Selected publications using the phytoplankton measurements between 1979-1998

1. Ehrlich, E., N. Kath & U. Gaedke submitted

2. Ehrlich, E. & U. Gaedke submitted

3. Rossberg, A. **U. Gaedke** & P. Kratina (2019) Dome patterns in pelagic size spectra reveal strong trophic cascades. Nature Communications

4. Perkins, D. M., A. Perna, R. Adrian, P. Cermeño, U. Gaedke, M. Huete-Ortega, E. White & G. Yvon-Durocher (2019) Energetic equivalence underpins the size structure of tree and phytoplankton communities. Nature Comm. 10: 255

5. Mittler, U., B. Blasius, U. Gaedke & A. B. Ryabov (2019) Length-volume relationship of lake phytoplankton. Limnol. & Oceanogr.: Methods 17:58-68 doi: 10.1002/lom3.10296
6. Muhl, R. M. W., D. L. Roelke, T. Zohary, M. Moustaka-Gouni, U. Sommer, G. Borics**, U. Gaedke**, F. G. Withrow, J. Bhattacharyya (2018) Resisting annihilation: Relationships between functional trait dissimilarity, assemblage competitive power and allelopathy. Ecol. Lett. 21: 1390-1400.
7. Weithoff, G. & U. Gaedke (2017) Mean functional traits of lake phytoplankton reflect seasonal and inter-annual changes in nutrients, climate and herbivory. J. Plankton Res. 39: 509-517.
8. Weithoff, G., M. Rocha, U. Gaedke (2015) Comparing seasonal dynamics of functional and taxonomic diversity reveals the driving forces underlying phytoplankton community structure. Freshw. Biology 60: 758-767.
9. Boit, A. & U. Gaedke (2014) Benchmarking Successional Progress in a Quantitative Food Web. PLoS One 9(2): e90404 http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0090404
10. Rocha, M. R. D. Vasseur & U. Gaedke (2012) Seasonal variations alter the impact of functional traits on plankton dynamics. PLoS ONE 7(12): e51257. Doi:10.1371/journal.pone.0051257
11. Hartwich M., D. Straile, U. Gaedke & A. Wacker (2012) Use of ciliate and phytoplankton taxonomic composition for the estimation of eicosapentaenoic acid concentration in lakes. Freshw. Biol. 57:1385-1398.
12. Tirok, K., B. Bauer, K. Wirtz & U. Gaedke (2011) Predator-prey dynamics driven by feedback between functionally diverse trophic levels. PLoS ONE 6(11): e27357. doi:10.1371/journal.pone.0027357
13. Rocha, M. R., U. Gaedke & D. Vasseur (2011) Functionally similar species have similar dynamics. Journal of Ecology 99: 1453-1459
14. Rocha, M. R, D. A. Vasseur, M. Hayn, M. Holschneider & U. Gaedke (2011). Variability patterns differ between standing stock and process rates. OIKOS 120:17-25.
15. Tirok, K. & U. Gaedke (2010) Internally driven alternation of functional traits in a multi-species predator-prey system. Ecology 91: 1748-1762
16. Kamjunke, N., D. Straile and U. Gaedke (2009) Response of heterotrophic bacteria, autotrophic picoplankton and heterotrophic flagellates to re-oligotrophication. J. Plankton Res. 31: 899-907.
17. Kamjunke, N., T. Henrichs & U. Gaedke (2007) Phosphorus gain by bacterivory promotes the mixotrophic flagellate Dinobryon spp. during re-oligotrophication. J. Plankton Res. 29:39-46
18. Tirok, K. & U. Gaedke (2007a) The effect of irradiance, vertical mixing and temperature on spring phytoplankton dynamics under climate change – long-term observations and models. Oecologia 150: 625-642
19. Vasseur, D. & U. Gaedke (2007) Spectral analysis unmasks synchronous and compensatory dynamics in plankton communities. Ecology 88: 2058-2071.

20. Tirok, K. & U. Gaedke (2007b) Regulation of planktonic ciliate dynamics and functional composition during spring in Lake Constance. Aquatic Microbial Ecology 49: 87-100.
21. Huber, V. & U. Gaedke (2006) Predation drives temporal variability patterns in phytoplankton and ciliates. OIKOS 114: 265-276.
22. Tirok, K. & U. Gaedke (2006). Spring weather determines the relative importance of ciliates, rotifers and crustaceans for the initiation of the clear-water phase in a large, deep lake. J. Plankton Res., 28: 361-373.
23. Vasseur, D., U. Gaedke & K. McCann (2005). A seasonal alternation of coherent and compensatory dynamics occurs in phytoplankton. OIKOS 110:507-514.
24. Gaedke, U. (1998 a). Functional and taxonomical properties of the phytoplankton community: Interannual variability and response to re-oligotrophication. Arch. Hydrobiol. Spec. Issues: Advances in Limnology 53: 119-141.
25. Gaedke, U. (1998 b). The response of the pelagic community of a large and deep lake (L. Constance) to reoligotrophication: Evidence for scale-dependent hierarchical patterns. Arch. Hydrobiol. Spec. Issues: Advances in Limnology 53: 317-333.
26. Häse, C., U. Gaedke, B. Beese, A. Seifried & M. Tilzer (1998). Phytoplankton response to reoligotrophication in large and deep Lake Constance: Photosynthetic activity and chlorophyll concentration. Arch. Hydrobiol. Spec. Issues: Advances in Limnology 53: 159-178.
27. Gaedke, U. & T. Weisse (1998). Seasonal and interannual variability of picocyanobacteria in Lake Constance (1987-1996). Arch. Hydrobiol. Spec. Issues: Advances in Limnology 53: 143-158.
28. Gaedke, U., D. Ollinger, E. Bäuerle & D. Straile (1998). The impact of weather conditions on the seasonal plankton development. Arch. Hydrobiol. Spec. Issues: Advances in Limnology 53: 565-585.
29. Stüber, K. 1998 Der Einfluss unterschiedlicher Nährstoff- und Wetterbedingungen auf die saisonale Phytoplanktonentwicklung im Bodensee. Master Thesis, 186 p.; supervised by U. Gaedke, Univ. of Constance
30. Gaedke, U. & A. Schweizer (1993). The first decade of oligotrophication in Lake Constance. I. The response of phytoplankton biomass and cell size. Oecologia 93: 268-275.
31. Sommer, U., U. Gaedke & A. Schweizer (1993). The first decade of oligotrophication of Lake Constance. II. The response of phytoplankton taxonomic composition. Oecologia 93: 276-284.
32. Tilzer, M. M., U. Gaedke, A. Schweizer, B. Beese & T. Wieser (1991). Interannual variability of phytoplankton productivity and related parameters in Lake Constance: No response to decreased phosphorus loading? J. Plankton Res. 13: 755-777.
33. Gaedke, U. & M. Schimmele (1991). Internal Seiches in Lake Constance: Influence on Plankton Abundance at a fixed sampling site. J. Plankton Res. 13: 743-754.
34. Sommer, U. 1987. Factors controlling the seasonal variation in phytoplankton species composition – A case study for a deep nutrient-rich lake. Progress in Phycological Res. 5:123-176 and lit. cited therein
35. For work on phytoplankton data after 1998 see also publications by Dietmar Straile and coworkers

Selected publications considering the entire pelagic food web of Lake Constance based on data obtained between 1979-1998

1. Rossberg, A. **U. Gaedke** & P. Kratina (2019) Dome patterns in pelagic size spectra reveal strong trophic cascades. Nature Communications
2. Boit, A. & U. Gaedke (2014) Benchmarking Successional Progress in a Quantitative Food Web. PLoS One 9(2): e90404 http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0090404
3. Boit, A., N.D. Martinez, R. J. Williams & U. Gaedke (2012) Mechanistic theory and modeling of complex food web dynamics in Lake Constance. Ecol. Lett. 15:594-602

4. Rocha, M. R, D. A. Vasseur, M. Hayn, M. Holschneider & U. Gaedke (2011). Variability patterns differ between standing stock and process rates. OIKOS 120:17-25.
5. de Castro, F., Gaedke, U. (2008) The metabolism of lake plankton does not support the metabolic theory of ecology. Oikos 117:1218-1226
6. Vasseur, D. & U. Gaedke (2007) Spectral analysis unmasks synchronous and compensatory dynamics in plankton communities. Ecology 88: 2058-2071.
7. Gaedke, U. & N. Kamjunke (2006) Structural and functional properties of low and high diversity planktonic food webs. J. Plankton Res. 28: 707-718.
8. Gaedke, U., A. Seifried & R. Adrian (2004) Biomass size spectra and plankton diversity in a shallow eutrophic lake. Internat Rev. Hydrobiol. 89: 1-20.
9. Gaedke, U., S. Hochstädter & D. Straile (2002) Interplay between energy limitation and nutritional deficiency: Empirical data and food web models. Ecological Monographs 72: 251-270.
10. Gaedke, U. (1998 b). The response of the pelagic community of a large and deep lake (L. Constance) to reoligotrophication: Evidence for scale-dependent hierarchical patterns. Arch. Hydrobiol. Spec. Issues: Advances in Limnology 53: 317-333.
11. Gaedke, U. & D. Straile (1998). Daphnids: Keystone species for the pelagic food web structure and energy flow - A body size related analysis linking seasonal changes on the population and ecosystem level. Arch. Hydrobiol. Spec. Issues: Advances in Limnology 53: 587-610.
12. Gaedke, U., D. Straile & C. Pahl-Wostl (1996). Trophic structure and carbon flow dynamics in the pelagic community of a large lake, p. 60-71 (Chapter 5). In Polis, G. and K. Winnemiller “Food Webs: Integration of Patterns and Dynamics". Chapman and Hall, New York.
13. Gaedke, U. (1995). A comparison of whole community and ecosystem approaches to study the structure, function, and regulation of pelagic food webs. J. Plankton Res. 17: 1273-1305.
14. Gaedke, U. & D. Straile (1994 a). Seasonal changes of the quantitative importance of protozoans in a large lake - An ecosystem approach using mass-balanced carbon flow diagrams. Mar. Microb. Food Webs 8: 163-188.
15. Gaedke, U. & D. Straile (1994 b). Seasonal changes of trophic transfer efficiencies in a plankton food web derived from biomass size distributions and network analysis. Ecol. Modelling 75/76: 435-445.
16. Gaedke, U. (1993). Ecosystem analysis based on biomass size distributions: A case study of a plankton community in a large lake. Limnol. Oceanogr. 38: 112-127.
17. Gaedke, U. (1992 a). The size distribution of plankton biomass in a large lake and its seasonal variability. Limnol. & Oceanogr. 37: 1202-1220.
18. Gaedke, U. (1992 b). Identifying ecosystem properties: A case study using plankton biomass size distributions. Ecol. Modelling 63: 277-298.