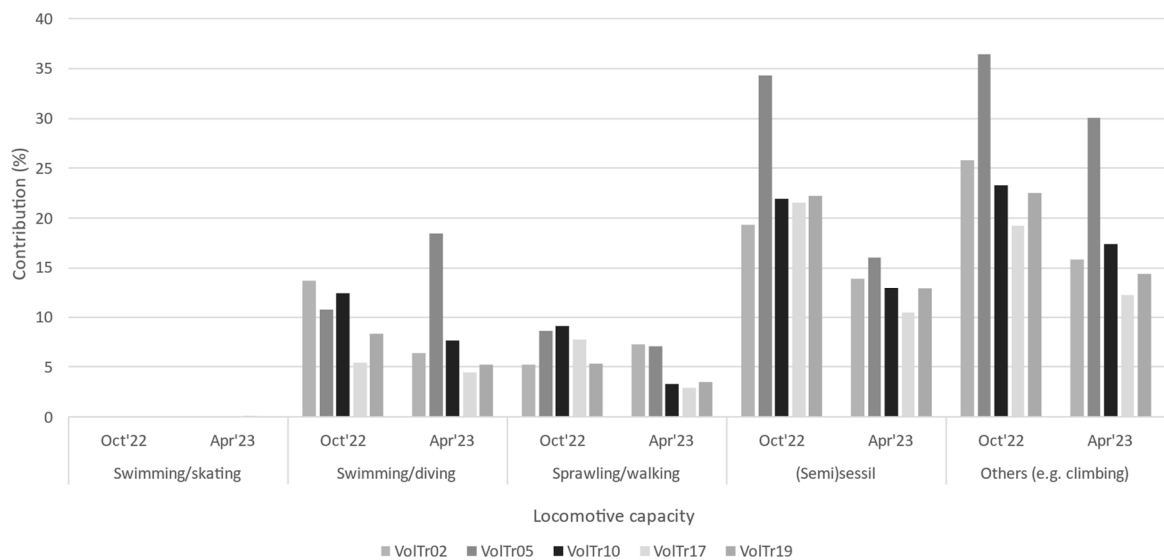


(b)

Figure S2. Number and abundance of benthic macroinvertebrate taxa at the sampling stations in October 2022 (Oct'22) and April 2023 (Apr'23) in Lake Volvi.



(a)



(b)

Figure S3. Contribution (%) of (a) functional feeding guilds and (b) locomotive capacity of benthic macroinvertebrate taxa at the sampling stations in October 2022 (Oct'22) and April 2023 (Apr'23) in Lake Volvi.

Table S1. Summary table of macrophytic vegetation composition in Lake Volvi, as recorded during three extensive sampling efforts in 1986 [55], 2013 and 2016 [56], as well as the results of the current sampling effort that took place in 2023 (in bold). For most recent samplings (2013, 2016 and 2023) the relative presence of recorded taxa is given in percentages of total sampling plots recorded.

Taxon	1986 (presence)	2013 (% presence in sampling plots)	2016 (% presence in sampling plots)	2023 (% presence in sampling plots)
<i>Azolla filiculoides</i>	+			
<i>Butomus umbellatus</i>	+			
<i>Ceratophyllum demersum</i>	+	35	19	15
<i>Ceratophyllum submersum</i>	+	1		
<i>Chara vulgaris</i>			1	
<i>Cladophora</i> sp.	+		1	25
<i>Hydrocharis morsus-ranae</i>	+		1	2
<i>Lemna minor</i>	+		1	2
<i>Myriophyllum spicatum</i>	+	26	29	47
<i>Najas marina</i>	+	72	76	2
<i>Najas minor</i>		1		
<i>Phragmites australis</i>		21	32	50
<i>Potamogeton crispus</i>	+			5
<i>Potamogeton gramineus</i>		1		
<i>Potamogeton lucens</i>	+			
<i>Potamogeton perfoliatus</i>	+	22	13	3
<i>Potamogeton pusilus</i>		4		
<i>Salvinia natans</i>			1	2
<i>Schoenoplectus lacustris</i>	+	3	2	3
<i>Sparganium erectum</i>		1		
<i>Stuckenia pectinata</i>	+	17	16	32
<i>Trapa natans</i>	+			
<i>Typha domingensis</i>			1	
<i>Vallisneria spiralis</i>	+	23	15	7
<i>Zannichellia palustris</i>			1	7
TOTAL TAXA	16	13	15	14

Table S2. Preferences of the fish species of Lake Volvi regarding their reproductive substrate, diet, habitat and reproductive period. LITH: lithophilic, PHLI: phyto-lithophilic, PHYT: phytophilic, PEL: pelagophilic, OSTR: ostracophilic, PSAM: psammophilic, OMNI: omnivores, INV: benthivores, PLAN: planktivores, HERB: herbivores, PISC: piscivores, PEL: pelagic, and BENTH: benthic. Jan: January, Feb: February, Mar: March, Apr: April, Jun: June, Jul: July, Aug: August, Sep: September, Oct: October, Nov: November, Dec: December.

Species	Reproductive substrate	Diet	Habitat	Reproductive period											
				Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
<i>A. brama</i>	PHLI	INV	WCOL				+	+	+						
<i>A. sp. Volvi</i>	PHLI	PLAN	WCOL				+	+	+						
<i>A. volviticus**</i>	PHLI	PLAN	WCOL				+	+	+						
<i>A. macedonica</i>	LITH	PLAN/PISC	WCOL					+	+	+	+				
<i>A. anguilla***</i>	PEL	PISC	WCOL			+	+	+							
<i>B. strumicae*</i>	PSAM	INV	WCOL						+						
<i>C. gibelio</i>	PHYT	OMNI	WCOL					+	+	+					
<i>C. strumicae</i>	PHYT	INV	BENT					+	+						
<i>C. carpio</i>	PHYT	OMNI	WCOL					+	+	+					
<i>E. lucius</i>	PHYT	PISC	WCOL			+	+	+	+	+					
<i>G. holbrooki</i>	NONE	INV	WCOL				+	+	+	+	+	+	+		
<i>K. caucasica</i>	PHLI	INV	BENTH				+	+	+						
<i>H. molitrix****</i>	PSAM	PHYT	WCOL												
<i>L. aspius</i>	PHLI	PISC	WCOL			+	+	+							
<i>L. gibbosus</i>	LITH	INV	WCOL				+	+	+						
<i>P. macedonicum</i>	PHLI	INV	WCOL					+	+						
<i>P. fluviatilis</i>	PHLI	INV/PISC	WCOL		+	+	+	+	+	+					
<i>P. borysthenticus</i>	PEL/PHLI	INV	WCOL					+	+						
<i>P. parva</i>	PHLI	OMNI	WCOL				+	+	+						
<i>R. amarus</i>	OSTR	OMNI	WCOL				+	+	+	+					
<i>R. rutilus</i>	PHLI	OMNI	WCOL				+	+							

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Table S2 (continued)

Species	Reproductive substrate	Diet	Habitat	Reproductive period											
				Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
<i>S. fluviatilis</i>	LITH	INV	BENT				+	+	+	+					
<i>S. erythrophthalmus</i>	PHYT	OMNI	WCOL				+	+	+						
<i>S. aristotelis</i>	PHYT	PISC	WCOL				+	+	+	+					
<i>S. glanis</i>	PHYT	PISC	WCOL				+	+	+	+					
<i>S. orpheus</i> *	LITH	OMNI	WCOL				+	+	+						
<i>T. tinca</i>	PHYT	OMNI	WCOL				+	+	+	+					
<i>V. melanops</i>	LITH	INV	WCOL		+	+	+	+							

* rheophilic species which mainly occur in the streams

**migrates to tributaries for reproduction

***reproduces in the Sargasso Sea

****does not reproduce in the country's water bodies and it's population conservation relies on stockings. It should be noted that for species where the reproductive period is unknown, the table was completed based on available information for closely related species.