

Curriculum Vitae

Personal details

Name : Nathan Jay Baker
Highest qualification : Dr. rer. nat.
Date of birth : 03 June 1993
Place of birth : South Africa
Nationality : South African
Languages : English (Native), Afrikaans (B2), German (A1)
Driver's licence : Valid (Code B – South Africa)
Skipper's licence : Category R (Inland Waters)
Permanent email address : Nathan93Baker@gmail.com



Experience summary

Dr. Nathan Jay Baker is a freshwater ecologist specializing in biomonitoring, biodiversity assessment, and EU Water Framework Directive (WFD) compliance. He is a South African citizen, with his early academic career routed in the effects of wastewater treatment facilities on riverine biological communities within the Limpopo province. His research directly addresses deficiencies in government river biomonitoring systems and has contributed to improving WFD assessment methods through the integration of functional traits and novel statistical approaches. With extensive experience in macroinvertebrate community analysis across diverse freshwater ecosystems—from rivers to lakes and wetlands—Dr. Baker has published 20 high-impact articles (90% Q1, average IF: 7.22) and currently leads the project “*Modernizing and optimizing biomonitoring of Lithuanian rivers*” (LMTLT project no. S-MIP-24-61) in which he is implementing eDNA based approaches for the biomonitoring of freshwater ecosystems in Lithuania. His expertise in spatial-temporal statistical modelling implemented in the R statistical environment, combined with hands-on field experience in aquatic biomonitoring of across multiple continents, ideally positions him to achieve in any task he sets his mind untoward.

Career history summary

Mar 2023 – Present	Senior Researcher <i>Institute:</i> State Nature Research Centre <i>City, Country:</i> Vilnius, Lithuania
Nov 2022 – Oct 2024	Postdoctoral Fellow <i>Institute:</i> Nature Research Centre <i>City, Country:</i> Vilnius, Lithuania
Mar 2022 – Feb 2023	Researcher <i>Institute:</i> Nature Research Centre <i>City, Country:</i> Vilnius, Lithuania
Jun 2018 – Mar 2022	Full time PhD candidate <i>Institute:</i> Senckenberg Research Institute & Natural History Museum, Frankfurt <i>City, Country:</i> Frankfurt am Main, Germany
Feb 2018 – Jun 2018	General Assistant (non-research assistant) <i>Institute:</i> University of Johannesburg <i>City, Country:</i> Johannesburg, South Africa
Aug 2016 – Oct 2016	Field Consultant <i>Institute:</i> Natural Science Services (NSS) <i>City, Country:</i> Johannesburg, South Africa
Feb 2015 – Dec 2017	Practical Demonstrator & Tutor <i>Institute:</i> University of Johannesburg. <i>City, Country:</i> Johannesburg, South Africa
Jan 2012 – Dec 2018	Full Time Student <i>Institute:</i> University of Johannesburg <i>City, Country:</i> Johannesburg, South Africa

Education

- 2018 – 2022 **Ph.D. in Community Ecology (Magna Cum Laude)**
Institute: University of Duisburg-Essen; Senckenberg Research Institute and Natural History Museum Frankfurt.
Dissertation: Disentangling the effects of environmental drivers on the structure and function of macroinvertebrate communities within boreal streams (Advisor: [Peter Haase](#)).
- 2016 – 2018 **Masters in Aquatic Science (Cum Laude)**
Institute: University of Johannesburg
Dissertation: An assessment of the aquatic macroinvertebrate diversity within the Nyl River floodplain system, Limpopo, South Africa (Advisor: [Richard Greenfield](#)).
- 2015 **Bachelors of Science Honours in Zoology (Cum Laude)**
Institute: University of Johannesburg
Research Project: Metal accumulation in House Sparrows (*Passer domesticus*) from Thohoyandou, Limpopo Province, South Africa (Advisor: [Richard Greenfield](#), [John Maina](#)).
- 2012 – 2014 **Bachelors of Science in Zoology & Environmental Management**
Institute: University of Johannesburg.
- 2011 **National Senior Certificate (Matric)**
Institute: The Training Academy (TTA)
Subjects Completed: English, Afrikaans, Mathematics, Physical Sciences, Life Sciences, Computer Applications Technology, Life Orientation.

Funding received

Total personal funding: 347 350 EUR

- Projects: Postdoctoral fellowship project entitled “How changes in biodiversity change biodiversity: Long-term trends of freshwater invertebrates as vectors for haemosporidian parasites”. Project duration: 2 years (24 months). Funding amount: 90 000 EUR.
- Junior Research Group Project entitled “Modernizing and optimizing biomonitoring of Lithuanian rivers”. Project duration: 3 years (36 months). Funding amount: 200 000 EUR.
- Scholarships: A PhD scholarship in Stream Ecology – A joint research project funded by the Glaser and Plettner Foundations on “The influence of landscape variables on concentration, quality and effects of dissolved organic carbon in the Bavarian Forest National Park”. Funding amount: 50 000 EUR.
- External funding: National Research Foundation (NRF) – Honours Freestanding Block B Grant (Allocated 2015). Funding amount: R20 000 (~1 000 EUR).
- National Research Foundation (NRF) – Masters Freestanding Masters Scholarship (Allocated 2016). Funding amount: R50 000 (~2 500 EUR).
- Internal funding: University of Johannesburg Masters Merit Bursary (2016). Funding amount: R30 000 (~1 500 EUR).
- University of Johannesburg Masters Merit Bursary (2017). Funding amount: R30 000 (~1 500 EUR).
- Travel awards: Travel stipend for Entomological Society of America Entomology 2025 conference (2025). Funding amount: \$1000 USD (~850 EUR).

Projects

Total collaborative funding: 497 350 EUR

- Principle investigator: “Modernizing and optimizing biomonitoring of Lithuanian rivers”. Project duration: 3 years (36 months). Funding amount: 200 000 EUR. **Project underway.**

- Principle investigator: *“How changes in biodiversity change biodiversity: Long-term trends of freshwater invertebrates as vectors for haemosporidian parasites”*. Project duration: 2 years (24 months). Funding amount: 90 000 EUR. **Project complete.**
- Primary implementor: *“Reviving fish parasitology in Lithuania: assessing the current helminth diversity in fish and the impact of non-native fish in Lithuanian freshwaters”*. Project duration: 3 years (36 months). Funding amount: 150 000 EUR. **Project complete.**
- Principle investigator: Subproject *“Disentangling the effects of environmental drivers on the structure and function of macroinvertebrate communities within boreal streams”*, nested within larger project *“Influence of natural factors on the concentration, quality and impact of dissolved organic carbon in the Bavarian Forest National Park”*. Project duration: 3.5 years (42 months). Funding amount: 50 000 EUR (200 000 EUR for larger project). **Project complete.**

Managerial experience

- 2024 – Present **Nature Research Centre Early Career Researcher Committee**
Role: Chairperson
Institute: Nature Research Centre, Vilnius, Lithuania
- 2022 – 2024 **Nature Research Centre Early Career Researcher Committee**
Role: Committee member
Institute: Nature Research Centre, Vilnius, Lithuania
- 2018 – 2021 **Senckenberg Young Scientists Committee**
Role: Committee member
Institute: Senckenberg Research Institute and Natural History Museum Frankfurt

Mentoring and field experience

- 2025 – Present **Ph.D project of Bianca J. Boshoff:** The development of reliable and cost-effective DNA and microbial bioassessment methods for monitoring Lithuania’s freshwater ecosystems
Role: Supervisor
Institute: Vilnius University, Vilnius, Lithuania
- 2022 – Present **Ph.D. project of Diana Osadčaja:** Waterbody type-specific macroinvertebrate indicators for the assessment of water quality of the ecological status of Lithuanian surface waters.
Role: Co-supervisor (Consultant)
Institute: Vilnius University, Vilnius, Lithuania
- 2021 – Present **Ph.D. project of Daniel Enns:** Understanding the impacts of wastewater on freshwater invertebrate communities.
Role: Co-supervisor (Consultant)
Institute: University of Frankfurt, Frankfurt, Germany
- 2019 – 2022 **Mentor:** Statistical assistance and result interpretation for bachelor and masters students
Role: Mentor
Institute: Senckenberg Research Institute and Natural History Museum, Germany.
- 2019 **Conference:** Early career researcher conference and retreat
Role: Co-leader and organiser
Institute: Senckenberg Research Institute, Germany
- 2017 – 2018 **Field course:** Shoreline ecology, marine and freshwater macroinvertebrate collection, marine parasite collection, seine netting, introduction to food webs, estuary sediment collection, *in situ* water quality, water sample collection, fish collection, electroshocking, angling.
Role: Practical demonstrator and group mentor
Institute: University of Johannesburg, South Africa
- 2017 **Short course:** Basic principles of the South African Scoring System Version 5 (SASS 5) for aquatic macroinvertebrates for high-school students.
Role: Teacher and practical demonstrator

Institute: University of Johannesburg, South Africa

2015 – 2018

Practical demonstrator: Biology 1A (Introduction to Biology), Zoology 1B (Animal Diversity), Zoology 3B (Comparative Animal Physiology), microbiology 2B (Microbial Diversity & Plant Pathology), Bioscience 1AE1 (Fundamentals of Bioscience).

Role: Practical demonstrator and tutor

Institute: University of Johannesburg, South Africa

2015

Field course: Shoreline ecology, mangrove ecology, ant behaviour, butterfly collection and identification, benthic macroinvertebrate collection, predator-prey interaction.

Role: Practical demonstrator and mentor

Institute: Swire Institute for Marine Science, Hong Kong

Professional development

2016

Inductively Coupled Plasma Optical Emission Spectrometry (ICP-OES) training course

Short course

Institute: University of Johannesburg

2018

ANOVA & Linear Regression with R

Short course

Institute: Goethe University Frankfurt Graduate School

2019

Scientific Paper Writing: Special Focus Environmental Sciences and Sustainability

Short course

Institute: Goethe University Frankfurt Graduate School

2020

Graphical Information Systems (GIS) using ArcGIS

Short course

Institute: Goethe University Frankfurt Graduate School

Advanced Methods with ArcGIS

Short course

Institute: Goethe University Frankfurt Graduate School

Transitioning from ArcGIS to QGIS

Short course

Institute: Senckenberg Research Institute and Natural History Museum Frankfurt

Writing a Review Paper

Short course

Institute: Goethe University Frankfurt Graduate School

Scientific Visualization with the ggplot Package in R

Short course

Institute: Goethe University Frankfurt Graduate School

Perfecting Your Figures with Free Software (Inkscape, Gimp, IrfanView)

Short course

Institute: Goethe University Frankfurt Graduate School

Nonlinear Regression with R

Short course

Institute: Goethe University Frankfurt Graduate School

2022

Data Science Foundations - Data Mining in R

Online course

Institution: LinkedIn learning

R Essential Training - Wrangling and Visualizing Data

Online course

Institution: LinkedIn learning

R Essential Training – Modelling Data

Online course
Institution: LinkedIn learning

2025 **Regression models with spatial or spatial-temporal correlation using R-INLA**
Online course
Institution: Highland Statistics

2026 **eDNA Metabarcoding**
Online course
Institution: Physalia-courses

Internships

May 2024 **Advanced spatial analysis and trait-based analysis in R.**
Institute: Edmund Mach Foundation (FEM), Trento, Italy
Host: Dr Stefano Larsen

April 2023 **Advanced time-series analyses in R.**
Institute: Norwegian Institute for Nature Research (NINA), Oslo, Norway
Host: Dr Francesca Pilotto

Peer-review

Funding proposals: Biodiversa+ (1 review)

Academic journals: Environmental Monitoring and Assessment (4 reviews)
Ecological Indicators (4 reviews)
Journal of Ecohydraulics (1 review)
Ecoscience (3 reviews)
BMC Ecology (1 review)
Oikos (1 review)
PLOS1 (3 reviews)
Restoration ecology (1 review)
Ecological Applications (1 review)
Global Ecology and Biogeography (1 review)

Record of formal publication

h index = **11**; 398 citations (according to Web of Science), **12**; 557 citations (based on google scholar)

Peer-reviewed journals: **Baker, N.J.** & Palinauskas, V. Ecological integrity drives increased abundances of dipteran insects (Culicidae, Simuliidae, Ceratopogonidae). *Ecology & Evolution* (Submitted).

 Pelikan, L., Kabus, J., Enns, D., Karaouzas, I., Lipkowski, K., Shumka, S., Soose, L., **Baker, N.J.** & Jourdan, J. Morphological convergence but functional divergence? Investigating the ecological role of cryptic amphipod decomposers. *Freshwater Biology* (Submitted).

 Enns, D., **Baker, N.J.**, Oehlmann, J. & Jourdan, J. Urban land use and related infrastructure limit ecological status in freshwater streams. *Environmental Science Europe* (Submitted).

Baker, N.J., Jourdan, J., Pilotto, F., Wagner, R., Awad, J., Caruso, V., Chimeno, C., Höcherl, A., Ivković, M., Moser, M., & Baranov, V. Comparing species accumulation within taxonomically well- and poorly-resolved insect groups over 37-years. *Insect Conservation & Diversity* (Submitted).

 Osadčaja, D. & **Baker, N.J.** Standardizing freshwater macroinvertebrate taxonomy: a Lithuanian operational taxalist for ecological quality assessments and biodiversity research. *Hydrobiologia* (Submitted).

 Kudlai, O., Binkienė, R., Rakauskas, V. & **Baker, N.J.** (2026). Comparison of historic and novel data reveals higher contemporary diversity of trematode metacercariae in freshwater fish. *Parasite*, 33, [10.1051/parasite/2025067](https://doi.org/10.1051/parasite/2025067).

Sinclair, J. S., Stubbington, R., Welty, E.A.R., Aroviita J., **Baker, N.J.**, et al. (2025). Protected areas promote recovery in degraded European rivers. *Nature Ecology & Evolution* 16, 11146. [10.1038/s41467-025-67125-5](https://doi.org/10.1038/s41467-025-67125-5).

Rakauskas, V., Kaupinis, A., Binkienė, R., **Baker, N.J.**, Virbickas, T. & Kudlai, O. (2025). First records of the black bullhead *Ameiurus melas* (Rafinesque, 1820) and its parasites in Lithuania. *BioInvasions Records*, 14, 929–943, <https://doi.org/10.3391/bir.2025.14.4.14>

Cardoso, P., **Baker, N.J.**, Boieiro, M., Bonte, D., Borges, P.A. v., Braby, M.F., Branco, V., Chobanov, D., Correia, L., Dalton, D.T., Damas-Mora, M., Didham, R.K., Forster, L., Glatz, R., Gorneau, J.A., Hochkirch, A., Kirse, A., Lichtenberg, E.M., Macías-Hernández, N., ... Scherber, C. (2025). Toward a global repository of insect traits (GRIT). *Insect Conservation and Diversity*. <https://doi.org/10.1111/ICAD.70035>

Enns, D., **Baker, N.J.**, Oehlmann, J., & Jourdan, J. (2025). Stream baseline conditions shape functional responses to wastewater: evidence from insect-dominated sites. *PeerJ*, 13, e20193. <https://doi.org/10.7717/PEERJ.20193>

Mittag, D.C., **Baker, N.J.**, Antão, L.H., Kuczynski, L., Haase, P. & Welty, E.A.R. Increases in interspecific but mixed trends in intraspecific body sizes in German stream macroinvertebrates across two decades. *Oikos*, e11596. <https://doi.org/10.1002/oik.11596>

Kudlai, O., Rakauskas, V., **Baker, N. J.**, Pantoja, C., Lisitsyna, O., & Binkienė, R. (2024). Helminth parasites of invasive freshwater fish in Lithuania. *Animals*, 14, 1-25. <https://doi.org/10.3390/ani14223293>

Kabus, J., Hartmann, V., Cocchiararo, B., Dombrowski, A., Enns, D., Karaouzas, I., Lipkowski, K., Pelikan, L., Shumka, S., Soose, L., **Baker, N.J.**, & Jourdan, J. (2024). Cryptic species complex shows population-dependent, rather than lineage-dependent tolerance to a neonicotinoid. *Environmental pollution*, 362, 1-10. <https://doi.org/10.1016/j.envpol.2024.124888>

Baker, N.J., Pilotto, F., Welty, E.A.R., Osadčaja, D. & Palinauskas, V. (2024). Recovery or reorganisation? Long-term increases in riverine taxonomic and functional diversity are confounded by compositional dynamics. *Hydrobiologia*. <https://doi.org/10.1007/s10750-024-05665-5>

Welty, E. A. R. Bowler, D. E., Altermatt, F., Álvarez-Cabria, M. Amatulli, G., Angeler, D. G., Archambaud, G., Jorrín, A. I., Aspin, T., Azpiroz, I., **Baker, N. J.**, et al. Time series of freshwater macroinvertebrate abundances and site characteristics of European streams and rivers. *Scientific Data*. 11, 601. <https://doi.org/10.1038/s41597-024-03445-3>

Sinclair, J. S., Welty, E. A. R., Altermatt, F., Álvarez-Cabria, M., Aroviita, J., **Baker, N. J.** et al. 2024. Multi-decadal improvements in the ecological quality of European rivers are not consistently reflected in biodiversity metrics. *Nature Ecology & Evolution*. <https://doi.org/10.1038/s41559-023-02305-4>

Stoltefaut, T., Haubrock, P.J., Welty, E.A.R., **Baker, N.J.**, Haase, H. 2023. A long-term case study of river restoration effects on floodplain biodiversity. *Ecological Engineering*, 198, 1–12. [10.1016/j.ecoleng.2023.107143](https://doi.org/10.1016/j.ecoleng.2023.107143)

Haase, P., Bowler, D.E., **Baker, N.J.**, ... & Welty, E.A.R. 2023. The recovery of European freshwater biodiversity has come to a halt. *Nature*, 620, 582–588. [10.1038/s41586-023-06400-1](https://doi.org/10.1038/s41586-023-06400-1)

Enns, D., Cunze, S., **Baker, N.J.**, Oehlmann, J. & Jourdan, J. 2023. Flushing away the future: The effects of wastewater treatment plants on aquatic invertebrates. *Water Research*, 243, 1–10. [10.1016/j.watres.2023.120388](https://doi.org/10.1016/j.watres.2023.120388)

Baker, N.J., Welty, E.A.R., Pilotto, F., Jourdan, J., Beudert, B., Huttunen, K., Muotka, T., Paavola, R., Göthe, E. & Haase, P. 2023. Seasonal and spatial variation of stream macroinvertebrate taxonomic and functional diversity across three boreal regions. *Insect Conservation and Diversity*, 00, 1–19. [10.1111/icad.12623](https://doi.org/10.1111/icad.12623)

Zajicek, P., Welti, E.A.R., **Baker, N.J.**, Januschke, K., Brauner, O. & Haase, P. 2021. Long-term data reveal unimodal responses of ground beetle abundance to precipitation and land use but no changes in taxonomic and functional diversity. *Scientific Reports* 11, 17468. [10.1038/s41598-021-96910-7](https://doi.org/10.1038/s41598-021-96910-7)

Baker, N.J., Pilotto, F., Haubrock, P.J., Beudert, B. & Haase, P. 2021. Multidecadal changes in functional diversity lag behind the recovery of taxonomic diversity. *Ecology and Evolution*, 11, 17471–17484. [10.1002/ece3.8381](https://doi.org/10.1002/ece3.8381)

Baker, N.J., Pilotto, F., Jourdan, J., Beudert, B. & Haase, P. 2021. Recovery from air pollution and subsequent acidification masks the effects of climate change on a freshwater macroinvertebrate community. *Science of the Total Environment*, 758, 143685. [10.1016/j.scitotenv.2020.143685](https://doi.org/10.1016/j.scitotenv.2020.143685)

Haubrock, P.J., Cuthbert, R.N., Veselý, L., Balzani, P., **Baker, N.J.**, Dick, J.T.A. & Kouba, A. 2020. Predatory functional responses under increasing temperatures of two life stages of an invasive gecko. *Scientific Reports*, 10, 10119. [10.1038/s41598-020-67194-0](https://doi.org/10.1038/s41598-020-67194-0)

Baker, N.J. & Greenfield, R. 2019. Shift happens: changes to the diversity of riverine aquatic macroinvertebrate communities in response to sewage effluent runoff. *Ecological Indicators*, 102, 813–821. [10.1016/j.ecolind.2019.03.021](https://doi.org/10.1016/j.ecolind.2019.03.021)

Dahms-Verster, S., **Baker, N.J.** & Greenfield, R. 2018. A multivariate examination of 'artificial mussels' in freshwater ecosystems. *Environmental Monitoring and Assessment*, 190. [10.1007/s10661-018-6764-6](https://doi.org/10.1007/s10661-018-6764-6)

Dahms, S., **Baker, N.J.** & Greenfield, R. 2017. Ecological risk assessment of metals in sediment: A case study from Limpopo, South Africa. *Ecotoxicology and Environmental Safety*, 135, 106–114. [10.1016/j.ecoenv.2016.09.036](https://doi.org/10.1016/j.ecoenv.2016.09.036)

Baker, N.J., Dahms, S., Gerber, R., Maina, J. & Greenfield, R. 2017. Metal accumulation in House Sparrows (*Passer domesticus*) from Thohoyandou, Limpopo Province, South Africa. *African Zoology*, 52, 43–53. [10.1080/15627020.2017.1293491](https://doi.org/10.1080/15627020.2017.1293491)

Conference proceedings: **Baker, N.J.**, Maina, J. & Greenfield, R. 2015. Zinc and Cadmium concentrations in the House Sparrow (*Passer domesticus*), Thohoyandou, Limpopo, South Africa. Proceedings of the 7th International Toxicology Symposium in Africa. Johannesburg, South Africa, 31 August 2015. pp: 51-52. ISBN: 978-0-620-66287-1 (e-book)

Popular media articles

- 2023 <https://www.lrt.lt/naujienos/mokslas-ir-it/11/2053938/biologinei-ivairovei-europos-geluose-vandenyse-iskilusi-gresme-mokslininkai-ragina-imtis-priemoniu> (in Lithuanian language)
- <https://www.lrytas.lt/gamta/zeme/2023/08/28/news/biologinei-ivairovei-europos-geluose-vandenyse-iskilusi-gresme-mokslininkai-ragina-imtis-priemoniu-28035907> (in Lithuanian language)
- http://www.technologijos.lt/n/mokslas/gamta_ir_biologija/S-135321/straipsnis/Biologinei-ivairovei-Europos-geluose-vandenyse-iskilusi-gresme--mokslininkai-ragina-imtis-priemoniu (in Lithuanian language)
- <https://ukininkopatarejas.lt/naujienos/mokslininkai-biologinei-ivairovei-europos-geluose-vandenyse-iskilusi-gresme/> (In Lithuanian language)
- <https://www.voruta.lt/biologinei-ivairovei-europos-geluose-vandenyse-iskilusi-gresme-mokslininkai-ragina-imtis-priemoniu/> (In Lithuanian language)
- 2025 <https://sc.bns.lt/view/item/lietuvos-upiu-bukle-bus-vertinama-taikant-naujus-siuolaikinius-metodus-500650> (in Lithuanian language)
- <https://atliekukultura.lt/naujienos/lietuvos-upiu-bukle-bus-vertinama-taikant-naujus-siuolaikinius-metodus/> (in Lithuanian language)

<https://alkas.lt/2025/02/04/lietuvos-upiu-bukle-bus-vertinama-taikant-naujus-siuolaikinius-budus/> (in Lithuanian language)

<https://www.15min.lt/verslas/naujiena/bns-spaudos-centras/lietuvos-upiu-bukle-bus-vertinama-taikant-naujus-siuolaikinius-metodus-500650> (in Lithuanian language)

<https://www.facebook.com/nemunas2.0/posts/modern%C5%ABs-tyrimai-nemuno-baseineprie-nemunas-20-jungiasi-jaun%C5%B3-tyr%C4%97j%C5%B3-komanda-i%C5%A1-747589028304519/> (in Lithuanian language)

<https://www.linkedin.com/company/nemunas-2-0/posts/> (in Lithuanian language)

Selected conference presentations

Local conferences:

7th Annual Oppenheimer De Beers Group Research Conference, Crown mines, South Africa, October 2016 – Poster presentation: *Metal Accumulation in House Sparrows (Passer domesticus) from Thohoyandou, South Africa.*

South African Society of Aquatic Scientists (SASAqS), Boksburg, South Africa, June 2017 – Poster presentation: *Preliminary MSc results for an assessment of the aquatic macroinvertebrate diversity within the Nyl and Mogalakwena river systems, Limpopo, South Africa* – **Prize winner for best student presentation.**

8th Annual Oppenheimer De Beers Group Research conference, Crown Mines, South Africa, October 2017 – Poster Presentation: *Using macroinvertebrate community assemblages to determine water quality within drought conditions.*

UJ Postgraduate School's Annual Inter-Faculty Postgraduate Symposium, University of Johannesburg, Auckland Park, South Africa, October 2017 – Oral Presentation: *Assessing the water quality of the Nyl and Mogalakwena River system using macroinvertebrate community assemblages.*

Annual Grosse Ohe meeting, Grafenau, Germany, September 2018 – Oral Presentation: *Understanding the role of doc & its effects on macroinvertebrate communities in the mountainous streams of the Bavarian Forest National Park.*

Annual Grosse Ohe meeting, Grafenau, Germany, September 2019 – Oral Presentation: *Aquatic invertebrates in the Große Ohe River: A long-term temporal analysis.*

Long Term Ecological Research Network – Deutschland (LTER-D) annual meeting 2020, Leipzig, Germany, March 2020 – Oral Presentation: *Long-term (>30 years) macroinvertebrate community variability & the drivers thereof: Lessons from an LTER site in the Bavarian Forest National Park.*

Senckenberg evaluation 2020, Frankfurt am Main, Germany, June 2020 – Poster Presentation: *Complex and nonlinear climate-driven changes in freshwater insect communities over 42 years.*

Annual Grosse Ohe meeting, Grafenau, Germany, September 2021 – Oral Presentation: *Eine Reise durch die Zeit: An exploration of the Große Ohe macroinvertebrate diversity and function through time.*

BioAteitis conference 2024, Vilnius, Lithuania, November 2024 – Plenary talk: *The role of young researchers in shaping the future of biosciences: opportunities and challenges.*

International conferences:

7th International Toxicology Symposium in Africa, Johannesburg, South Africa, August 2015 – Poster presentation: *Zinc and Cadmium concentrations in the House Sparrow (Passer domesticus), Thohoyandou, Limpopo, South Africa.*

12th Water Research Horizon Conference 2022, Essen, Germany, September 2022 – **Invited speaker:** *Things are not always as they seem: a multidecadal trend analysis of freshwater invertebrate communities within Bavarian Forest National Park, Germany.*

Symposium of European Freshwater Sciences (SEFS) 13, Newcastle Upon Tyne, England, June 2023 – Oral presentation: *The seasonal continuum [concept]: short-term temporal taxonomic turnover does not alter ecosystem functioning in boreal streams.*

Symposium of European Freshwater Sciences (SEFS) 14, Bolu, Türkiye, July 2025 – Oral presentation: *Ecological quality drives an increased abundance of malaria insect vectors.*

Entomological Society of America Conference 2025 (EntSoc25), Portland, Oregon, USA, November 2025 – Oral presentation: *Ecological drivers of vector abundance across Lithuania.*

Entomological Society of America Conference 2025 (EntSoc25), Portland, Oregon, USA, November 2025 – Workshop: *Standardizing the collection of insect trait data to identify ecological functions.* Unified insect trait database working group: Progress and future directions. Perry, KI, NJ Baker, D Dillard, E Lichtenberg, KA Roeder, EAR Welti, and EM Grames. 2025. Unified insect trait database working group: Progress and future directions. WORKSHOP: Standardizing the collection of insect trait data to identify ecological functions. Entomological Society of America, Portland, OR, November 9.

Invited presentations and seminars

November 2025	“ <i>The importance of SCALE when analyzing biodiversity data: a local, regional, & European perspective</i> ”. Invited speaker at EURAC’s Institute for Alpine Environment, Bolzano, Italy (Online).
July 2025	“ <i>Ecological monitoring: What to sample? When to sample? Why sample?</i> ”. Guest lecture to Vilnius University hydrology bachelors students at Molėtai Astronomical Observatory, Kulionys, Lithuania.
May 2025	“ <i>Same same but different: The importance of scale in community ecology</i> ”. Invited speaker at University of the Witwatersrand, Johannesburg, South Africa.
February 2025:	“ <i>Science in Lithuania</i> ”. Guest lecture at Vilniaus Žirmūnų gimnazija, Vilnius, Lithuania.
November 2024	“ <i>The role of young researchers in shaping the future of biosciences: opportunities and challenges</i> ”. Invited speaker at Bioateitis conference, Nature Research Centre, Vilnius, Lithuania.
June 2024:	“ <i>Understanding European freshwater biodiversity: Spatio-temporal patterns and future directions</i> ” – Invited speaker at the Goethe University Frankfurt, Frankfurt am Main, Germany.
April 2024:	“ <i>Changes in invertebrate communities after river restoration</i> ” – Invited speaker at a stakeholder seminar at the Nature Research Centre, Vilnius, Lithuania.
March 2024:	“ <i>How and why European freshwater biodiversity is changing</i> ” – Invited speaker at the University of Lodz, Poland (Online).
February 2024:	“ <i>The spatio-temporal patterns of European riverine diversity</i> ” – Invited lecture at the Ludwig Maximilian University of Munich (LMU), Germany.
April 2023:	“ <i>Invertebrates, parasites, fish & birds: [trying to] connect the unconnected</i> ” – Invited speaker at Norwegian Institute for Nature Research (NINA) in Oslo, Norway.
September 2022:	“ <i>Things are not always as they seem: a multidecadal trend analysis of freshwater invertebrate communities within Bavarian Forest National Park, Germany.</i> ” – Invited speaker at 12th Water Research Horizon Conference 2022, Essen, Germany.

References (additional references are available as needed)

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