

Publications

14. J. Serpico, B.A. Zambrano-Luna, R. Milne, **C. M. Heggerud**, A. Hastings, H. Wang. Deciphering culprits for cyanobacterial blooms and lake vulnerability in north-temperate lakes, In review (2024)
13. A. Morozov, U. Feudel, A. Hastings, K.C. Abbott, K. Cuddington, **C. M. Heggerud**, S. Petrovskii, Long-living transients in ecological models: recent progress, new challenges, and open questions. *Physics of Life Reviews*, In press (2024)
12. **C. M. Heggerud** & A. Hastings, Predicting transient dynamics through the use of empirical dynamical modelling: A case study of anaerobic digestion. *Journal of the Royal Society Interface*, 21:20240059 (2024)
11. K.C. Abbot, **C.M. Heggerud**, YC. Lai, A. Morozov, S. Petrovski, K. Cuddington, & A. Hastings. When and why ecological systems respond to the rate rather than the magnitude of environmental changes. *Biological Conservation*, 292:110494 (2024)
10. **C. M. Heggerud**, J. Xu, Hao Wang, M. A. Lewis, R. Zurawell, C. Loewen, R. Vinebrooke, & P. Ramazi, Predicting imminent cyanobacterial blooms in lakes using incomplete timely data. *Water Resources Research* 60, 2 (2024)
9. **C. M. Heggerud**, KY. Lam & H. Wang. Niche differentiation in the light spectrum promotes coexistence of phytoplankton species: a spatial modelling approach. *Journal of Mathematical Biology* 86, 54 (2023)
8. A. Shen, S. Gao, **C. M. Heggerud**, H. Wang, Z. Ma, & S. Yuan. Fluctuation of growth and photosynthetic characteristics in *Prorocentrum shikokuense* under phosphorus limitation: Evidence from field and laboratory. *Ecological Modelling*, 479, (2023).
7. **C. M. Heggerud**, K.C. Abbott, A. Hastings, Transient Dynamics. *Oxford Bibliographies in Ecology*. New York: Oxford University Press, 2023.
6. V. Kirkow, H. Wang, P. V. Garcia, S. Ahmed, **C. M. Heggerud**, Impacts of a changing environment on a stoichiometric producer-grazer system: a stochastic modelling approach. *Ecological Modelling* 469 (2022).
5. H. Wang, P. V. Garcia, S. Ahmed, **C. M. Heggerud***, Mathematical comparison and empirical review of the Monod and Droop forms for resource-based population dynamics. *Ecological Modelling* 466 (2022). (*Supervisory Author)
4. **C. M. Heggerud**, H. Wang, & M. A. Lewis, "Coupling the socio-economic and ecological dynamics of cyanobacteria: Single lake and network dynamics." *Ecological Economics* 194 (2022).
3. A. Peace, P. C. Frost, N. D. Wagner, M. Danger, C. Accolla, P. Antczak, B. W. Brooks, D. M. Costello, R. A. Everett, K. B. Flores, **C. M. Heggerud**, R. Karimi, Y. Kang, Y. Kuang, J. H. Larson, T. Mathews, G. D. Mayer, J. N. Murdock, C. A. Murphy, R. M. Nisbet, L. Pecquerie, N. Pollesch, E. M. Rutter, K. L. Schulz, J. T. Scott, L. Stevenson, & H. Wang. Stoichiometric Ecotoxicology for a Multisubstance World. *BioScience*: biaa160, (2021).
2. **C. M. Heggerud**, H. Wang, & M. A. Lewis, Transient dynamics of a stoichiometric cyanobacteria model via multiple-scale analysis. *SIAM Journal of Applied Mathematics* 80 (3), 1223–1246 (2020).

1. **C. M. Heggerud**, & K.Q. Lan. Local stability analysis of ratio-dependent predator-prey models with predator harvesting rates. *Applied Mathematics and Computation* 270: 349-357 (2015).