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SUPPLEMENTARY MATERIAL

Using benthic diatoms for estimating lake ecological quality: Comparing different taxonomic resolution

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Tab. S1. Trophic scores (p) and indicator values (v) for the diatom species.

Species	This paper		Original EPI-L	
	p	v	p	v
<i>Achnantheidium affine</i>	1.03	30.0	1.01	28.4
<i>Achnantheidium lineare</i>	0.81	30.0	0.79	30.0
<i>Achnantheidium pyrenaicum</i>	1.25	15.0	1.24	12.6
<i>Achnantheidium straubianum</i>	1.23	18.0	1.22	22.0
<i>Achnantheidium subatomus</i>	1.18	30.0	1.14	30.0
<i>Achnantheidium minutissimum</i>	1.05	4.60	1.09	4.6
<i>Achnantheidium saprophilum</i>	1.35	12.16	1.27	9.9
<i>Amphora inariensis</i>	1.70	7.89	1.49	11.6
<i>Amphora pediculus</i>	1.37	8.05	1.35	9.0
<i>Aulacoseira granulata</i>	1.58	23.98	1.48	20.4
<i>Aulacoseira nivalis</i>			0.80	30.0
<i>Brachysira microcephala</i>	0.63	14.52	0.68	12.3
<i>Brachysira vitrea</i>	0.70	30.0	0.69	30.0
<i>Cocconeis placentula</i>	1.63	7.25	1.31	24.9
<i>Cocconeis placentula var. lineata</i>	1.27	28.12	1.28	30.0
<i>Cocconeis pseudolineata</i>	1.30	26.29	1.31	24.9
<i>Craticula molestiformis</i>			0.50	30.0
<i>Cyclotella atomus</i>	1.54	6.03	1.48	10.4
<i>Cymbella affinis</i>	1.47	4.56	1.51	6.4
<i>Cymbella cistula</i>	1.41	9.37	1.30	10.9
<i>Cymbella excisa</i>	1.42	7.38	1.34	8.4
<i>Cymbella helvetica</i>	1.54	12.70	1.44	20.6
<i>Cymbopleura amphicephala</i>	1.52	9.80	1.42	11.3
<i>Delicata delicatula</i>	0.64	30.0	0.62	30.0
<i>Denticula tenuis</i>	0.95	5.13	0.99	5.1
<i>Discostella stelligera</i>	1.48	30.0	1.42	30.0
<i>Discostella stelligeroides</i>	0.51	19.49	0.52	18.0
<i>Encyonema caespitosum</i>	1.73	13.66	1.68	17.8
<i>Encyonema lange-bertalotii</i>	1.06	7.18	0.98	6.4
<i>Encyonema minutum</i>	0.85	6.45	0.94	5.7
<i>Encyonema paucistriatum</i>	0.75	30.0	0.79	20.0
<i>Encyonema silesiacum</i>	0.83	8.36	0.92	5.6
<i>Encyonema ventricosum</i>	1.58	4.24	1.61	6.9
<i>Encyonopsis cesatii</i>	0.56	19.32	0.58	17.1
<i>Encyonopsis microcephala</i>	0.76	11.04	0.78	10.1
<i>Encyonopsis minuta</i>	0.86	11.77	0.94	5.7
<i>Encyonopsis subminuta</i>	0.80	9.10	0.87	6.5
<i>Eolimna minima</i>			1.36	12.0
<i>Epithemia adnata</i>			1.31	30.0
<i>Epithemia sorex</i>	1.44	30.0	1.35	30.0
<i>Eucoconeis flexella</i>	0.47	30.0	0.48	30.0
<i>Eunotia exigua</i>	0.67	30.0		
<i>Eunotia microcephala</i>	1.23	10.70		
<i>Fragilaria capucina</i>	1.13	5.51	1.21	8.5
<i>Fragilaria crotonensis</i>	1.60	17.46	1.50	15.3
<i>Fragilaria gracilis</i>	1.29	3.50	1.27	3.3

Species	This paper		Original EPI-L	
	<i>p</i>	<i>v</i>	<i>p</i>	<i>v</i>
<i>Fragilaria perminuta</i>	1.27	20.40	1.28	17.4
<i>Fragilaria rumpens</i>	1.30	10.38	1.27	16.1
<i>Fragilaria tenera</i>	0.72	11.15	0.85	8.7
<i>Fragilaria tenera var. nanana</i>	0.91	7.39	0.84	7.2
<i>Fragilaria vaucheriae</i>	1.32	15.09	1.36	14.6
<i>Gomphonema minutum</i>	1.10	12.32	1.15	12.4
<i>Gomphonema olivaceum</i>	1.38	29.21	1.32	30.0
<i>Gomphonema oliveolacuum</i>			1.28	30.0
<i>Gomphonema parvulum</i>	1.52	5.41	1.42	5.0
<i>Gomphonema pumilum</i>	1.53	7.36	1.56	10.2
<i>Gomphonema tergestinum</i>	1.29	22.83	1.27	30.0
<i>Gomphonema truncatum</i>	1.15	7.77	1.21	9.2
<i>Grunowia tabellaria</i>	1.38	10.69	1.32	11.1
<i>Karayevia clevei</i>			1.35	30.0
<i>Iconella linearis</i>			0.76	11.1
<i>Lindavia radiosa</i>	1.29	3.99		
<i>Lindavia lemanensis</i>			1.59	19.1
<i>Mastogloia smithii</i>			1.54	19.1
<i>Mayamaea permitis</i>	1.64	30.0	1.48	30.0
<i>Melosira varians</i>	0.92	5.91	0.80	6.2
<i>Navicula antonii</i>			1.28	14.7
<i>Navicula capitatoradiata</i>	1.41	6.58	1.39	6.0
<i>Navicula cryptotenella</i>	1.24	6.62	1.26	7.7
<i>Navicula menisculus</i>	1.49	19.96	1.39	2.4
<i>Navicula tenelloides</i>			1.39	30.0
<i>Navicula tripunctata</i>			1.68	15.2
<i>Navicula veneta</i>	1.83	30.0	1.74	30.0
<i>Nitzschia amphibia</i>			1.52	8.7
<i>Nitzschia capitellata</i>	1.47	9.57	1.44	10.0
<i>Nitzschia capitoradiata</i>			1.39	6.0
<i>Nitzschia dissipata</i>	1.55	6.41	1.47	8.2
<i>Nitzschia fonticula</i>	1.60	8.47	1.49	10.5
<i>Nitzschia frustulum</i>	1.89	18.12	1.64	11.7
<i>Nitzschia lacuum</i>	1.91	11.91	1.71	8.7
<i>Nitzschia microcephala</i>	1.66	18.75	1.52	18.1
<i>Nitzschia palea</i>	1.36	6.35	1.32	7.1
<i>Nitzschia recta</i>	1.20	4.43	1.25	7.4
<i>Nitzschia sociabilis</i>	1.59	13.66	1.53	12.5
<i>Nitzschia soratensis</i>	1.54	16.82	1.46	18.9
<i>Odontidium mesodon</i>	0.59	30.0	0.60	30.0
<i>Pantocsekiella comensis</i>	0.67	30.0	0.67	30.0
<i>Pantocsekiella costei</i>	0.84	5.13	1.14	7.3
<i>Pantocsekiella kuetzingiana</i>			1.34	30.0
<i>Pantocsekiella ocellata</i>	1.40	6.42	1.44	6.8
<i>Pinnularia microstauron var nonfasciata</i>	0.88	7.61	0.94	7.1
<i>Planothidium lacus-vulcani</i>	0.59	10.92	0.66	7.5
<i>Planothidium rostratum</i>			1.24	30.0

Species	This paper		Original EPI-L	
	p	v	p	v
<i>Psammothidium helveticum</i>	0.43	30.0		
<i>Psammothidium marginulatum</i>	0.59	30.0	0.60	30.0
<i>Psammothidium microscopicum</i>	0.80	5.56	0.88	4.6
<i>Psammothidium scoticum</i>	0.84	5.44	0.83	5.5
<i>Pseudostaurosira brevistriata</i>	1.14	5.60	1.24	6.6
<i>Pseudostaurosira elliptica</i>	0.66	3.51	0.81	2.5
<i>Reimeria sinuata</i>	1.14	18.32	1.15	14.4
<i>Rhoicosphenia abbreviata</i>			1.33	30.0
<i>Rhopalodia gibba</i>	1.62	16.50	1.51	18.5
<i>Staurosira binodis</i>	0.82	8.59	0.86	9.1
<i>Staurosira construens</i>	0.85	9.60	0.98	7.0
<i>Staurosira mutabilis</i>	0.97	5.16	1.06	4.7
<i>Staurosira venter</i>	1.31	5.54	1.23	7.6
<i>Tabellaria flocculosa</i>	0.90	7.60	0.99	7.2
<i>Ulnaria acus</i>			1.24	7.8
<i>Ulnaria ulna</i>			1.34	16.3

Tab. S2. Indicator values and trophic scores for the diatom genera (or part of them).

Taxon	Trophic score (p)	Indicator value (t)
<i>Achnanthydium lineare</i>	0.98	26.09
other <i>Achnanthydium</i>	1.06	4.90
<i>Amphora</i>	1.45	7.41
<i>Aulacoseira</i>	1.63	23.98
<i>Brachysira</i>	0.62	22.85
<i>Cocconeis</i>	1.57	7.83
<i>Cyclotella</i>	1.62	6.60
<i>Cymbella</i>	1.49	5.59
<i>Cymbopleura</i>	1.57	9.80
<i>Delicata</i>	0.57	30.00
<i>Denticula</i>	0.92	5.13
<i>Discostella stelligera</i>	1.52	30.00
<i>Discostella stelligeroides</i>	0.42	19.49
<i>Encyonema caespitosum</i> + <i>E. ventricosum</i>	1.74	7.30
other <i>Encyonema</i>	0.81	7.37
<i>Encyonopsis</i>	0.71	10.78
<i>Epithemia</i>	1.45	30.00
<i>Eucocconeis</i>	0.38	30.00
<i>Eunotia exigua</i>	0.61	30.00
other <i>Eunotia</i>	1.24	10.70
<i>Fragilaria crotonensis</i>	1.65	17.46
<i>Fragilaria tenera</i> + <i>F. tenera</i> var. <i>nanana</i>	0.77	8.40
other <i>Fragilaria</i>	1.29	11.34
<i>Gomphonema</i>	1.35	10.23
<i>Grunowia</i>	1.41	10.69
<i>Lindavia</i>	1.31	3.99
<i>Mayamaea</i>	1.70	30.00
<i>Melosira</i>	0.89	5.91
<i>Navicula</i>	1.35	6.53
<i>Nitzschia</i>	1.58	6.89
<i>Odontidium</i>	0.52	30.00
<i>Pantocsekiella ocellata</i>	1.43	6.42
other <i>Pantocsekiella</i>	0.72	8.60
<i>Pinnularia</i>	0.85	7.61
<i>Planothidium</i>	1.21	10.68
<i>Psammothidium</i>	0.57	8.67
<i>Pseudostaurosira</i>	1.07	4.65
<i>Reimeria</i>	1.14	18.32
<i>Rhopalodia</i>	1.67	16.50
<i>Staurosira</i>	0.91	6.03
<i>Tabellaria</i>	0.86	7.60