

Publications Stephen C. Maberly

1. Black, M.A., **Maberly, S.C.** & Spence, D.H.N. (1981). Resistance to carbon dioxide fixation in four submerged freshwater macrophytes. *The New Phytologist* **89**, 557-568.
2. **Maberly, S.C.** (1983). The interdependence of photon irradiance and free carbon dioxide or bicarbonate concentration on the photosynthetic compensation point of freshwater plants. *The New Phytologist* **93**, 1-12.
3. **Maberly, S.C.** & Spence, D.H.N. (1983). Photosynthetic inorganic carbon use by freshwater plants. *Journal of Ecology* **71**, 705-724.
4. **Maberly, S.C.** (1985). Photosynthesis by *Fontinalis antipyretica*. I. Interaction between photon irradiance, concentration of carbon dioxide and temperature. *The New Phytologist* **100**, 127-140.
5. **Maberly, S.C.** (1985). Photosynthesis by *Fontinalis antipyretica*. II. Assessment of environmental factors limiting photosynthesis and production. *The New Phytologist* **100**, 141-155.
6. Spence, D.H.N. & **Maberly, S.C.** (1985). Occurrence and ecological importance of HCO₃-use among aquatic higher plants. In: *Inorganic carbon uptake by aquatic photosynthetic organisms*. Ed. W.J. Lucas & J.A. Berry, American Society of Plant Physiologists. pp 125-143.
7. Farmer, A.M., **Maberly, S.C.** & Bowes, G. (1986) Carboxylase activity of freshwater macrophytes. *Journal of Experimental Botany* **37**, 1568-1573.
8. Giordano, M & **Maberly, S.C.** (1989). Distribution of carbonic anhydrase in British marine macroalgae. *Oecologia* **81**, 534-539.
9. **Maberly, S.C.** & Spence, D.H.N. (1989). Photosynthesis and photorespiration in freshwater organisms: amphibious plants. *Aquatic Botany* **34**, 267-286.
10. **Maberly, S.C.** & Madsen, T.V. (1990). The contribution of air and water to the carbon balance of *Fucus spiralis* L. *Marine Ecology - Progress Series* **62**, 175-183.
11. Madsen, T.V. & **Maberly, S.C.** (1990). A comparison of air and water as environments for photosynthesis by *Fucus spiralis* L. *Journal of Phycology* **26**, 24-30.
12. **Maberly, S.C.** (1990). Exogenous sources of inorganic carbon for photosynthesis by marine macroalgae. *Journal of Phycology* **26**, 439-449.
13. Madsen, T.V. & **Maberly, S.C.** (1991). Diurnal variation in light and carbon limitation of photosynthesis by two species of submerged freshwater macrophyte with a differential ability to use bicarbonate. *Freshwater Biology* **26**, 175-187.
14. **Maberly, S.C.** (1992). Carbonate ions appear to neither inhibit nor stimulate use of bicarbonate ions in photosynthesis by *Ulva lactuca*. *Plant Cell & Environment* **15**, 255-260.
15. **Maberly, S.C.**, Raven, J.A. & Johnston, A.M. (1992). Discrimination between ¹²C and ¹³C by marine plants. *Oecologia* **91**, 481-492.
16. Harris, S.A., **Maberly, S.C.** & Abbott, R.G. (1992). Genetic variation within and between populations of *Myriophyllum alterniflorum*. *Aquatic Botany* **44**, 1-21.
17. Johnston, A.M., **Maberly, S.C.** & Raven, J.A. (1992). The acquisition of inorganic carbon by four red macroalgae from different habitats. *Oecologia* **92**, 317-326.
18. **Maberly, S.C.** (1993). Morphological and photosynthetic characteristics of *Potamogeton obtusifolius* from different depths. *Journal of Aquatic Plant Management* **31**, 34-39.
19. **Maberly, S.C.**, Hurley, M.A., Butterwick, C., Corry, J.E., Heaney, S.I., Irish, A.E., Jaworski, G.H.M., Lund, J.W.G., Reynolds, C.S. & Roscoe, J.V. (1994). The rise and fall of *Asterionella formosa* in the South Basin of Windermere: analysis of a 45-year

- series of data. *Freshwater Biology* **31**, 19-34.
20. **Maberly, S.C.**, Reynolds, C.S., George, D.G., Haworth, E.Y. & Lund, J.W.G. (1994). The sensitivity of freshwater plankton to environmental change: monitoring, mechanisms and models. In: R.A. Leigh & A.E. Johnston (Eds.) *Long-term Experiments in Agricultural and Ecological Sciences*. Rothamsted 150th Anniversary Symposium. CAB International pp. 387-405.
 21. **Maberly S.C.** (1996). Diel, episodic and seasonal changes in pH and concentrations of inorganic carbon in a productive English Lake, Esthwaite Water, Cumbria. *Freshwater Biology* **35**, 579-598.
 22. Planas, D. **Maberly, S.C.** & Parker, J.E. (1996). Phosphorus and nitrogen status of *Cladophora glomerata* in two lake basins of contrasting trophic status. *Freshwater Biology*, **35**, 609-622.
 23. Heaney S.I. & **Maberly S.C.** (1996). Jack Talling, FRS, master limnologist. *Freshwater Biology* **35**, 483-487.
 24. Madsen, T.V., **Maberly, S.C.** & Bowes, G. (1996). Photosynthetic acclimation of submersed angiosperms to CO₂ and HCO₃⁻. *Aquatic Botany* **53**, 15-30.
 25. Finlay, B.J., **Maberly, S.C.** & Esteban, G. (1996). Spectacular abundance of ciliates in anoxic pond water: contribution of symbiont photosynthesis to host respiratory oxygen requirements. *FEMS Microbiology Ecology* **20**, 229-235.
 26. Finlay B.J., **Maberly S.C.** & Cooper I. (1997). Microbial diversity and ecosystem function. *Oikos* **80**, 209-213.
 27. **Maberly S.C.** & Madsen T.V. (1998). Affinity for CO₂ in relation to the ability of freshwater macrophytes to use HCO₃⁻. *Functional Ecology*, **12**, 99-106.
 28. Skidmore R.E., **Maberly S.C.** & Whitton B.A. (1998). Patterns of spatial and temporal variation in phytoplankton chlorophyll *a* in the River Trent and its tributaries. *Science of the Total Environment* **210/211**, 357-365.
 29. Ibelings B.W. & **Maberly S.C.** (1998). Photoinhibition and the availability of inorganic carbon restrict photosynthesis by surface blooms of cyanobacteria. *Limnology & Oceanography* **43**, 408-419.
 30. **Maberly S.C.** & Reynolds C.S. (1999). Testable models of aquatic systems: A NERC Special Topic for integrating experiments and modelling. *Freshwater Forum* **12**, 44-50.
 31. Casper, P., **Maberly S.C.**, Hall G.H. & Finlay B.J. (2000). Fluxes of methane and carbon dioxide from a small productive lake to the atmosphere. *Biogeochemistry* **49**, 1-19.
 32. Elliott J.M., Hurley M.A. & **Maberly S.C.** (2000). The emergence period of sea trout fry in a Lake District stream correlates with the North Atlantic Oscillation. *Journal of Fish Biology* **56**, 208-210.
 33. Parker J.E. & **Maberly S.C.** (2000). Biological response to lake remediation by phosphate stripping: control of *Cladophora*. *Freshwater Biology* **44**, 303-309.
 34. Olesen B. & **Maberly S.C.** (2001). The effect of high levels of visible and ultra-violet radiation on the photosynthesis of phytoplankton from a freshwater lake. *Archiv für Hydrobiologia* **151**, 301-315.
 35. **Maberly S.C.** & Madsen T.V. (2002). Aquatic freshwater angiosperm carbon concentrating mechanisms: processes and patterns. *Functional Plant Biology* **29**, 393-405.
 36. **Maberly S.C.** & Madsen T.V. (2002). Use of bicarbonate ions as a source of carbon in photosynthesis by *Callitriche hermaphroditica* L. *Aquatic Botany* **73**, 1-7.
 37. Reynolds C.S. & **Maberly S.C.** (2002). A simple method for approximating the supportive capacities and metabolic constraints in lakes and reservoirs. *Freshwater*

- Biology* **47**, 1183-1188.
38. Finlay B.J., Monaghan E.B., & **Maberly S.C.** (2002). The rate and scale of dispersal of freshwater diatom species is a function of their global abundance. *Protist* **153**, 261-273.
 39. **Maberly S.C.**, King L., Dent M.M., Jones R.I. & Gibson C.E. (2002). Nutrient limitation of phytoplankton and periphyton growth in upland lakes. *Freshwater Biology* **47**, 2136-2152.
 40. Weyhenmeyer G.A., Adrian R., Gaedke G., Livingstone D.M. & **Maberly S.C.** (2002) Response of phytoplankton in European lakes to a change in the North Atlantic Oscillation. *Verh. Internat. Verein. Limnol.* **28**, 1436-1439.
 41. Jones J.I. Li W. & **Maberly S.C.** (2003). Area, altitude and aquatic plant diversity. *Ecography* **26**, 411-420.
 42. Clegg M.R., **Maberly S.C.** & Jones R.J. (2003). The effect of photon irradiance on the behavioural ecology and potential niche separation of freshwater phytoplanktonic flagellates. *Journal of Phycology* **39**, 650-662.
 43. Clegg M.R., **Maberly S.C.** & Jones R.I. (2003). Behavioural responses of freshwater phytoplanktonic flagellates to a temperature gradient. *European Journal of Phycology* **38**, 195-203.
 44. Madsen T.V. & **Maberly S.C.** (2003). High internal resistance to CO₂ uptake by submerged macrophytes that use HCO₃⁻: measurements in air, nitrogen and helium. *Photosynthesis Research*, **77**, 183-190.
 45. **Maberly S.C.**, King L., Gibson C.E., May L., Jones R.I., Dent M.M. & Jordan C. (2003). Linking nutrient limitation and water chemistry in upland lakes to catchment characteristics. *Hydrobiologia* **506**, 83-91.
 46. Clegg M.R., **Maberly S.C.** & Jones R.I. (2003). Chemosensory behavioural response of freshwater phytoplanktonic flagellates. *Plant Cell & Environment* **27**, 123-135.
 47. Vinebrooke R.D., Cottingham K.L., Norberg J., Scheffer M., Dodson S.I., **Maberly S.C.** & Sommer U. (2004). Impacts of multiple stressors on biodiversity and ecosystem functioning: the role of species co-tolerance. *Oikos* **104**, 451-457.
 48. Jones R.I., King L., Dent M.M., **Maberly S.C.** & Gibson C.E. (2004). Nitrogen stable isotope ratios in epilithon, macrophytes and surface sediments from upland lakes with differing nutrient status. *Freshwater Biology* **49**, 382-391.
 49. Clegg M.R., **Maberly S.C.** & Jones R.I. (2004). Dominance and compromise in freshwater phytoplanktonic flagellates: the interaction of behavioural preferences for conflicting environmental gradients. *Functional Ecology* **18**, 371-380.
 50. George D.G., **Maberly S.C.** & Hewitt D.P. (2004). The influence of the North Atlantic Oscillation on the physics, chemistry and biology of four lakes in the English Lake District. *Freshwater Biology* **49**, 760-774.
 51. Raven J.A. & **Maberly S.C.** (2005). Plant Productivity of Inland Waters. Pp 779-793 In: G.C. Papageorgiou and Govindjee (Eds) Chlorophyll Fluorescence: A Signature of Photosynthesis. Kluwer Academic Publishers.
 52. Neal C., Neal M., Reynolds B., **Maberly S.C.**, May L., Ferrier R.C., Smith J & Parker J.E. (2005). Silicon levels in UK surface waters. *Journal of Hydrology* **304**, 75-93.
 53. Goddard V.J., Baker A.C., Davy J.E., Adams D.A., De Ville M.M., Thackeray S.J., **Maberly S.C.** & Wilson W.H. (2005). Temporal distribution of viruses, bacteria and phytoplankton throughout the water column in a freshwater hypereutrophic lake. *Aquatic Microbial Ecology* **39**, 211-223.
 54. Spijkerman E., **Maberly S.C.** & Coesel P.F.M. (2005). Carbon acquisition strategies by desmids and their link to ecological distribution. *Canadian Journal of Botany* **83**, 850-858.

55. Raven J.A., Ball L.A., Beardall J. Giordano M. & **Maberly S.C.** (2005). Algae Lacking carbon concentrating mechanisms. *Canadian Journal of Botany* **83**, 879 – 890.
56. Thackeray S.J., **Maberly S.C.** & Winfield I.J. (2006). The Ecology of Bassenthwaite Lake (English Lake District). *Freshwater Forum* **25**, 1-80.
57. Suggett D.J., **Maberly S.C.** & Geider R.J. (2006). Gross photosynthesis drives lake community metabolism during the spring phytoplankton bloom. *Limnology & Oceanography* **51**, 2064 – 2076.
58. Clegg M.R., **Maberly S.C.** & Jones R.I. (2007). Behavioural response as a predictor of seasonal depth distribution and vertical niche separation in freshwater phytoplanktonic flagellates. *Limnology & Oceanography* **52**, 441-455.
59. Boggetto N., Gontero B. & **Maberly S.C.** (2007). Regulation of phosphoribulokinase and glyceraldehyde 3-phosphate dehydrogenase in a freshwater diatom, *Asterionella formosa* (Bacillariophyceae). *Journal of Phycology* **43**, 1227-1235.
60. Thackeray S. J., Jones I. D. & **Maberly S. C.** (2008). Long-term change in the phenology of spring phytoplankton: species-specific responses to nutrient enrichment and climatic change. *Journal of Ecology* **96**, 523-535.
61. Jones I. & **Maberly S.C.** (2008). Automatic in-lake monitoring in the English Lake District: The effect of lake size on stratification. *Verh. Internat. Verein. Limnol.* **30**, 70-72.
62. Eroles J., Gontero B. & **Maberly S.C.** (2008). Specificity and function of glyceraldehyde-3-phosphate dehydrogenase in a freshwater diatom, *Asterionella formosa* (Bacillariophyceae). *Journal of Phycology* **44**, 1455-1464.
63. Klavnsen S.K. & **Maberly S.C.** (2009). The contribution of Crassulacean acid metabolism (CAM) to the *in situ* carbon budget in a population of the invasive aquatic macrophyte *Crassula helmsii*. *Freshwater Biology* **54**, 105-118.
64. Raven J A and **Maberly S C.** (2009). Phytoplankton Nutrition and Related Mixotrophy. In: Gene E. Likens, (Editor) Encyclopedia of Inland Waters. Volume 1, pp. 192-196 Oxford: Elsevier.
65. Diaz M.M. & **Maberly S.C.** (2009). Carbon concentrating mechanisms in acidophilic algae. *Phycologia* **48**, 77-85.
66. Johnson A.C., Acreman M.C., Dunbar M.J., Feist S.W., Giacomello A.M., Gozlan R. E., Hinsley S.A., Ibbotson A.T., Jarvie H.P., Jones J.I., Longshaw M., **Maberly S.C.**, Marsh T.J., Neal C., Newman J.R., Nunne M.A., Pickup R.W., Reynard N.S., Sullivan C.A., Sumpter J.P., Williams R.J. (2009). The British river of the future: How climate change and human activity might affect two contrasting river ecosystems in England. *Science of the Total Environment* **407**, 4787-4798.
67. **Maberly S.C.**, Ball L.A. Raven J.A. & Sültemeyer D. (2009). Inorganic carbon acquisition by chrysophytes. *Journal of Phycology* **45**, 1052-1061.
68. Raven J.A., Beardall J., Flynn K.J. & **Maberly S.C.** Carnivorous plants: Phagotrophy in the origins of photosynthesis in eukaryotes and as a complementary mode of nutrition. *Journal of Experimental Botany* **60**, 3975-3987.
69. Tyler A.N., Hunter P.D., Carvalho L., Codd G.A., Elliott J.A., Ferguson C.A., Hanley N.D., Hopkins D.W., **Maberly S.C.**, Mearns K.J. and Scott E.M. (2009). Strategies for monitoring and managing mass populations of toxic cyanobacteria in recreational waters: a multi-interdisciplinary approach. *Environmental Health* **8** (Suppl 1):S11 doi:10.1186/1476-069X-8-S1-S11
70. King L., **Maberly S.C.**, De Ville M.M., Kitschke M., Gibson C.E. & Jones R.I. (2009) Nitrogen stable isotope ratios of lake macrophytes in relation to growth form and nutrient-limitation. *Fundamental and Applied Limnology* **175**, 307-315.

71. Watson, N.M., Heathwaite, A.L, **Maberly, S.C.**, Norton, L., Waterton, C. Haygarth, P.M. (2009). Integrated Catchment Management and the WFD: Dealing with the Complexity and Uncertainty of Diffuse Pollution from Agriculture *Tearmann: Irish journal of agri-environmental research* **7**, 195-210.
72. Noges P., Adrian R., Anneville O., Arvola L., Blenckner T., George G., Jankowski T., Jarvinen M., **Maberly S.C.**, Padisak J., Straile D., Teubner K. & Weyhenmeyer G. (2010). The impacts of variations in the climate on seasonal dynamics of phytoplankton. pp.253-274. IN: G. George (Ed.) *The Impact of Climate Change on European Lakes*. Springer Dordrecht, 507pp.
73. **Maberly S.C.**, Courcelle C., Groben R. & Gontero B. (2010). Phylogenetically-based variation in the regulation of the Calvin cycle enzymes, phosphoribulokinase and glyceraldehyde-3-phosphate dehydrogenase, in algae. *Journal of Experimental Botany* **61**, 735-745.
74. Groben R., Kaloudas D., Raines C.A., Offmann B., **Maberly S.C.** and Gontero B. (2010). Comparative sequence analysis of CP12, a small protein involved in the formation of a Calvin cycle complex in photosynthetic organisms *Photosynthesis Research* **103**, 183-194.
75. Klavsén S.K. & **Maberly S.C.** (2010). Effect of light and CO₂ on inorganic carbon uptake in the invasive aquatic CAM-plant *Crassula helmsii*. *Functional Plant Biology* **37**, 737-747.
76. Hunter P.D., Tyler A.N., Carvalho L., Codd G.A. and **Maberly S.C.** (2010). Hyperspectral remote sensing of cyanobacterial pigments as indicators for cell populations and toxins in eutrophic lakes. *Remote Sensing of Environment* **114**, 2705-2718.
77. Strong C. & **Maberly S.C.** The influence of atmospheric wave dynamics on the surface temperature of lakes in the English Lake District. *Global Change Biology*, in press.