

Bjørn Tore Kopperud, MSc.

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🌐 <https://www.github.com/kopperud>



Employment History

- Feb 2020 – June 2025 **Research assistant**, Department of Earth and Environmental Sciences, Ludwig-Maximilians-Universität München. Developing methods for estimating diversification rates from reconstructed phylogenies.
- Feb 2018 – Jan 2020 **Researcher**, Natural History Museum, University of Oslo. Text-mining bryozoan occurrence data using natural language processing.
- Oct 2017 – Nov 2017 **Research assistant**, Department of Biosciences, University of Oslo. Software development in R, and writing manuscripts.

Education

- Feb 2020 – ongoing **PhD., Ludwig-Maximilians Universität München** at the Faculty of Geological Sciences. Thesis title: *Efficient inference of clade-specific diversification rates with probabilistic approaches.*
- Aug 2015 – Sept 2017 **MSc. University of Oslo** in Biology: Ecology and Evolution. Thesis title: *Artiodactyl brain-size evolution.*
- Aug 2012 – Sept 2016 **BSc., University of Oslo** in Biology.

Selected work

Published articles

- B. T. Kopperud** and S. Höhna, “Phylogenetic estimation of branch-specific shifts in the tempo of origination,” *Systematic Biology*, syafo41, 2025.
- S. L. Olroyd and **B. T. Kopperud**, “Allometry of sound reception structures and evidence for a mandibular middle ear in non-mammalian synapsids,” *Evolution*, vol. 79, no. 6, pp. 905–921, 2025.
- J. Pienaar, K. Bartoszek, B. Brahmantio, J. L. Fierst, J. A. Fuentes-González, T. F. Hansen, W. H. C. Kiang, **B. T. Kopperud**, and K. L. Voje, “Phylogenetic comparative methods for studying adaptation: The adaptation-inertia framework,” *Journal of Evolutionary Biology*, voaf113, Sep. 2025.
- J. Martinez-Gómez, M. J. Song, C. M. Tribble, **B. T. Kopperud**, W. A. Freyman, S. Höhna, C. D. Specht, and C. J. Rothfels, “Commonly used bayesian diversification methods lead to biologically meaningful differences in branch-specific rates on empirical phylogenies,” *Evolution Letters*, vol. 8, no. 2, pp. 189–199, 2024.
- M. Tsuboi, **B. T. Kopperud**, M. Matschiner, M. Grabowski, C. Syrowatka, C. Pélabon, and T. F. Hansen, “Antler Allometry, the Irish Elk and Gould Revisited,” *Evolutionary Biology*, pp. 1–17, 2024.
- M. Grabowski, **B. T. Kopperud**, M. Tsuboi, and T. F. Hansen, “Both diet and sociality affect primate brain-size evolution,” *Systematic Biology*, vol. 72, no. 2, pp. 404–418, 2023.
- M. Grabowski, J. Pienaar, K. L. Voje, S. Andersson, J. Fuentes-González, **B. T. Kopperud**, D. S. Moen, M. Tsuboi, J. Uyeda, and T. F. Hansen, “A Cautionary Note on “A Cautionary Note on the Use of Ornstein Uhlenbeck Models in Macroevolutionary Studies,”” *Systematic Biology*, syado12, 2023.
- B. T. Kopperud**, A. F. Magee, and S. Höhna, “Rapidly changing speciation and extinction rates can be inferred in spite of nonidentifiability,” *Proceedings of the National Academy of Sciences*, vol. 120, no. 7, e2208851120, 2023.

- 9 S. Höhna, **B. T. Kopperud**, and A. F. Magee, “CRABS: Congruent rate analyses in birth–death scenarios,” *Methods in Ecology and Evolution*, vol. 13, no. 12, pp. 2709–2718, 2022.
- 10 **B. T. Kopperud**, S. Lidgard, and L. H. Liow, “Enhancing georeferenced biodiversity inventories: Automated information extraction from literature records reveal the gaps,” *PeerJ*, vol. 10, e13921, 2022.
- 11 C. M. Tribble, W. A. Freyman, M. J. Landis, J. Y. Lim, J. Barido-Sottani, **B. T. Kopperud**, S. Höhna, and M. R. May, “RevGadgets: An R package for visualizing Bayesian phylogenetic analyses from RevBayes,” *Methods in Ecology and Evolution*, vol. 13, no. 2, pp. 314–323, 2022.
- 12 M. Tsuboi, **B. T. Kopperud**, C. Syrowatka, M. Grabowski, K. L. Voje, C. Pélabon, and T. F. Hansen, “Measuring complex morphological traits with 3D photogrammetry: a case study with deer antlers,” *Evolutionary Biology*, vol. 47, no. 2, pp. 175–186, 2020.
- 13 **B. T. Kopperud**, S. Lidgard, and L. H. Liow, “Text-mined fossil biodiversity dynamics using machine learning,” *Proceedings of the Royal Society B*, vol. 286, no. 1901, p. 2019022, 2019.
- 14 M. Tsuboi, W. van der Bijl, **B. T. Kopperud**, J. Erritzøe, K. L. Voje, A. Kotrschal, K. E. Yopak, S. P. Collin, A. Iwaniuk, and N. Kolm, “Reply to: Comparisons of static brain–body allometries across vertebrates must distinguish between indeterminate and determinate growth,” *Nature Ecology & Evolution*, vol. 3, no. 10, pp. 1405–1406, 2019.
- 15 M. Tsuboi, W. van der Bijl, **B. T. Kopperud**, J. Erritzøe, K. L. Voje, A. Kotrschal, K. E. Yopak, S. P. Collin, A. N. Iwaniuk, and N. Kolm, “Breakdown of brain–body allometry and the encephalization of birds and mammals,” *Nature Ecology & Evolution*, vol. 2, no. 9, pp. 1492–1500, 2018.

Software

- 1 **B. T. Kopperud** and S. Höhna, *Pesto.jl: Phylogenetic estimation of shifts in the tempo of origination*, 2025. [URL: https://github.com/kopperud/Pesto.jl](https://github.com/kopperud/Pesto.jl).
- 2 **B. T. Kopperud**, J. Pienaar, K. L. Voje, S. H. Orzack, T. F. Hansen, and M. Grabowski, *slouch: stochastic linear Ornstein-Uhlenbeck comparative hypotheses*, 2020. [URL: https://cran.r-project.org/web/packages/slouch/index.html](https://cran.r-project.org/web/packages/slouch/index.html).

Theses

- 1 **B. T. Kopperud**, “Efficient inference of clade-specific diversification rates with probabilistic approaches,” PhD thesis, Ludwig-Maximilians-Universität München, Munich, Germany, 2025.
- 2 **B. T. Kopperud**, “Artiodactyl brain-size evolution,” MSc thesis, University of Oslo, Oslo, Norway, 2017. [URL: https://www.duo.uio.no/handle/10852/59351](https://www.duo.uio.no/handle/10852/59351).

Miscellaneous Experience

Talks

- 2024 **PalAss**, Palaeontological Association, Erlangen, Germany. Estimating lineage-specific diversification rates on phylogenies.
- 2024 **Evolution**, Montreal, Canada. Phylogenetic Estimation of Shifts in the Tempo of Origination.
- 2021 **Phyloseminar**, (virtual). Birth–death congruence classes can be collapsed using Bayesian shrinkage priors.
- 2019 **Evolution**, Providence, RI, USA. Extracting fossil occurrence data using natural language processing.
- 2018 **GSA**, Geological Society of America, Indianapolis, IN, USA. Text-mining the bryozoan fossil record.

Miscellaneous Experience (continued)

Posters

- 2023 ■ **MCEB Meeting**, Mathematical and Computational Evolutionary Biology, Corsica, France. Pesto: Phylogenetic Estimation of Shifts in the Tempo of Origination.
- 2023 ■ **SSB Standalone Meeting**, Society for Systematic Biology, México City, México. Fast estimation of branch-specific speciation and extinction rates.
- 2021 ■ **MIC-Phy**, (virtual). Mathematical Inferential and Computational Phylogenomics. Congruent birth-death models can be collapsed using Bayesian inference.
- 2017 ■ **ESEB Conference**, European Society for Evolutionary Biology, Groningen, the Netherlands. Short-form presentation of my master's project: Artiodactyl brain-size evolution.

Review experience

- Journals for which I have provided peer-reviews of manuscripts: Global Ecology and Biogeography, Systematic Biology, Methods in Ecology and Evolution, Journal of Evolutionary Biology, Geological Society Special Publications.
- Funding organizations for which I have provided scientific reviews: Czech Science Foundation.

Miscellaneous

- 2025 ■ **Macroevolution course**, at the Ludwig-Maximilians-Universität München, Munich, Germany. Teaching a lecture and exercise about diversification rate analyses that allow for rate variation among clades.
- 2018 ■ **Slouch workshop**, at the Norwegian University of Science and Technology, Trondheim, Norway. Teaching a workshop in how to use the R-package Slouch (Stochastic Linear Ornstein-Uhlenbeck Comparative Hypotheses) for testing adaptive macroevolutionary hypotheses.

References

Available upon request