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Towards improved source apportionment of organic matter in soil and peat using lipid biomarkers and inverse modeling

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AUTHORS STATEMENT

Manuscript I

Thomas, C. L., Jansen, B., van Loon, E. E., and Wiesenberg, G. L. B., 2021. Transformation of *n*-alkanes from plant to soil: a review. *SOIL*, 7, 785–809, <https://doi.org/10.5194/soil-7-785-2021>.

Authors' contributions: CLT, BJ, EEvL, and GLBW conceived and designed the study. CLT developed the review methodology, performed the meta-analysis of the data, collected, curated, and published the data in the PANGAEA repository, created the data visualizations, wrote the original draft, and led the editing process. BJ, EEvL, and GLBW supervised the study and paper completion. GLBW acquired project funding and administered the project. All authors contributed to the drafts of the manuscript and its final approval.

Manuscript II

Thomas, C. L., Jansen, B., Czerwiński, S., Gałka, M., Knorr, K.-H., van Loon, E. E., Egli, M., and Wiesenberg, G. L. B., 2023. Comparison of paleobotanical and biomarker records of mountain peatland and forest ecosystem dynamics over the last 2600 years in central Germany, *Biogeosciences*, 20, 4893–4914, <https://doi.org/10.5194/bg-20-4893-2023>.

Authors' contributions: CLT, K-HK, and GLBW conceptualized the study. CLT, MG, K-HK, and GLBW facilitated and conducted the fieldwork. CLT, SC, MG, and ME performed lab analyses. CLT, SC, and ME contributed to the data visualization. CLT curated and published the data in the PANGAEA repository, wrote the original draft, and led the editing process. BJ, EEvL, and GLBW supervised the study and paper completion. GLBW acquired project funding and administered the project. All authors contributed to the drafts of the manuscript and its final approval.

Manuscript III

Thomas, C. L., Jansen, B., van Loon, E. E., and Wiesenberg, G. L. B. Evaluating the applicability of the VERHIB model to a 2600-year peat sequence from central Germany. Will be submitted to *Palaeogeography, Palaeoclimatology, Palaeoecology*, 2024.

Authors' contributions: CLT, BJ, EEvL, and GLBW conceptualized the study. EEvL created the model used in the study. CLT performed the lab and data analyses as well as the data visualization and curation and published the data used for the model simulations to the PANGAEA repository. CLT wrote the original draft and led the editing process. BJ, EEvL, and GLBW supervised the study and paper completion. GLBW acquired project funding and administered the project. All authors contributed to the drafts of the manuscript and its final approval.

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ABOUT THE AUTHOR

Carrie Louise Thomas was born in Danville, Illinois, USA on August 3, 1991. She attended St. Charles North High School in St. Charles, Illinois. Later, she studied at the University of Illinois at Urbana-Champaign, double majoring in English Literature and Environmental Sustainability with a minor in Geology. During her bachelor's, she worked as a student assistant at the Illinois State Geological Survey. In 2016, Carrie moved to the Netherlands to pursue a master's degree in Earth Sciences at the University of Amsterdam. While at the UvA, she served one year as president of the GAOS study association and completed a master's thesis entitled, "Soil Legacies: Using lipid biomarkers to verify illicit whisky distilling sites on the isle of Arran, Scotland," for which she won the Dutch Soil Science Society's (Nederlandse Bodemkundige Vereniging) Hissinkprijs for best master's thesis in 2018. Following her MSc, Carrie started a joint PhD between the University of Zurich and the University of Amsterdam, the results of which are described in this dissertation. Today, Carrie works as a postdoctoral researcher in the Plant Microbe Ecology group at Radboud University in Nijmegen.