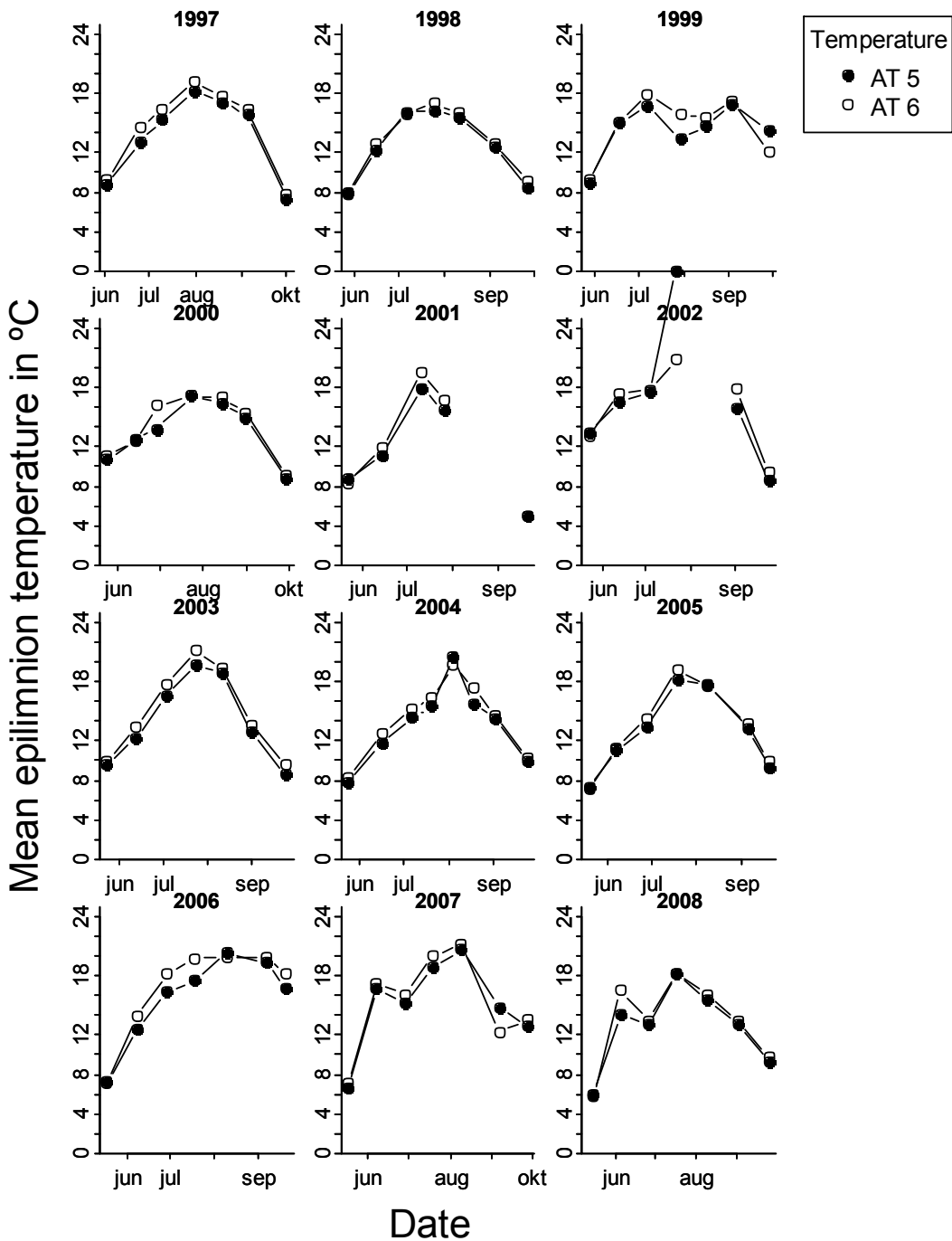


Appendix A1

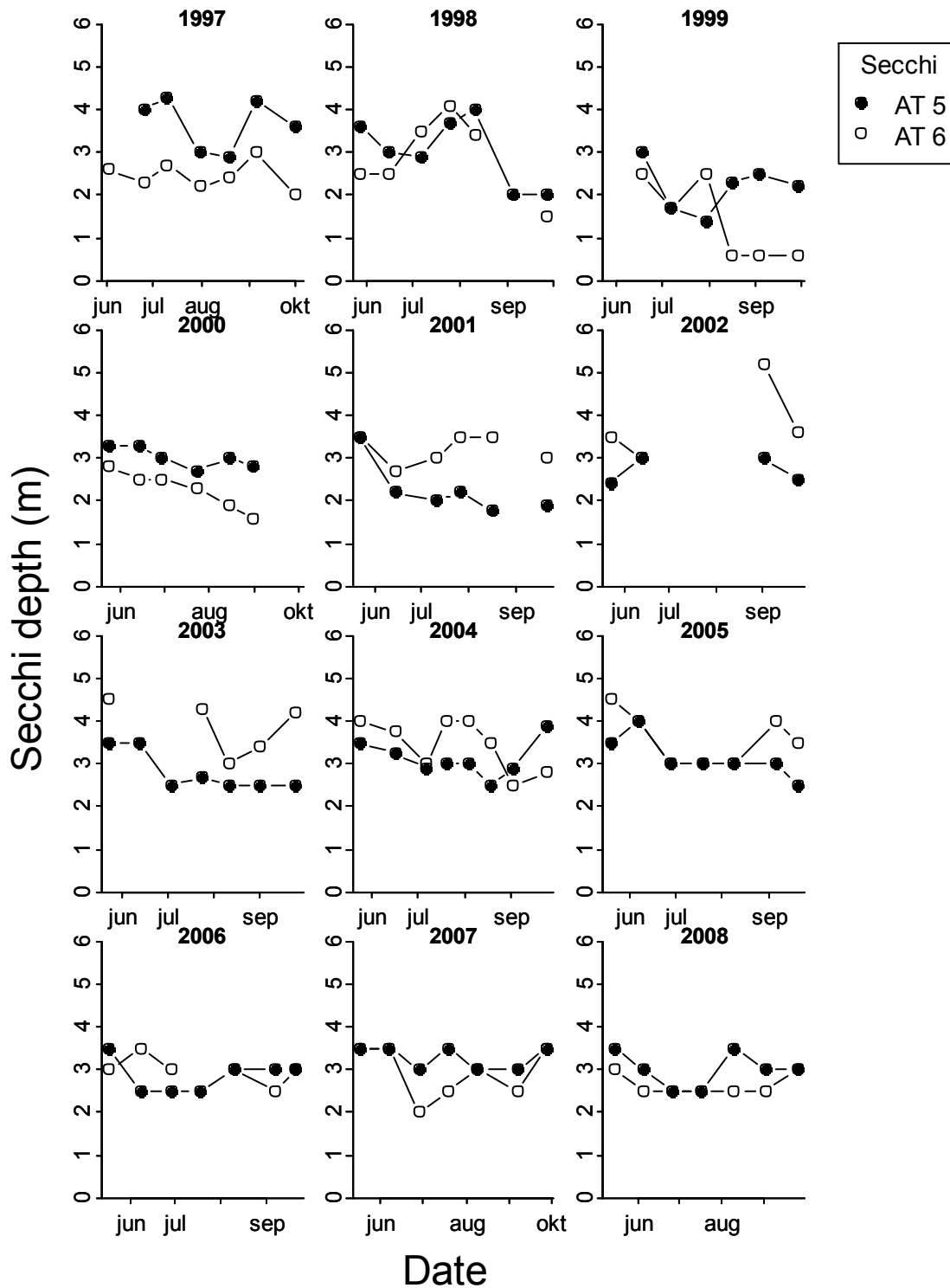
Appendix A1A

Seasonal mean epilimnion temperature in lakes AT5 and AT6.



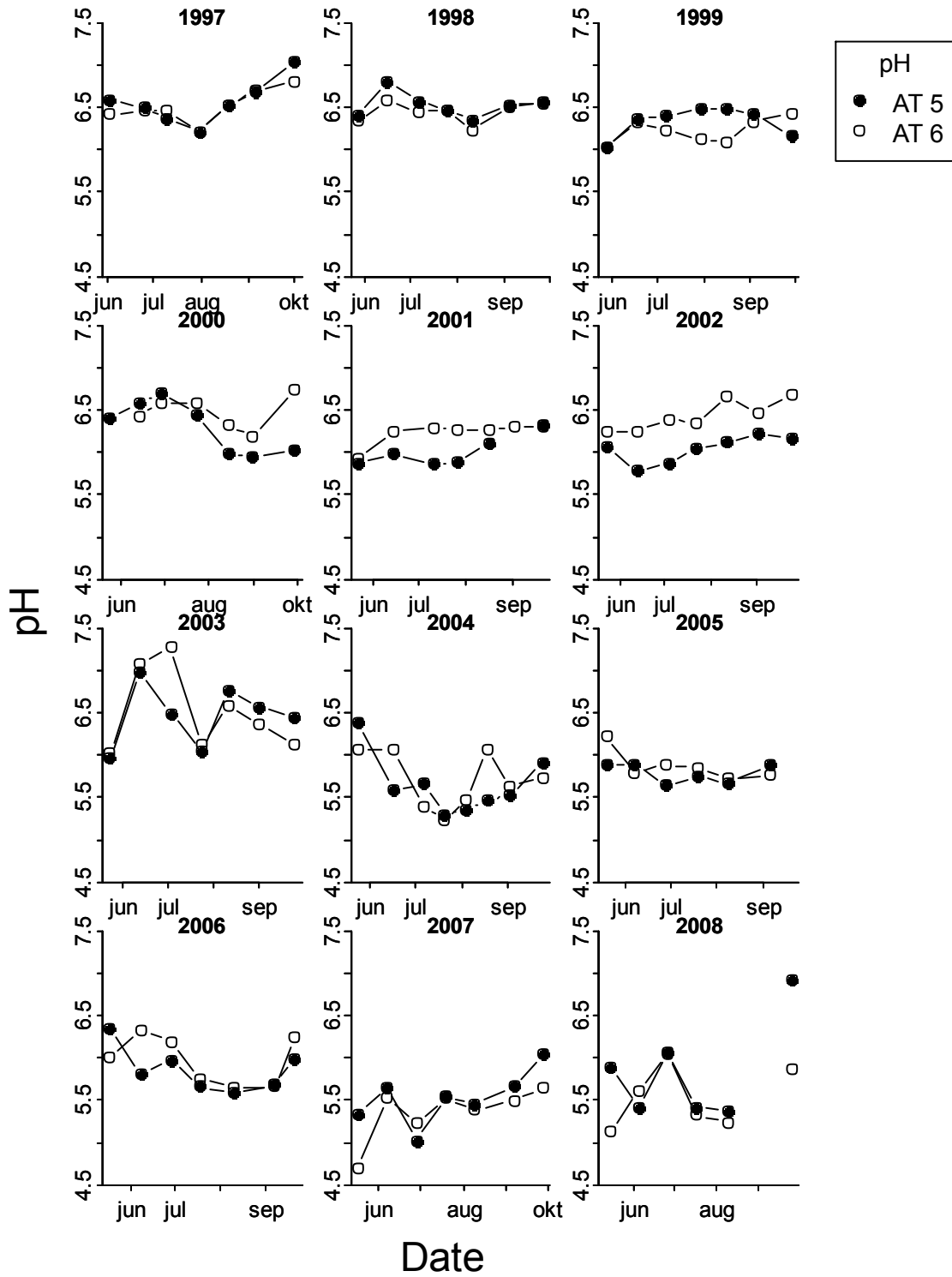
Appendix A1B

Seasonal Secchi depth in lakes AT5 and AT6.



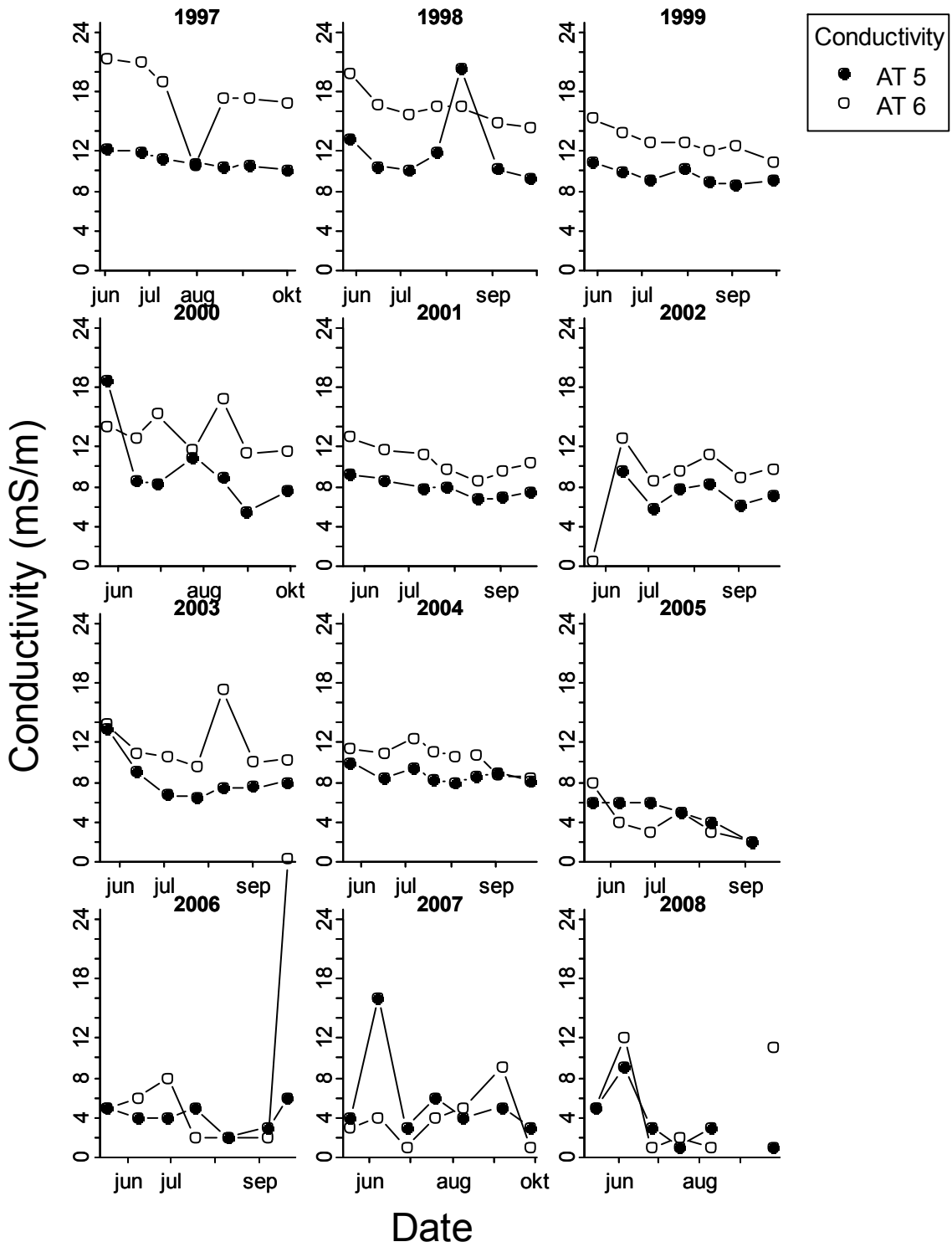
Appendix A1C

Seasonal pH in lakes AT5 and AT6. Note that from 2004 onwards a different instrument was used.



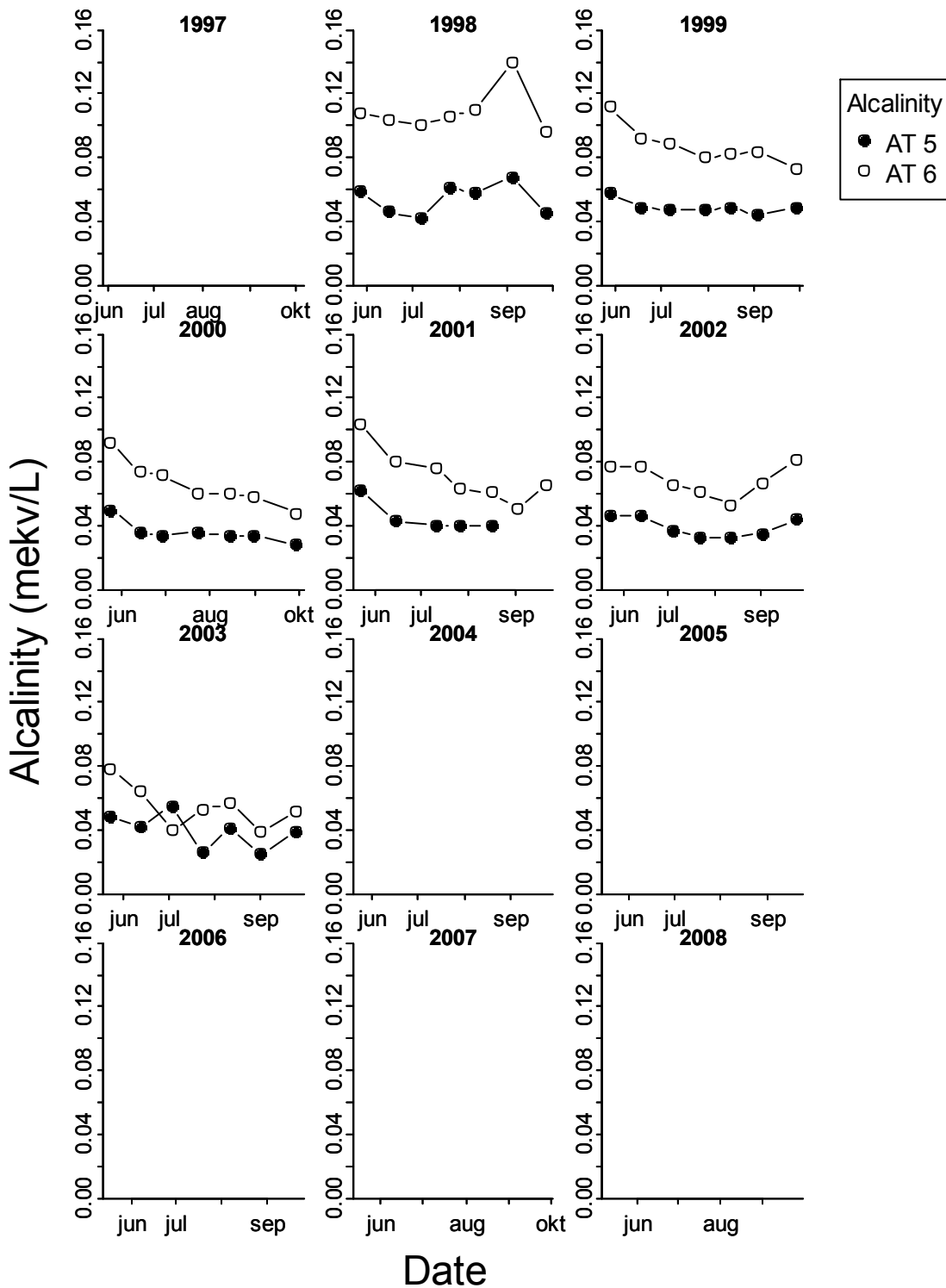
Appendix A1D

Seasonal conductivity in lakes AT5 and AT6. Note that from 2004 onwards a different instrument was used.



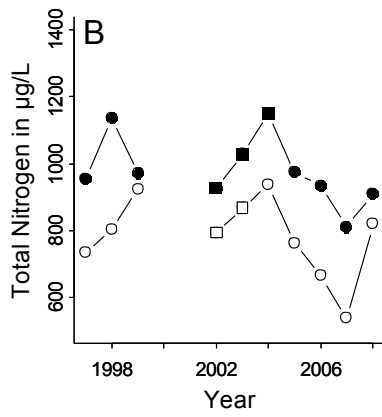
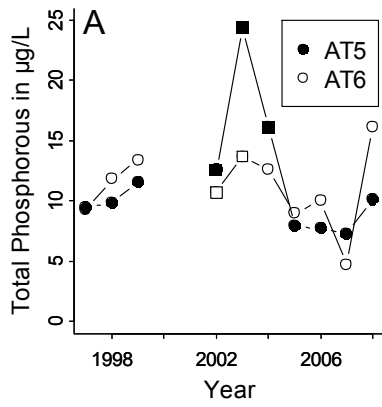
Appendix A1E

Seasonal alkalinity in lakes AT5 and AT6. Only measured from 1998 through 2003.



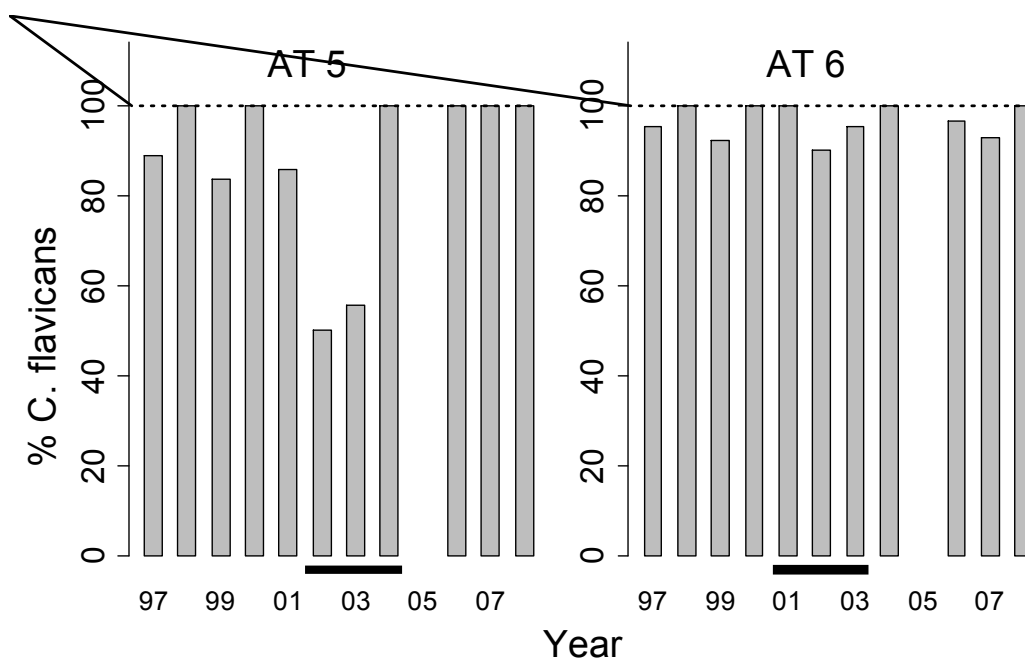
Appendix A1F

Phosphorous and nitrogen concentrations in lakes AT5 (filled symbols) and AT6 (open symbols). Squares represent values during the perturbation period.



Appendix A2

Relative *Chaoborus* species composition over the course of the experiment in lakes AT5 (left panel) and AT6 (right panel). For each year, 3rd and 4th instar larvae from late summer and autumn samples were identified to the species level using the key provided by Sæther (1997). Younger larvae could not easily be identified unambiguously. On average, 96 % of identified individuals were *C. flavicans*, the rest were *C. obscuribes*. No other *Chaoborus* species than these two were found in the lakes or enclosures. The lines below each x-axis depict the presence of fish. In 2005 no samples were conserved to assess the *Chaoborus* species composition. The percentages for the perturbation periods, especially in AT5, are based on very few individuals.

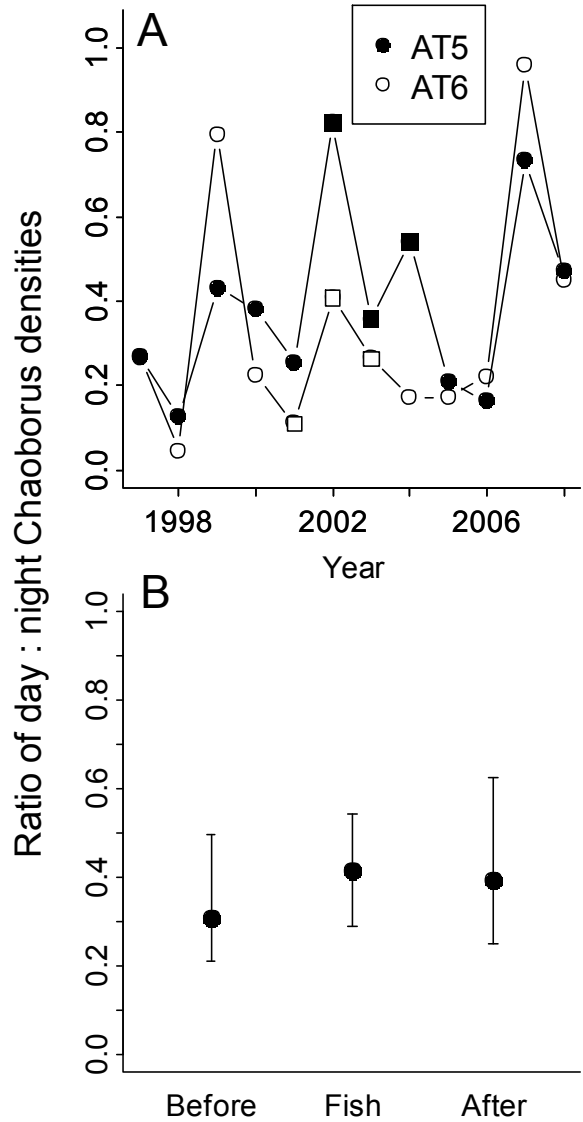


References

Sæther, O. A. 1997. Diptera Chaoboridae, phantom midges. – In: Nilsson, A. (ed.), Aquatic insects of North Europe. A taxonomic handbook, Vol. 2. Apollo, pp. 149–161.

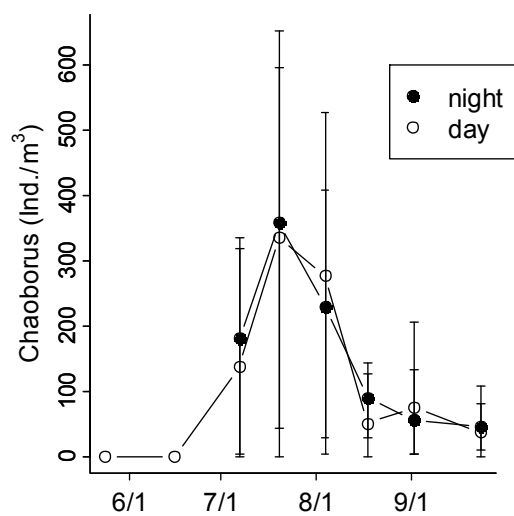
Appendix A3

Ratio of day:night densities of *Chaoborus*. (A) Change over the time course of the experiment in each lake (AT5 = filled symbols, AT6 = open symbols). Squares represent values during the perturbation period. (B) Arithmetic bootstrap treatment means (n = 2, R = 1000, stratified by lake) and their bias-corrected and adjusted 95% confidence intervals.



Appendix A4

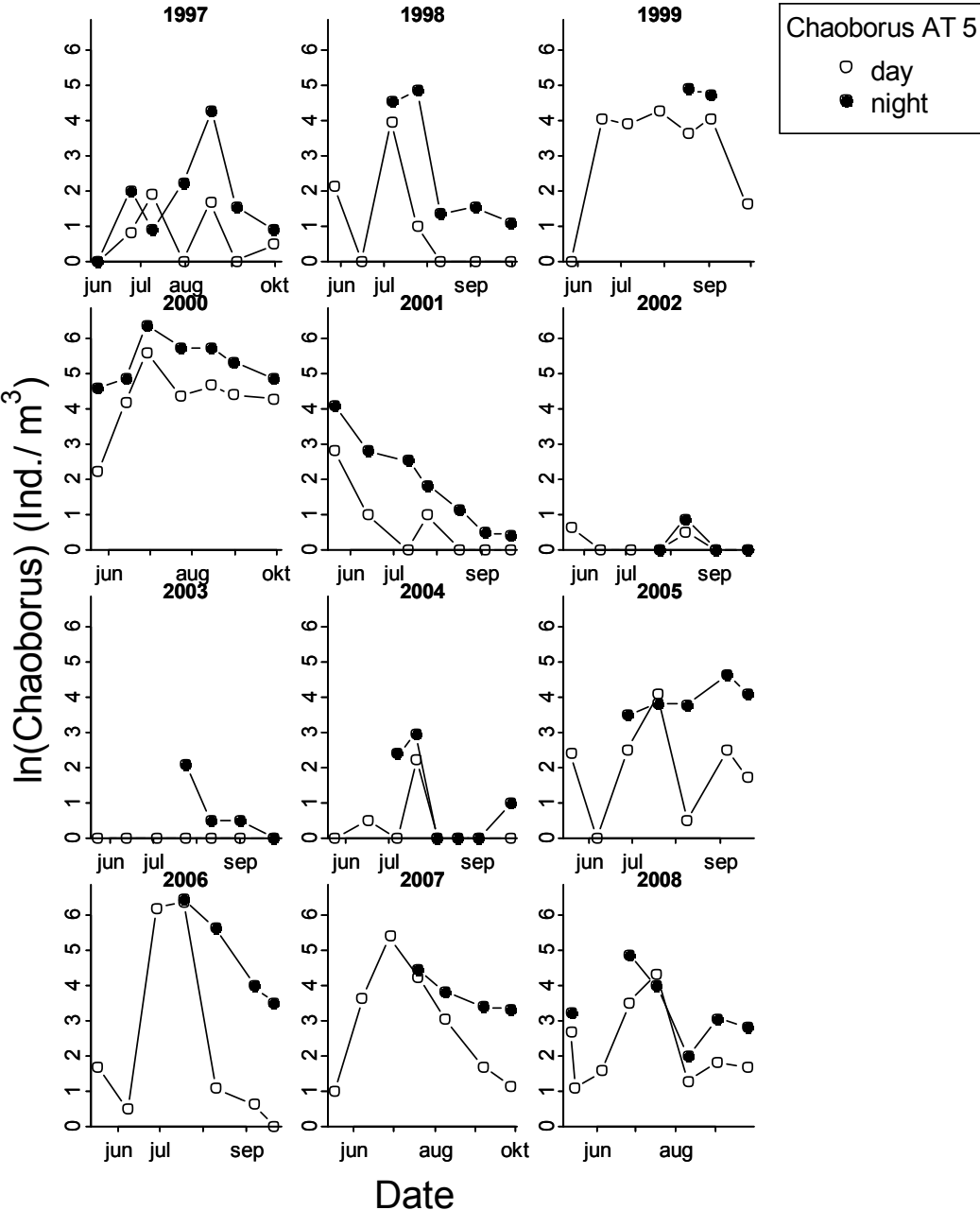
Chaoborus larvae density over the ice-free period in year 2004 in mesocosms in AT6 with initial exclusion of mesozooplankton. Exclusion was achieved by filtering the lake water used to fill the enclosures through a 74 μm cloth. No unfiltered control was performed for this pilot study. Symbols show the arithmetic bootstrap mean ($n = 3$, $R = 1000$) for each date. Error bars give the bias-corrected and adjusted 95% bootstrap confidence interval of the mean.



Appendix A5

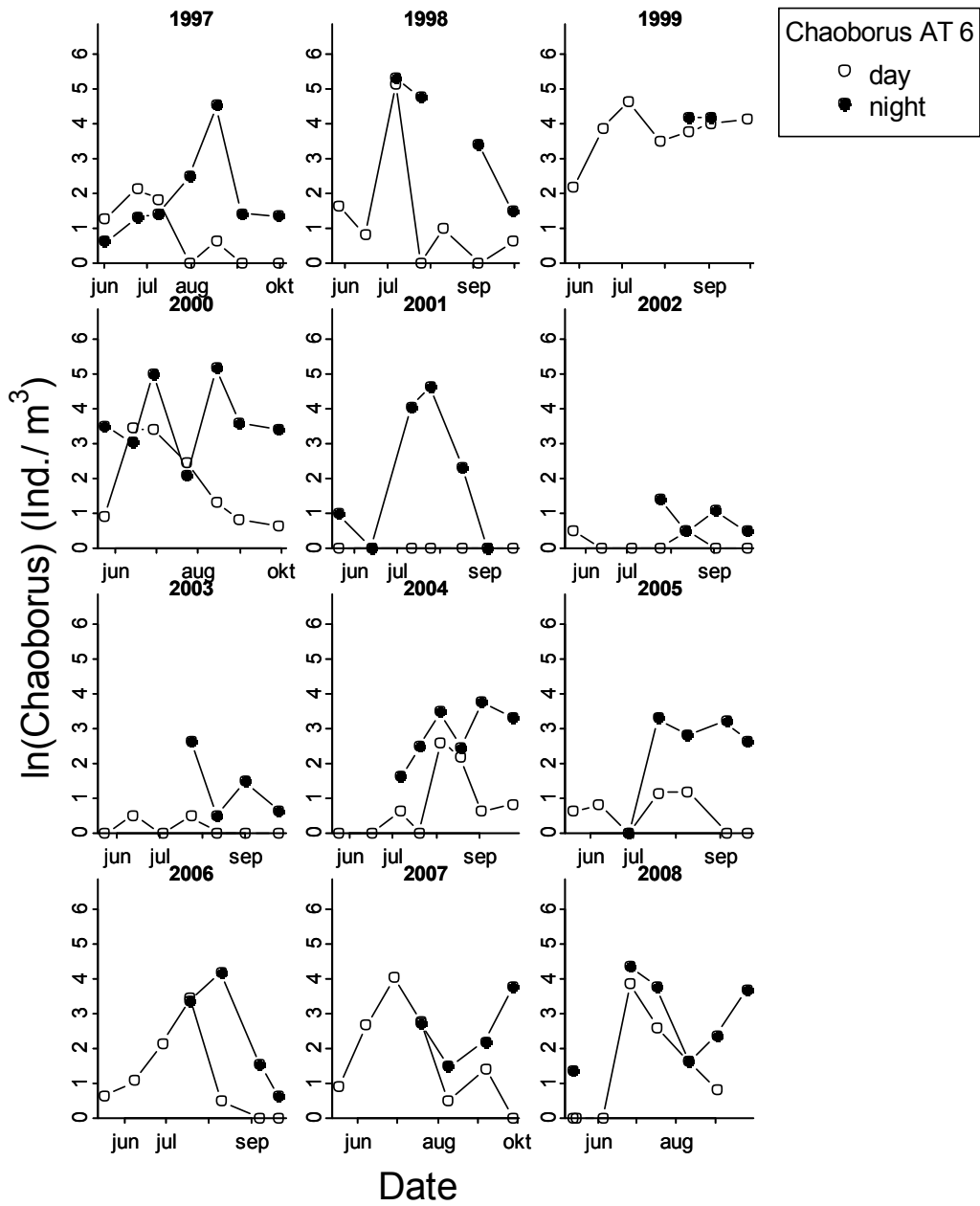
Appendix A5A

Seasonal dynamics of *Chaoborus* larvae in Lake AT5 for each year of the study. The perturbation period lasted from 2002–2004.



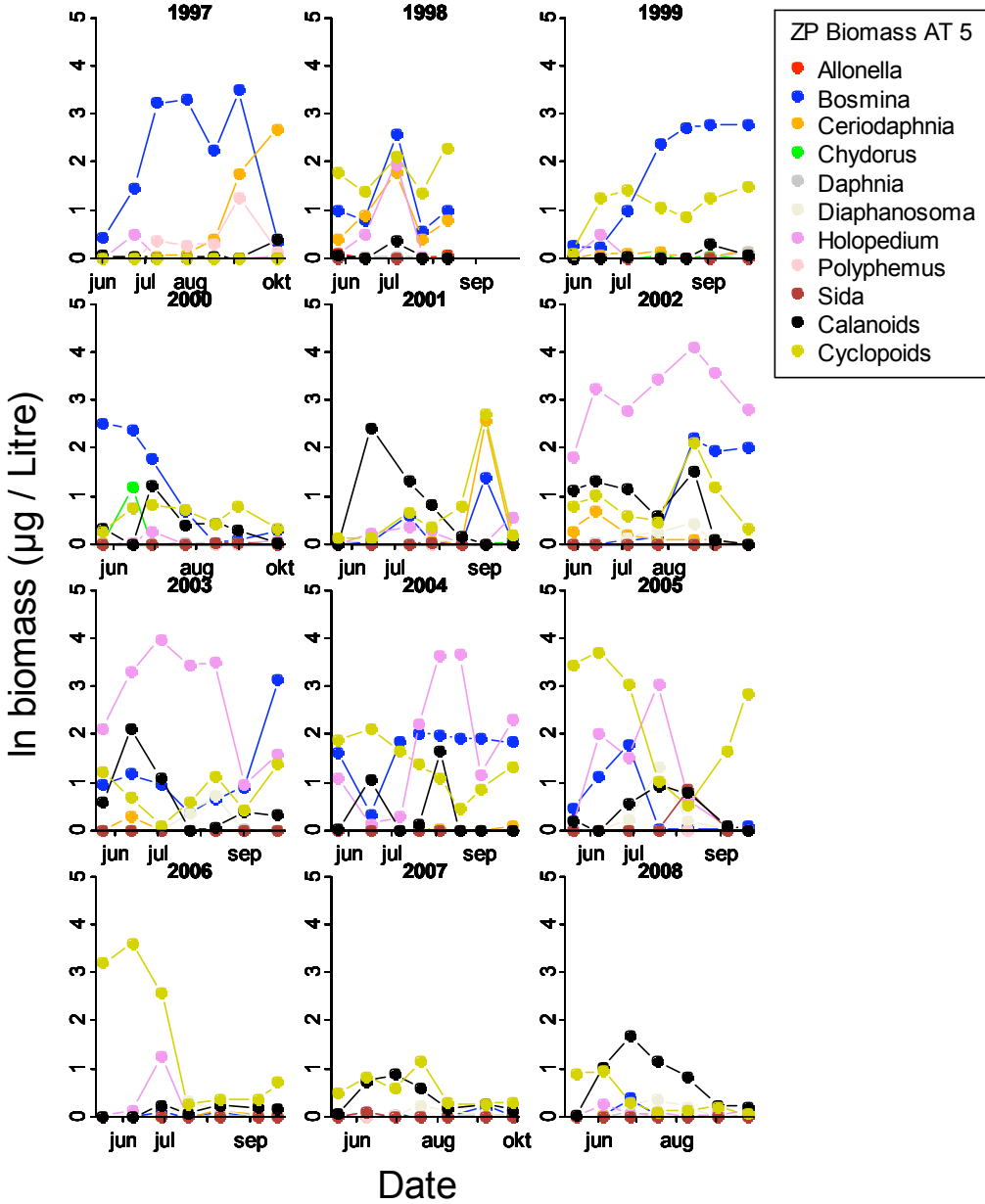
Appendix A5B

Seasonal dynamics of *Chaoborus* larvae in Lake AT6 for each year of the study. The perturbation period lasted from 2001–2003.



Appendix A5C

Seasonal dynamics of mesozooplankton in Lake AT5 for each year of the study. The perturbation period lasted from 2002–2004.



Appendix A5D

Seasonal dynamics of mesozooplankton in Lake AT6 for each year of the study. The perturbation period lasted from 2001–2003.

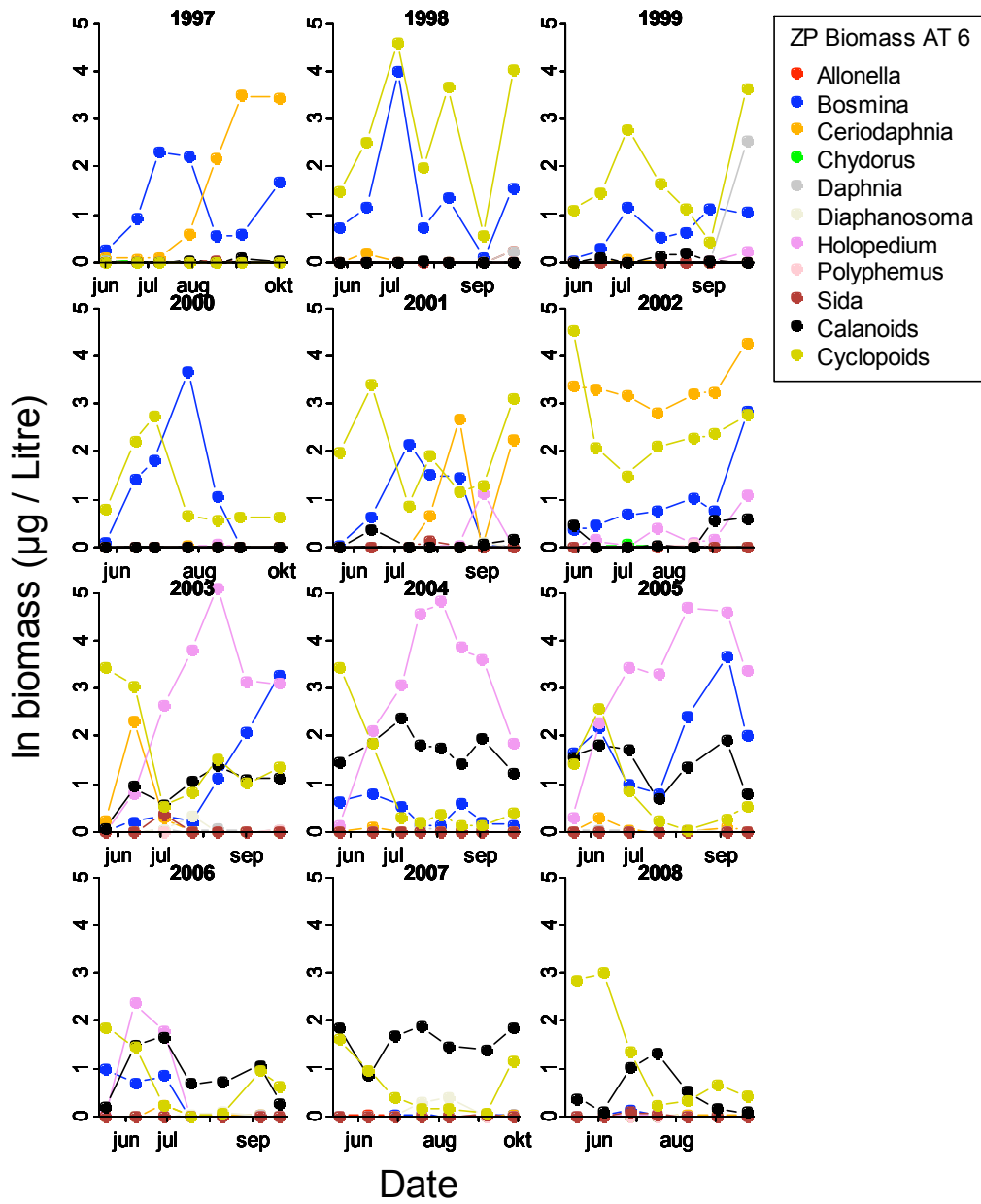
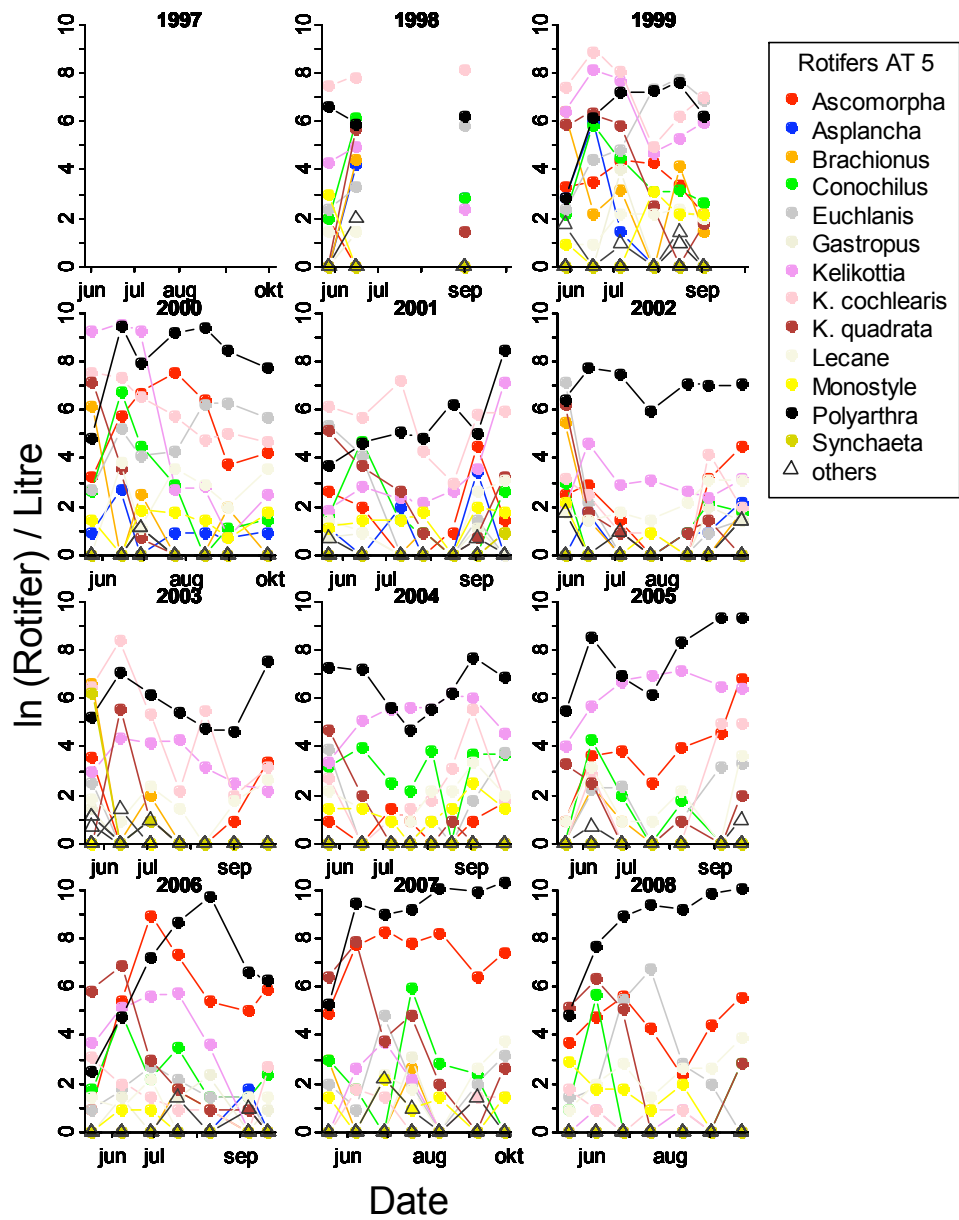


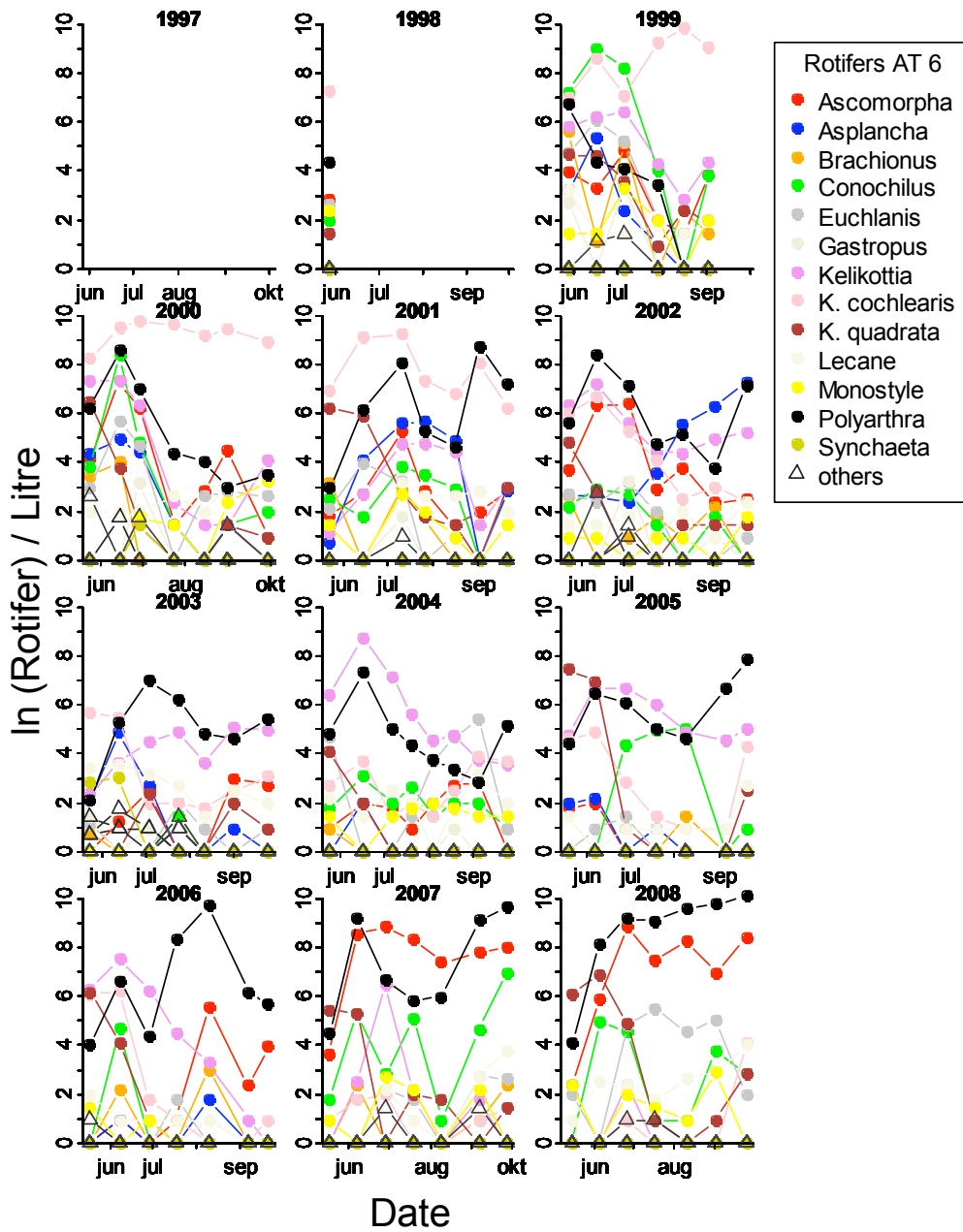
Figure A5E

Seasonal dynamics of rotifers abundances in Lake AT5 for each year of the study. The perturbation period lasted from 2002–2004.



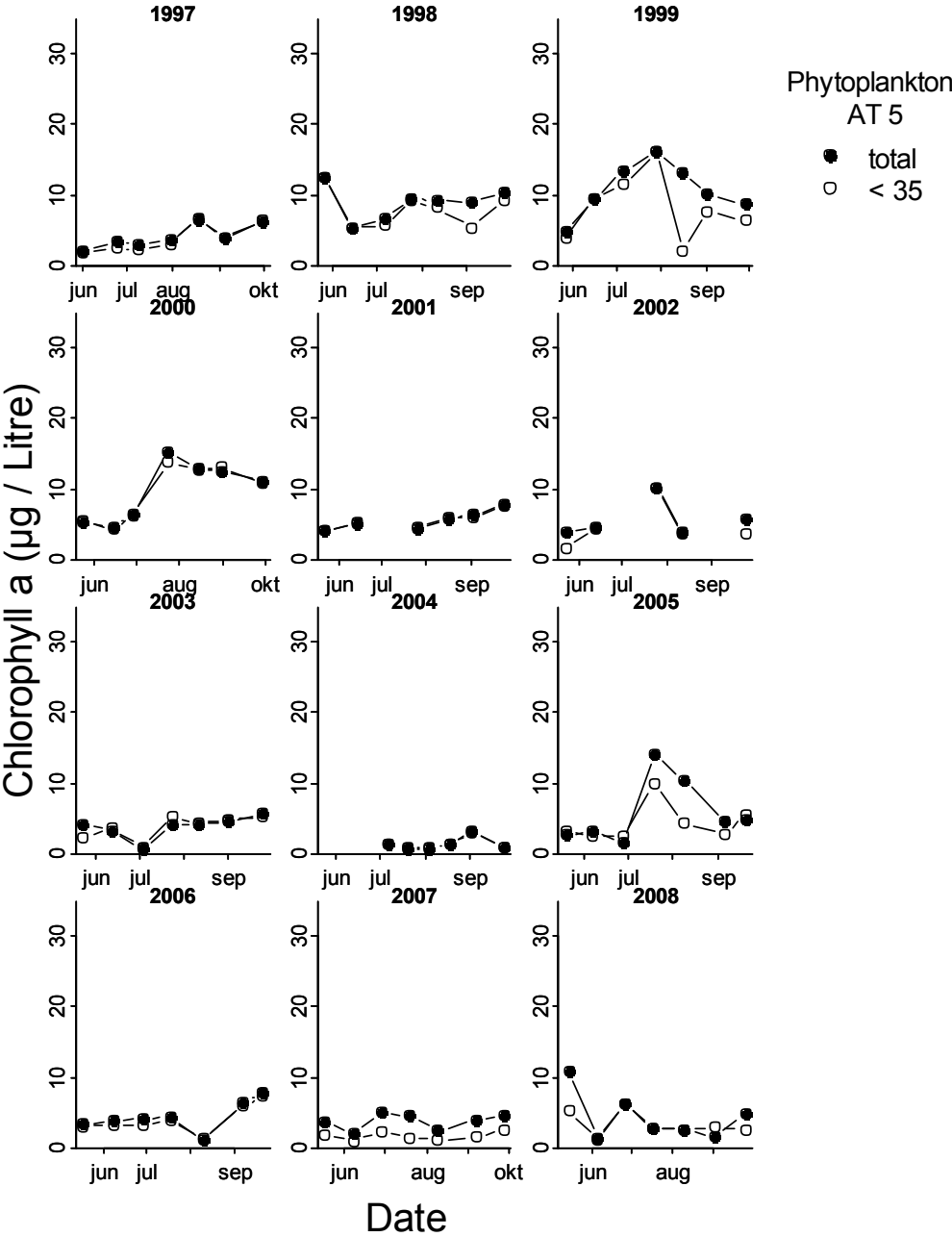
Appendix A5F

Seasonal dynamics of rotifer abundances in Lake AT6 for each year of the study. The perturbation period lasted from 2001–2003.



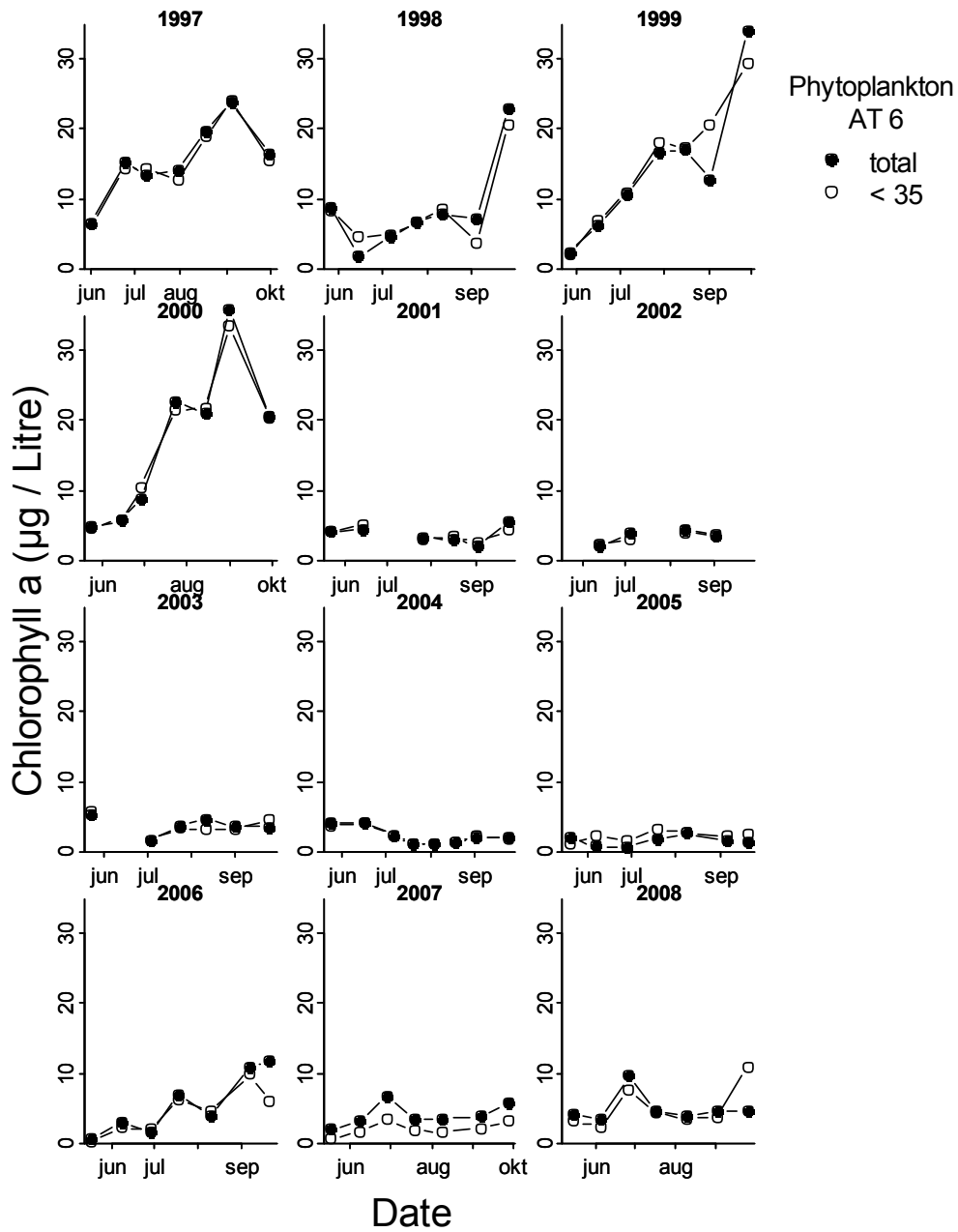
Appendix A5G

Seasonal dynamics of phytoplankton biomass in Lake AT5 for each year of the study. The perturbation period lasted from 2002–2004.



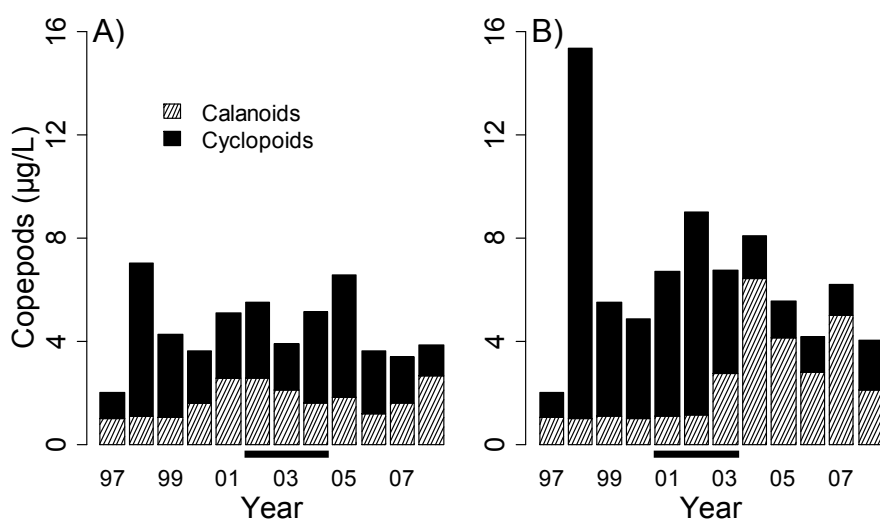
Appendix A5H

Seasonal dynamics of phytoplankton biomass in Lake AT6 for each year of the study. The perturbation period lasted from 2001–2003.



Appendix A6

Density of copepods in lakes AT5 (left panel) and AT6 (right panel) over the course of the experiment. Bar heights show the geometric mean over the summer (end of June to early September) of each year. The lines below each X-axis depict the presence of fish. Arithmetic bootstrap treatment means ($n = 2$, $R = 1000$, stratified by lake) and their bias-corrected and adjusted 95% confidence intervals are: Calanoids Before 1.3 [1.05, 1.7], Fish 1.9 [1.4, 2.4], After 3.1 [2.3, 3.9]; Cyclopoids Before 4.3 [2.5, 7.5], Fish 4.3 [3.4, 5.3], After 2.0 [1.5, 2.7].



Appendix A7

Permutation ANOVA statistics

Table A7.1. Permutation ANOVA statistics for different similarity indices and whether or not the first two years of the post-perturbation period were classified as ‘fish’ or ‘after’. (A) based on individual summer samplings. (B) based on geometric season means over summer samplings.

		Years AT6 ‘04/’05 = ‘After’				Years AT6 ‘04/’05 = ‘Fish’			
		$F_{1,85/1,18}$	p	R^2	SS	$F_{1,85/1,18}$	P	R^2	SS
(A)	Bray	8.26	< 0.001	0.16	24.5	12.76	< 0.001	0.23	22.1
	Manhattan	10.97	< 0.001	0.21	$6.8 \cdot 10^9$	16.52	< 0.001	0.28	$6.1 \cdot 10^9$
	Euclidean	10.89	< 0.001	0.20	$3.8 \cdot 10^9$	18.70	< 0.001	0.31	$3.2 \cdot 10^9$
	Jaccard	6.05	< 0.001	0.12	29.46	8.82	< 0.001	0.17	27.87
(B)	Bray	3.08	0.007	0.26	4.39	5.24	< 0.001	0.37	3.72
	Manhattan	3.52	0.019	0.30	$6.5 \cdot 10^8$	5.79	0.002	0.39	$5.7 \cdot 10^8$
	Euclidean	3.05	0.026	0.25	$4.5 \cdot 10^8$	4.98	< 0.001	0.36	$3.9 \cdot 10^8$
	Jaccard	2.34	0.007	0.21	5.65	3.67	< 0.001	0.29	5.05