The following supplement accompanies the article

Testing the theory of island biogeography for microorganisms – patterns for spring diatoms

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Supplement.

Fig. S1. Species accumulation curves for the most species-rich spring (circles) and the most species-poor spring (squares) among the 50 boreal springs. Filled symbols indicate rarefied species richness values and open symbols indicate standard errors

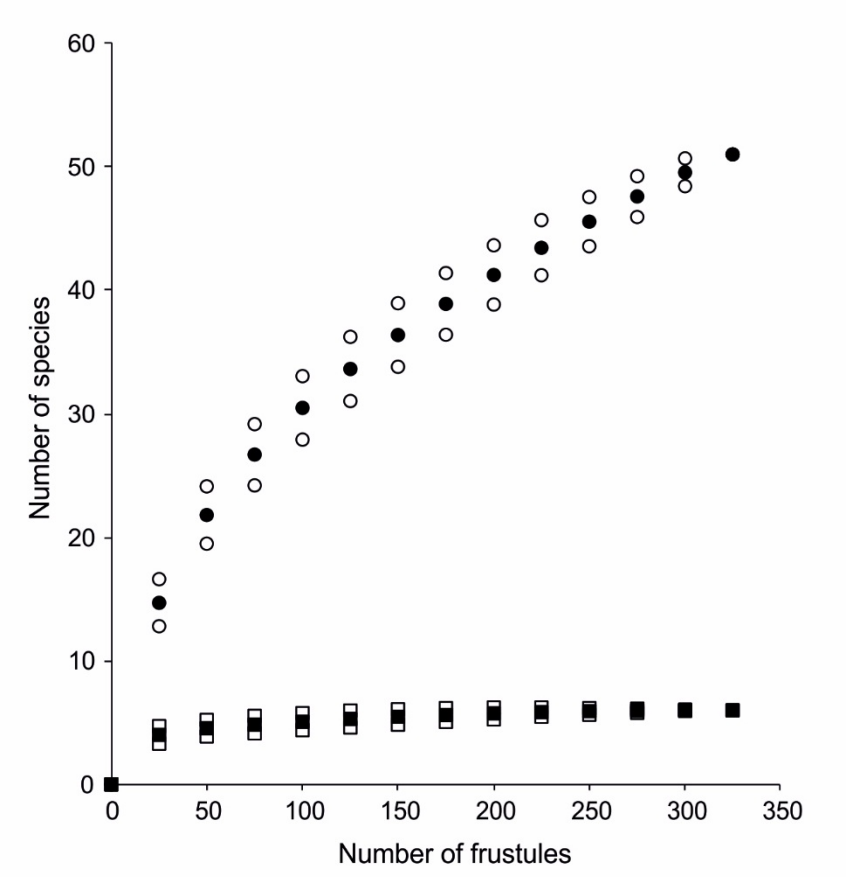

Table S1. Means, ranges, medians and standard deviations (SD) for local environmental and catchment variables

Variable	Mean (Range)	Median	SD
Local environmental			
Total N (µg l^{-1})	628 (20–1822)	472	487
Total P (µg l^{-1})	24 (2–78)	19	19
pH	- (4.7–7.2)	6.1	0.5
Conductivity (µS cm^{-1})	74 (14–294)	64	49
Temperature (°C)	8.2 (4.0–14.8)	7.1	3.1
Colour (mg Pt l^{-1})	26 (0–160)	5	41
Shading (%)	50 (0–90)	54	24
Area (m²)	12 (0.04–120)	5	20
Catchment			
300 m (radius)			
Artificial (%)	9 (0–64)	6	11
Agriculture (%)	16 (0–73)	9	17
Forests (%)	74 (22–100)	79	21
Wetlands (%)	0 (0–3)	0	1
Water bodies (%)	1 (0–16)	0	2
1000 m (radius)			
Artificial (%)	9 (0–35)	7	8
Agriculture (%)	20 (0–47)	20	14
Forests (%)	68 (26–98)	70	18
Wetlands (%)	1 (0–9)	0	2
Water bodies (%)	2 (0–26)	0	5

Table S2. Spearman's rank correlation coefficients and statistical significances based on p-values for local environmental variables, coordinates, and catchment variables (radius 300 m) (- nonsignificant, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$)

	Total N	Total P	pH	Conductivity	Temperature	Colour	Area	Shading	Latitude	Longitude	Artificial	Agriculture	Forests	Wetlands	Water bodies
Total N		0.38	–0.14	0.13	0.26	0.17	0.03	0.12	–0.26	0.05	0.20	0.20	–0.24	0.14	–0.33
Total P	**		–0.12	–0.10	0.49	0.63	–0.25	0.29	–0.32	0.02	0.07	–0.13	0.08	0.15	–0.17
pH	-	-		0.42	–0.27	–0.33	0.11	–0.04	0.32	0.14	–0.17	–0.23	0.20	–0.02	0.32
Cond.	-	-	**		0.11	–0.16	0.05	0.05	–0.23	0.09	0.14	0.33	–0.40	–0.27	–0.03
Temp.	-	***	-	-		0.63	–0.12	0.12	–0.55	–0.30	0.10	0.26	–0.27	0.16	–0.27
Colour	-	***	*	-	***		–0.22	0.15	–0.38	–0.23	0.01	–0.06	0.05	0.15	–0.19
Area	-	-	-	-	-	-		0.02	0.35	0.07	–0.19	0.02	0.07	0.22	–0.13
Shading	-	*	-	-	-	-	-		0.04	0.18	–0.24	0.04	0.03	0.10	–0.16
Latitude	-	*	*	-	***	**	*	-		0.14	–0.28	–0.51	0.47	0.13	0.18
Longitude	-	-	-	-	*	-	-	-	-		–0.16	0.08	–0.04	–0.16	0.05
Artificial	-	-	-	-	-	-	-	-	*	-		0.33	–0.60	–0.13	–0.39
Agriculture	-	-	-	*	-	-	-	-	***	-	*		–0.90	–0.16	–0.38
Forests	-	-	-	**	-	-	-	-	***	-	***	***		0.16	0.33
Wetlands	-	-	-	-	-	-	-	-	-	-	-	-	-		–0.10
Water bod.	*	-	*	-	-	-	-	-	-	-	**	**	*	-	

Fig S2. Scatter plots of the relationship between Chao1-estimated diatom species richness and total N, total P, pH, conductivity, temperature, colour, shading, latitude (north coordinate, Finnish Uniform Coordinate System), and longitude (east coordinate, Finnish Uniform Coordinate System) with Spearman's rank correlation coefficients and statistical significances based on p-values (ns = nonsignificant, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$)