

Wilken, S., Verspagen, J. M. H., Naus-Wiezer, S., Ellen Van Donk, and Huisman, J. 2013. Comparison of predator-prey interactions with and without intraguild predation by manipulation of the nitrogen source. *Oikos* 000: 000–000.

Appendix A1

Detailed population dynamics of *Microcystis* in mixed cultures

Microcystis was strongly suppressed through intraguild predation by *Ochromonas* (Fig. 4A,B). However, the scale of Fig. 4A,B is too coarse to assess whether *Microcystis* went truly extinct. Therefore, Fig. A1 shows a higher resolution of the population dynamics of *Microcystis* during the last 25 days of these experiments. This shows that *Microcystis* was not driven to extinction, but persisted at very low population abundances fluctuating between 5 and 500 cells ml⁻¹.

One might dismiss the persistence of such low *Microcystis* concentrations in the chemostats as an experimental artefact, for instance because of wall growth preventing removal of the last remnants of *Microcystis* from the chemostat vessels. However, we observed only marginal wall growth in our experiments, and any potential wall growth was removed daily by scraping the inside walls of the chemostat vessels with a magnetic stir bar. Moreover, the persistence of *Microcystis* shown in Fig. A1 was very different from previous phytoplankton competition experiments in our laboratory, with similar chemostat systems, where inferior competitors always continued to decline until the end of the experiment (Huisman et al. 1999, Passarge et al. 2006).

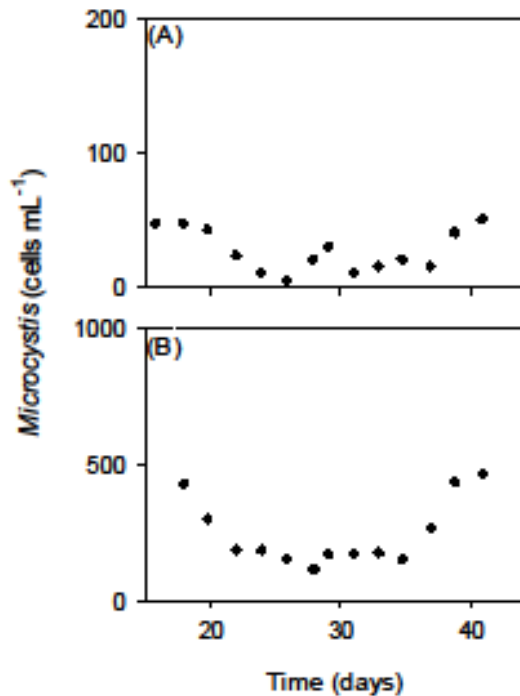


Fig. A1. Enhanced resolution of the population dynamics of *Microcystis* subjected to intraguild predation by *Ochromonas* in mixed cultures growing on ammonium. (A) Enhanced resolution of the *Microcystis* data in Fig. 4A of the main text. The mixed culture was derived from inoculation of *Microcystis* into the steady-state monoculture of *Ochromonas*. (B) Enhanced resolution of the *Microcystis* data in Fig. 4B of the main text. The mixed culture was derived from inoculation of *Ochromonas* into the steady-state monoculture of *Microcystis*.

References

- Huisman, J. et al. 1999. Competition for light between phytoplankton species: experimental tests of mechanistic theory. – *Ecology* 80: 211–222.
- Passarge, J. et al. 2006. Competition for nutrients and light: stable coexistence, alternative stable states, or competitive exclusion? – *Ecol. Monogr.* 76: 57–72.