

## ***Interactive comment on “Multi-nutrient, multi-group model of present and future oceanic phytoplankton communities” by E. Litchman et al.***

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Earlier studies (e.g. Aksnes et al 1994; Tyrrell Taylor, 1996; Riegman et al, 2000) suggested that coccolithophores (*Emiliana huxleyi* in particular) are more competitive than other phytoplankton when phosphate is more strongly limiting than nitrate. However, evidence from studies of the *E. huxleyi* blooms 1997-2000 in the eastern Bering Sea and a reanalysis of the conditions in which natural blooms and mesocosm blooms occurred (Lessard et al. 2005. Nitrate:phosphate ratios and *Emiliana huxleyi* blooms. Limnol. Oceanogr. 50: 1020-1024) concludes instead that there is no particular link. The eastern Bering Sea blooms in particular clearly occurred in nitrate-limited, phosphate-replete waters. I am not convinced that it is realistic to parameterise coccolithophores in this way.

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