

Gavin Simpson
Tenure Track, Assistant Professor
Department of Animal and Veterinary Sciences - ANIVET Management and Modelling (MAMO)
iCLIMATE Aarhus University Interdisciplinary Centre for Climate Change
Type of address: Postal address.
Blichers Allé 20
8867/K27, 3204
8830
Tjele
Denmark
Type of address: Postal address.
Frederiksborgvej 399
4000
Roskilde
Denmark
Email: gavin@anivet.au.dk
Mobile: +4522270433



Research outputs

1. Impacts of a century of land-use change on the eutrophication of large, shallow, prairie Lake Manitoba in relation to adjacent Lake Winnipeg (Manitoba, Canada)
Gushulak, C. A. C., Mezzini, S., Moir, K. E., Simpson, G. L., Bunting, L., Wissel, B., Engstrom, D. R., Laird, K. R., St. Amand, A., Cumming, B. F. & Leavitt, P. R., Jan 2024, In: *Freshwater Biology*. 69, 1, p. 47-63 17 p.
2. **A westernized diet changed the colonic bacterial composition and metabolite concentration in a dextran sulfate sodium pig model for ulcerative colitis**
M. Panah, F., Nielsen, K. D., Simpson, G., Schönherz, A. A., Schramm, A., Lauridsen, C., Nielsen, T. S., Højberg, O., Fredborg, M., Purup, S. & Canibe, N., Apr 2023, In: *Frontiers in Microbiology*. 14, 17 p., 1018242.
3. **Differential Controls of Greenhouse Gas (CO₂, CH₄, and N₂O) Concentrations in Natural and Constructed Agricultural Waterbodies on the Northern Great Plains**
Jensen, S. A., Webb, J. R., Simpson, G. L., Baulch, H. M., Leavitt, P. R. & Finlay, K., Apr 2023, In: *Journal of Geophysical Research: Biogeosciences*. 128, 4, e2022JG007261.
4. **Using generalized additive models to decompose time series and waveforms, and dissect heart-lung interaction physiology**
Enevoldsen, J., Simpson, G. & Vistisen, S. T., Feb 2023, In: *Journal of Clinical Monitoring and Computing*. 37, 1, p. 165-177 13 p.
5. Seasonal variability of CO₂, CH₄, and N₂O content and fluxes in small agricultural reservoirs of the northern Great Plains
Jensen, S. A., Webb, J. R., Simpson, G. L., Baulch, H. M., Leavitt, P. R. & Finlay, K., Oct 2022, In: *Frontiers in Environmental Science*. 10, 895531.
6. Abrupt changes in the physical and biological structure of endorheic upland lakes due to 8-m lake-level variation during the 20th century
Bjorndahl, J. A., Gushulak, C. A. C., Mezzini, S., Simpson, G. L., Haig, H. A., Leavitt, P. R. & Finlay, K., May 2022, In: *Limnology and Oceanography*. 67, 5, p. 1022-1039 18 p.
7. **An at-home laboratory in plant biology designed to engage students in the process of science**
Schnell, L. J., Simpson, G. L., Suchan, D. M., Quere, W., Weger, H. G. & Davis, M. C., Dec 2021, In: *Ecology and Evolution*. 11, 24, p. 17572-17580 9 p.
8. Effects of nitrogen removal from wastewater on phytoplankton in eutrophic prairie streams
Bergbusch, N. T., Hayes, N. M., Simpson, G. L., Swarbrick, V. J., Quiñones-Rivera, Z. J. & Leavitt, P. R., Dec 2021, In: *Freshwater Biology*. 66, 12, p. 2283-2300 18 p.
9. Unexpected shift from phytoplankton to periphyton in eutrophic streams due to wastewater influx
Bergbusch, N. T., Hayes, N. M., Simpson, G. L. & Leavitt, P. R., Jul 2021, In: *Limnology and Oceanography*. 66, 7, p. 2745-2761 17 p.
10. Novel responses of diatoms in neotropical mountain lakes to indigenous and post-European occupation
Velez, M. I., Salgado, J., Brenner, M., Hooghiemstra, H., Escobar, J., Boom, A., Bird, B., Curtis, J. H., Temoltzin-Loranca, Y., Patiño, L. F., Gonzalez-Arango, C., Metcalfe, S. E., Simpson, G. L. & Velasquez, C., Jun 2021, In: *Anthropocene*. 34, 100294.
11. Effects of seasonal and interannual variability in water isotopes ($\delta^2\text{H}$, $\delta^{18}\text{O}$) on estimates of water balance in a chain of seven prairie lakes
Haig, H. A., Hayes, N. M., Simpson, G. L., Yi, Y., Wissel, B., Hodder, K. R. & Leavitt, P. R., Jan 2021, In: *Journal of Hydrology X*. 10, 12 p., 100069.

12. Effects of lake warming on the seasonal risk of toxic cyanobacteria exposure
Hayes, N. M., Haig, H. A., Simpson, G. L. & Leavitt, P. R., 1 Jun 2020, In: *Limnology and Oceanography Letters*. 5, 6, p. 393-402 10 p.
13. Questions concerning the appropriateness of the methods and the degree to which they can be relied upon to support the authors conclusions
Simpson, G., 1 Jun 2020, In: *Climate of the Past Discussions*.
14. Comparison of isotopic mass balance and instrumental techniques as estimates of basin hydrology in seven connected lakes over 12 years
Haig, H. A., Hayes, N. M., Simpson, G. L., Yi, Y., Wissel, B., Hodder, K. R. & Leavitt, P. R., Jan 2020, In: *Journal of Hydrology X*. 6, 100046.
15. **Established rodent community delays recovery of dominant competitor following experimental disturbance**
Christensen, E. M., Simpson, G. L. & Ernest, S. K. M., 18 Dec 2019, In: *Proceedings of the Royal Society B: Biological Sciences*. 286, 1917, 20192269.
16. Holocene El Niño–Southern Oscillation variability reflected in subtropical Australian precipitation
Barr, C., Tibby, J., Leng, M. J., Tyler, J. J., Henderson, A. C. G., Overpeck, J. T., Simpson, G. L., Cole, J. E., Phipps, S. J., Marshall, J. C., McGregor, G. B., Hua, Q. & McRobie, F. H., 1 Dec 2019, In: *Scientific Reports*. 9, 1, 1627.
17. **Regulation of carbon dioxide and methane in small agricultural reservoirs: Optimizing potential for greenhouse gas uptake**
Webb, J. R., Leavitt, P. R., Simpson, G. L., Baulch, H. M., Haig, H. A., Hodder, K. R. & Finlay, K., 8 Nov 2019, In: *Biogeosciences*. 16, 21, p. 4211-4227 17 p.
18. **Spatial analysis of a hydrocarbon waste-remediating landfarm demonstrates influence of management practices on bacterial and fungal community structure**
Bergsveinson, J., Perry, B. J., Simpson, G. L., Yost, C. K., Schutzman, R. J., Hall, B. D. & Cameron, A. D. S., 1 Nov 2019, In: *Microbial Biotechnology*. 12, 6, p. 1199-1209 11 p.
19. Taxon-specific variation in $\delta^{13}\text{C}$ and $\delta^{15}\text{N}$ of subfossil invertebrate remains: Insights into historical trophodynamics in lake food-webs
Anas, M. U. M., Simpson, G. L., Leavitt, P. R., Cumming, B. F., Laird, K. R., Scott, K. A., Das, B., Wolfe, J. D., Hesjedal, B., Mushet, G. R., Walker, A., Meegahage, B. J. & Wissel, B., Jul 2019, In: *Ecological Indicators*. 102, p. 834-847 14 p.
20. Habitat specificity is not universal proxy for sensitivity to habitat conversion among rodents on the Canadian Prairies
Heisler, L. M., Simpson, G. L., Poulin, R. G., Wellicome, T. I. & Hall, B. D., 1 Jun 2019, In: *bioRxiv*.
21. **Widespread nitrous oxide undersaturation in farm waterbodies creates an unexpected greenhouse gas sink**
Webb, J. R., Hayes, N. M., Simpson, G. L., Leavitt, P. R., Baulch, H. M. & Finlay, K., 14 May 2019, In: *Proceedings of the National Academy of Sciences*. 116, 20, p. 9814-9819 6 p.
22. Spatial and temporal variation in nitrogen fixation and its importance to phytoplankton in phosphorus-rich lakes
Hayes, N. M., Patoine, A., Haig, H. A., Simpson, G. L., Swarbrick, V. J., Wiik, E. & Leavitt, P. R., 1 Feb 2019, In: *Freshwater Biology*. 64, 2, p. 269-283 15 p.
23. Differential stimulation and suppression of phytoplankton growth by ammonium enrichment in eutrophic hardwater lakes over 16 years
Swarbrick, V. J., Simpson, G. L., Glibert, P. M. & Leavitt, P. R., Jan 2019, In: *Limnology and Oceanography*. 64, p. S130-S149
24. **Seasonality of pCO₂ in a hard-water lake of the northern Great Plains: The legacy effects of climate and limnological conditions over 36 years**
Finlay, K., Vogt, R. J., Simpson, G. L. & Leavitt, P. R., Jan 2019, In: *Limnology and Oceanography*. 64, p. S118-S129
25. **Hierarchical generalized additive models in ecology: An introduction with mgcv**
Pedersen, E. J., Miller, D. L., Simpson, G. L. & Ross, N., 2019, In: *PeerJ*. 2019, 5, e6876.
26. **Activation of the Large-Conductance, Voltage, and Ca²⁺-Activated K⁺ (BK) Channel in Acute Spinal Cord Injury in the Wistar Rat Is Neuroprotective**
Jacobsen, M., Lett, K., Barden, J. M., Simpson, G. L. & Buttigieg, J., 18 Dec 2018, In: *Frontiers in Neurology*. 9, 1107.
27. Modelling palaeoecological time series using generalised additive models
Simpson, G. L., 26 Oct 2018, In: *Frontiers in Ecology and Evolution*. 6, OCT, 149.
28. **Specific Immunity to Cytomegalovirus in Pediatric Cardiac Transplantation**
Jacobsen, M. C., Manunta, M. D. I., Pincott, E. S., Fenton, M., Simpson, G. L., Klein, N. J. & Burch, M., 1 Sept 2018, In: *Transplantation*. 102, 9, p. 1569-1575 7 p.

29. **Regional variability in the atmospheric nitrogen deposition signal and its transfer to the sediment record in Greenland lakes**
Anderson, N. J., Curtis, C. J., Whiteford, E. J., Jones, V. J., McGowan, S., Simpson, G. L. & Kaiser, J., Sept 2018, In: *Limnology and Oceanography*. 63, 5, p. 2250-2265 16 p.
30. **Generalized Additive Models of Climatic and Metabolic Controls of Subannual Variation in pCO₂ in Productive Hardwater Lakes**
Wiik, E., Haig, H. A., Hayes, N. M., Finlay, K., Simpson, G. L., Vogt, R. J. & Leavitt, P. R., Jun 2018, In: *Journal of Geophysical Research: Biogeosciences*. 123, 6, p. 1940-1959 20 p.
31. **Variance and Rate-of-Change as Early Warning Signals for a Critical Transition in an Aquatic Ecosystem State: A Test Case From Tasmania, Australia**
Beck, K. K., Fletcher, M. S., Gadd, P. S., Heijnis, H., Saunders, K. M., Simpson, G. L. & Zawadzki, A., Feb 2018, In: *Journal of Geophysical Research: Biogeosciences*. 123, 2, p. 495-508 14 p.
32. **Spatial variations in snowpack chemistry, isotopic composition of NO₃⁻ and nitrogen deposition from the ice sheet margin to the coast of western Greenland**
Curtis, C. J., Kaiser, J., Marca, A., Anderson, N. J., Simpson, G., Jones, V. & Whiteford, E., 29 Jan 2018, In: *Biogeosciences*. 15, 2, p. 529-550 22 p.
33. **Gene-tracking of in vitro differentiation capabilities of adult mouse neural stem/progenitor cells**
Ludlow, K., Kumar, P., Simpson, G. & Buttigieg, J., 2018, In: *Journal of Stem Cells*. 13, 2, p. 67-82 16 p.
34. **Effects of experimental nitrogen fertilization on planktonic metabolism and CO₂ flux in a hypereutrophic hardwater lake**
Bogard, M. J., Finlay, K., Waiser, M. J., Tumber, V. P., Donald, D. B., Wiik, E., Simpson, G. L., Del Giorgio, P. A. & Leavitt, P. R., Dec 2017, In: *PLOS ONE*. 12, 12, e0188652.
35. **Regional climate changes drive increased scaled-chrysophyte abundance in lakes downwind of Athabasca Oil Sands nitrogen emissions**
Mushet, G. R., Laird, K. R., Das, B., Hesjedal, B., Leavitt, P. R., Scott, K. A., Simpson, G. L., Wissel, B., Wolfe, J. D. & Cumming, B. F., 1 Oct 2017, In: *Journal of Paleolimnology*. 58, 3, p. 419-435 17 p.
36. **Isotopic Structure of Lake Whitefish in Lake Huron: Evidence for Regional and Local Populations Based on Resource Use**
Eberts, R. L., Wissel, B., Simpson, G. L., Crawford, S. S., Stott, W., Hanner, R. H., Manzon, R. G., Wilson, J. Y., Boreham, D. R. & Somers, C. M., 2 Jan 2017, In: *North American Journal of Fisheries Management*. 37, 1, p. 133-148 16 p.
37. **Paleolimnological assessment of nutrient enrichment on diatom assemblages in a priori defined nitrogen- and phosphorus-limited lakes downwind of the Athabasca Oil Sands, Canada**
Laird, K. R., Das, B., Hesjedal, B., Leavitt, P. R., Mushet, G. R., Scott, K. A., Simpson, G. L., Wissel, B., Wolfe, J. & Cumming, B. F., 2017, In: *Journal of Limnology*. 76, 3, p. 488-502 15 p.
38. **Increased variability and sudden ecosystem state change in Lake Winnipeg, Canada, caused by 20th century agriculture**
Bunting, L., Leavitt, P. R., Simpson, G. L., Wissel, B., Laird, K. R., Cumming, B. F., St. Amand, A. & Engstrom, D. R., 1 Nov 2016, In: *Limnology and Oceanography*. 61, 6, p. 2090-2107 18 p.
39. **Diel Surface Temperature Range Scales with Lake Size**
Woolway, R. I., Jones, I. D., Maberly, S. C., French, J. R., Livingstone, D. M., Monteith, D. T., Simpson, G. L., Thackeray, S. J., Andersen, M. R., Battarbee, R. W., DeGasperis, C. L., Evans, C. D., de Eyto, E., Feuchtmayr, H., Hamilton, D. P., Kernan, M., Krokowski, J., Rimmer, A., Rose, K. C., Rusak, J. A., & 8 others Ryves, D. B., Scott, D. R., Shilland, E. M., Smyth, R. L., Staehr, P. A., Thomas, R., Waldron, S. & Weyhenmeyer, G. A., 2016, In: *PLOS ONE*. 11, 3, 14 p., e0152466.
40. **The coming and going of a marl lake: multi-indicator palaeolimnology reveals abrupt ecological change and alternative views of reference conditions**
Wiik, E., Bennion, H., Sayer, C., Davidson, T. A., Clarke, S., McGowan, S., Prentice, S., Simpson, G. & Stone, L., 12 Aug 2015, In: *Frontiers in Ecology and Evolution*. 3, 82, 20 p.
41. **Assessing degradation and recovery pathways in lakes impacted by eutrophication using the sediment record**
Bennion, H., Simpson, G. L. & Goldsmith, B. J., 11 Aug 2015, In: *Frontiers in Ecology and Evolution*. 3, AUG, 94.
42. **Harnessing the potential of the multi-indicator palaeoecological approach: An assessment of the nature and causes of ecological change in a eutrophic shallow lake**
Bennion, H., Davidson, T. A., Sayer, C. D., Simpson, G. L., Rose, N. L. & Sadler, J. P., 1 Jun 2015, In: *Freshwater Biology*. 60, 7, p. 1423-1442 20 p.
43. **Decrease in CO₂ efflux from northern hardwater lakes with increasing atmospheric warming**
Finlay, K., Vogt, R. J., Bogard, M. J., Wissel, B., Tutolo, B. M., Simpson, G. L. & Leavitt, P. R., 12 Mar 2015, In: *Nature*. 519, 7542, p. 215-218 4 p.
44. **Detecting changing river temperatures in England and Wales**
Orr, H. G., Simpson, G. L., des Clers, S., Watts, G., Hughes, M., Hannaford, J., Dunbar, M. J., Laizé, C. L. R., Wilby, R. L., Battarbee, R. W. & Evans, R., 28 Feb 2015, In: *Hydrological Processes*. 29, 5, p. 752-766 15 p.

45. Taxon selection using statistical learning techniques to improve transfer function prediction
Juggins, S., Simpson, G. L. & Telford, R. J., 16 Jan 2015, In: *The Holocene*. 25, 1, p. 130-136 7 p.
46. Neotoma: A programmatic interface to the neotoma paleoecological database
Goring, S., Dawson, A., Simpson, G. L., Ram, K., Graham, R. W., Grimm, E. C. & Williams, J. W., 2015, In: *Open Quaternary*. 1, 2.
47. Evidence of recovery from acidification in the macroinvertebrate assemblages of UK fresh waters: A 20-year time series
Murphy, J. F., Winterbottom, J. H., Orton, S., Simpson, G. L., Shilland, E. M. & Hildrew, A. G., Feb 2014, In: *Ecological Indicators*. 37, PART B, p. 330-340 11 p.
48. Recovery of UK lakes from acidification: An assessment using combined palaeoecological and contemporary diatom assemblage data
Battarbee, R. W., Simpson, G. L., Shilland, E. M., Flower, R. J., Kreiser, A., Yang, H. & Clarke, G., Feb 2014, In: *Ecological Indicators*. 37, PART B, p. 365-380 16 p.
49. Trends in bulk deposition of acidity in the UK, 1988-2007, assessed using additive models
Curtis, C. J. & Simpson, G. L., Feb 2014, In: *Ecological Indicators*. 37, PART B, p. 274-286 13 p.
50. Trends in the hydrochemistry of acid-sensitive surface waters in the UK 1988-2008
Monteith, D. T., Evans, C. D., Henrys, P. A., Simpson, G. L. & Malcolm, I. A., Feb 2014, In: *Ecological Indicators*. 37, PART B, p. 287-303 17 p.
51. Challenges in defining critical loads for nitrogen in UK Lakes
Curtis, C. J., Simpson, G. L., Battarbee, R. W. & Maberly, S., 1 Jan 2014, *Nitrogen Deposition, Critical Loads and Biodiversity: Proceedings of the International Nitrogen Initiative Workshop, Linking Experts of the Convention on Long-Range Transboundary Air Pollution and the Convention on Biological Diversity*. Springer, p. 337-344 8 p.
52. The effects of atmospheric nitrogen deposition on terrestrial and freshwater biodiversity
Baron, J. S., Barber, M., Adams, M., Agboola, J. I., Allen, E. B., Bealey, W. J., Bobbink, R., Bobrovsky, M. V., Bowman, W. D., Branquinho, C., Bustamente, M. M. C., Clark, C. M., Cocking, E. C., Cruz, C., Davidson, E., Denmead, O. T., Dias, T., Dise, N. B., Feest, A., Galloway, J. N., & 19 others Geiser, L. H., Gilliam, F. S., Harrison, I. J., Khanina, L. G., Lu, X., Manrique, E., Ochoa-Hueso, R., Ometto, J. P. H. B., Payne, R., Scheuschner, T., Sheppard, L. J., Simpson, G. L., Singh, Y. V., Stevens, C. J., Strachan, I., Sverdrup, H., Tokuchi, N., Van Dobben, H. & Woodin, S., 1 Jan 2014, *Nitrogen Deposition, Critical Loads and Biodiversity: Proceedings of the International Nitrogen Initiative Workshop, Linking Experts of the Convention on Long-Range Transboundary Air Pollution and the Convention on Biological Diversity*. Springer, p. 465-480 16 p.
53. Looking forward through the past: Identification of 50 priority research questions in palaeoecology
Seddon, A. W. R., Mackay, A. W., Baker, A. G., Birks, H. J. B., Breman, E., Buck, C. E., Ellis, E. C., Froyd, C. A., Gill, J. L., Gillson, L., Johnson, E. A., Jones, V. J., Juggins, S., Macias-Fauria, M., Mills, K., Morris, J. L., Nogués-Bravo, D., Punyasena, S. W., Roland, T. P., Tanentzap, A. J., & 49 others Willis, K. J., Aberhan, M., van Asperen, E. N., Austin, W. E. N., Battarbee, R. W., Bhagwat, S., Belanger, C. L., Bennett, K. D., Birks, H. H., Bronk Ramsey, C., Brooks, S. J., de Bruyn, M., Butler, P. G., Chambers, F. M., Clarke, S. J., Davies, A. L., Dearing, J. A., Ezard, T. H. G., Feurdean, A., Flower, R. J., Gell, P., Hausmann, S., Hogan, E. J., Hopkins, M. J., Jeffers, E. S., Korhola, A. A., Marchant, R., Kiefer, T., Lamentowicz, M., Larocque-Tobler, I., López-Merino, L., Liow, L. H., McGowan, S., Miller, J. H., Montoya, E., Morton, O., Nogué, S., Onoufriou, C., Boush, L. P., Rodriguez-Sanchez, F., Rose, N. L., Sayer, C. D., Shaw, H. E., Payne, R., Simpson, G., Sohar, K., Whitehouse, N. J., Williams, J. W. & Witkowski, A., Jan 2014, In: *Journal of Ecology*. 102, 1, p. 256-267 12 p.
54. Responses of microbial phototrophs to late-Holocene environmental forcing of lakes in south-west Greenland
Reuss, N. S., Anderson, N. J., Fritz, S. C. & Simpson, G. L., Apr 2013, In: *Freshwater Biology*. 58, 4, p. 690-704 15 p.
55. 'Diatoms and pH reconstruction' (1990) revisited
Birks, H. J. B. & Simpson, G. L., Mar 2013, In: *Journal of Paleolimnology*. 49, 3, p. 363-371 9 p.
56. Dominance of biologically produced nitrate in upland waters of Great Britain indicated by stable isotopes
Curtis, C. J., Heaton, T. H. E., Simpson, G. L., Evans, C. D., Shilland, J. & Turner, S., Nov 2012, In: *Biogeochemistry*. 111, 1-3, p. 535-554 20 p.
57. Identifying from recent sediment records the effects of nutrients and climate on diatom dynamics in Loch Leven
Bennion, H., Sayer, C. D., Simpson, G. L., Wischniewski, J. & Carvalho, L., 1 Oct 2012, In: *Freshwater Biology*. 57, 10, p. 2015-2029 15 p.
58. Combining limnological and palaeolimnological data to disentangle the effects of nutrient pollution and climate change on lake ecosystems: Problems and potential
Battarbee, R. W., Anderson, N. J., Bennion, H. & Simpson, G. L., Oct 2012, In: *Freshwater Biology*. 57, 10, p. 2091-2106 16 p.
59. **Nutrients exert a stronger control than climate on recent diatom communities in Esthwaite Water: evidence from monitoring and palaeolimnological records**
Dong, X., Bennion, H., Maberly, S. C., Sayer, C. D., Simpson, G. L. & Battarbee, R. W., Oct 2012, In: *Freshwater Biology*. 57, 10, p. 2044-2056 13 p.

60. An assessment of the mechanisms for the transfer of lead and mercury from atmospherically contaminated organic soils to lake sediments with particular reference to Scotland, UK
Rose, N. L., Yang, H., Turner, S. D. & Simpson, G. L., 1 Apr 2012, In: *Geochimica et Cosmochimica Acta*. 82, p. 113-135 23 p.
61. Analogue Methods in Palaeolimnology
Simpson, G. L., 2012, *Tracking Environmental Change Using Lake Sediments*. Springer, p. 495-522 28 p.
62. Human Impacts: Applications of Numerical Methods to Evaluate Surface-Water Acidification and Eutrophication
Simpson, G. & Hall, R. I., 2012, *Tracking Environmental Change Using Lake Sediments*. Birks, H. J. B., Lotter, A., Juggins, S. & Smol, J. (eds.). Dordrecht: Springer, Vol. 5. p. 579-614 36 p. (Developments in Paleoenvironmental Research).
63. Statistical Learning in Palaeolimnology
Simpson, G. L. & Birks, H. J. B., 2012, *Tracking Environmental Change Using Lake Sediments*. Springer, Vol. 5. p. 249-327 79 p. (Developments in Paleoenvironmental Research).
64. Terrestrial and aquatic responses to climate change and human impact on the southeastern Tibetan Plateau during the past two centuries
Wischniewski, J., Mischke, S., Herzsuh, U., Kramer, A., Kong, Z., Mackay, A. W. & Simpson, G. L., 1 Nov 2011, In: *Global Change Biology*. 17, 11, p. 3376-3391 16 p.
65. **The role of Cladocerans in tracking long-term change in shallow lake trophic status**
Davidson, T. A., Bennion, H., Clarke, G. H., Jeppesen, E., Sayer, C., Odgaard, B. V., Rasmussen, P., Rawcliffe, R., Salgado, J., Simpson, G. & Amsinck, S. L., 1 Nov 2011, In: *Hydrobiologia*. 676, 1, p. 299-315 16 p.
66. A palaeolimnological meta-database for assessing the ecological status of lakes
Battarbee, R. W., Morley, D., Bennion, H., Simpson, G. L., Hughes, M. & Bauere, V., Apr 2011, In: *Journal of Paleolimnology*. 45, 4, p. 405-414 10 p.
67. A reference typology of low alkalinity lakes in the UK based on pre-acidification diatom assemblages from lake sediment cores
Battarbee, R. W., Simpson, G. L., Bennion, H. & Curtis, C., Apr 2011, In: *Journal of Paleolimnology*. 45, 4, p. 489-505 17 p.
68. Defining ecological and chemical reference conditions and restoration targets for nine European lakes
Bennion, H., Simpson, G. L., Anderson, N. J., Clarke, G., Dong, X., Hobaeæk, A., Guilizzoni, P., Marchetto, A., Sayer, C. D., Thies, H. & Tolotti, M., Apr 2011, In: *Journal of Paleolimnology*. 45, 4, p. 415-431 17 p.
69. The use of diatom records to establish reference conditions for UK lakes subject to eutrophication
Bennion, H. & Simpson, G. L., Apr 2011, In: *Journal of Paleolimnology*. 45, 4, p. 469-488 20 p.
70. **Defining reference conditions and restoration targets for lake ecosystems using palaeolimnology: a synthesis**
Bennion, H., Battarbee, R. W., Sayer, C. D., Simpson, G. & Davidson, T. A., 2011, In: *Journal of Paleolimnology*. 45, p. 533-544
71. The present is the key to the past, but what does the future hold for the recovery of surface waters from acidification?
Helliwell, R. C. & Simpson, G. L., May 2010, In: *Water Research*. 44, 10, p. 3166-3180 15 p.
72. Palaeolimnological assessment of lake acidification and environmental change in the Athabasca Oil Sands Region, Alberta
Curtis, C. J., Roger, F., Neil, R., Shilland, J., Simpson, G. L., Turner, S., Yang, H. & Pla, S., 2010, In: *Journal of Limnology*. 69, SUPPL. 1, p. 92-104 13 p.
73. **Climate change and the future of freshwater biodiversity in Europe: a primer for policy-makers**
Moss, B., Hering, D., Green, A. J., Aidoud, A., Becares, E., Beklioglu, M., Bennion, H., Boix, D., Brucet, S., Carvalho, L., Clement, B., Davidson, T., Declerck, S., Dobson, M., van Donk, E., Dudley, B., Feuchtmayr, H., Friberg, N., Grenouillet, G., Hillebrand, H., & 22 othersHobaek, A., Irvine, K., Jeppesen, E., Johnson, R., Jones, I., Kernan, M., Lauridsen, T. L., Manca, M., Meerhoff, M., Olafsson, J., Ormerod, S., Papastergiadou, E., Penning, W. E., Ptacnik, R., Quintana, X., Sandin, L., Seferlis, M., Simpson, G., Triga, C., Verdonschot, P., Verschoor, A. M. & Weyhenmeyer, G. A., 2009, In: *Freshwater Reviews*. 2, p. 103-130
74. Deciphering the effect of climate change and separating the influence of confounding factors in sediment core records using additive models
Simpson, G. L. & Anderson, N. J., 2009, In: *Limnology and Oceanography*. 54, 6part2, p. 2529-2541
75. **Paleolimnological evidence of the effects on lakes of energy and mass transfer from climate and humans**
Leavitt, P., Fritz, S. C., Anderson, N. J., Barker, P. A., Blenckner, T., Bunting, L., Catalan, J., Conley, D. J., Hobbs, W. O., Jeppesen, E., Korhola, A., McGowan, S., Rühlend, K., Rusak, J. A., Simpson, G., Solovieva, N. & Werne, J., 2009, In: *Limnology and Oceanography*. 54, 6, part 2, p. 2330-2348
76. A Bayesian palaeoenvironmental transfer function model for acidified lakes
Holden, P. B., Mackay, A. W. & Simpson, G. L., May 2008, In: *Journal of Paleolimnology*. 39, 4, p. 551-566 16 p.

77. Assessing the accuracy of diatom-based transfer functions in defining reference pH conditions for acidified lakes in the United Kingdom
Battarbee, R. W., Monteith, D. T., Juggins, S., Simpson, G. L., Shilland, E. W., Flower, R. J. & Kreiser, A. M., Feb 2008, In: *The Holocene*. 18, 1, p. 57-67 11 p.
78. 1-29 Analogue methods in palaeoecology: Using the analogue package
Simpson, G. L., Sept 2007, In: *Journal of Statistical Software*. 22, 2, p. 1-29 29 p.
79. TBT causes regime shift in shallow lakes
Sayer, C. D., Hoare, D. J., Simpson, G. L., Henderson, A. C. G., Liptrot, E. R., Jackson, M. J., Appleby, P. G., Boyle, J. F., Jones, J. I. & Waldock, M. J., 1 Sept 2006, In: *Environmental Science and Technology*. 40, 17, p. 5269-5275 7 p.
80. Defining reference conditions for acidified waters using a modern analogue approach
Simpson, G. L., Shilland, E. M., Winterbottom, J. M. & Keay, J., Sept 2005, In: *Environmental Pollution*. 137, 1, p. 119-133 15 p.
81. Reconstructing pre-acidification pH for an acidified Scottish loch: A comparison of palaeolimnological and modelling approaches
Battarbee, R. W., Monteith, D. T., Juggins, S., Evans, C. D., Jenkins, A. & Simpson, G. L., Sept 2005, In: *Environmental Pollution*. 137, 1, p. 135-149 15 p.
82. Assessing eutrophication and reference conditions for Scottish freshwater lochs using subfossil diatoms
Bennion, H., Fluin, J. & Simpson, G. L., Feb 2004, In: *Journal of Applied Ecology*. 41, 1, p. 124-138 15 p.