

Data from: *Dating basal peat: the geochronology of peat initiation revisited*

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- ⇒ Quik C, Palstra SWL, Van Beek R, Van der Velde Y, Candel JHJ, Van der Linden M, Kubiak-Martens L, Swindles GT, Makaske B, Wallinga J. 2022. Dating basal peat: the geochronology of peat initiation revisited. *Quaternary Geochronology*, DOI: <https://doi.org/10.1016/j.quageo.2022.101278>.
- ⇒ Quik C, Palstra SWL, Van Beek R, Van der Velde Y, Candel JHJ, Van der Linden M, Kubiak-Martens L, Swindles GT, Makaske B, Koudijs R, Wallinga J. 2022. Data from: Dating basal peat: the geochronology of peat initiation revisited. 4TU.Centre for Research Data. DOI: 10.4121/16923358.

Description of the data in this dataset:

The data are grouped in the folders *AgeDepthModelling*, *DataTablesManuscript*, *OrganicMatterGradient*, and *StudySites*. An overview of the files is listed below. For methodological details please refer to the manuscript (see reference above).

AgeDepthModelling

In this folder all the OxCal scripts that were used to generate figures 7 and 8 of the manuscript are available. The files contained in this folder are listed below (TABLE 1).

TABLE 1: File overview for folder 'AgeDepthModelling'.		
Filename	Filetype	Description
FINAL_S17	.oxcal .txt	OxCal script on which figure 7b and 8a are based. Run the script in OxCal and wait for the MCMC to finish. The resulting .svg file was combined with the .svg file of the likelihoods of humics and humins (file: 'FINAL_S17_Likelihoods_HumicHumin') using Adobe Illustrator to yield figure 7b.
FINAL_S17_Likelihoods_HumicHumin	.oxcal .txt	OxCal script on which figure 7b is based. This script should only be used to visualise the likelihoods of the dates (i.e., the unmodelled data). To obtain these, run the script and manually end the MCMC in OxCal, then plot only the likelihoods (no posteriors). The resulting .svg file was combined with the .svg file of the P_Sequence (file: 'FINAL_S17') using Adobe Illustrator to yield figure 7b.
FINAL_S17_Likelihoods_MacroHumicHumin	.oxcal .txt	OxCal script on which figure 7a is based. This script should only be used to visualise the likelihoods of the dates (i.e., the unmodelled data). To obtain these, run the script and manually end the MCMC in OxCal, then plot only the likelihoods (no posteriors).

FINAL_S18	.oxcal .txt	OxCal script on which figure 7f and 8b are based. Run the script in OxCal and wait for the MCMC to finish. The resulting .svg file was combined with the .svg file of the likelihoods of humics and humins (file: 'FINAL_S18_Likelihoods_HumicHumin') using Adobe Illustrator to yield figure 7f.
FINAL_S18_Likelihoods_HumicHumin	.oxcal .txt	OxCal script on which figure 7f is based. This script should only be used to visualise the likelihoods of the dates (i.e., the unmodelled data). To obtain these, run the script and manually end the MCMC in OxCal, then plot only the likelihoods (no posteriors). The resulting .svg file was combined with the .svg file of the P_Sequence (file: 'FINAL_S18') using Adobe Illustrator to yield figure 7f.
FINAL_S18_Likelihoods_MacroHumicHumin	.oxcal .txt	OxCal script on which figure 7e is based. This script should only be used to visualise the likelihoods of the dates (i.e., the unmodelled data). To obtain these, run the script and manually end the MCMC in OxCal, then plot only the likelihoods (no posteriors).
FINAL_S20	.oxcal .txt	OxCal script on which figure 7j and 8c are based. Run the script in OxCal and wait for the MCMC to finish. The resulting .svg file was combined with the .svg file of the likelihoods of humics and humins (file: 'FINAL_S20_Likelihoods_HumicHumin') using Adobe Illustrator to yield figure 7j.
FINAL_S20_Likelihoods_HumicHumin	.oxcal .txt	OxCal script on which figure 7j is based. This script should only be used to visualise the likelihoods of the dates (i.e., the unmodelled data). To obtain these, run the script and manually end the MCMC in OxCal, then plot only the likelihoods (no posteriors). The resulting .svg file was combined with the .svg file of the P_Sequence (file: 'FINAL_S20') using Adobe Illustrator to yield figure 7j.
FINAL_S20_Likelihoods_MacroHumicHumin	.oxcal .txt	OxCal script on which figure 7i is based. This script should only be used to visualise the likelihoods of the dates (i.e., the unmodelled data). To obtain these, run the script and manually end the MCMC in OxCal, then plot only the likelihoods (no posteriors).

DataTablesManuscript

This folder contains the data tables that are contained in the manuscript. All files are listed below (TABLE 2).

TABLE 2: File overview for folder 'DataTablesManuscript'.		
<i>Filename</i>	<i>Filetype</i>	<i>Description</i>
Table5DatingMaterial_edit	.txt	Data from Table 5 of the manuscript. Overview of the charred aboveground plant remains that were selected for radiocarbon dating. For explanation, see caption in the manuscript.

Biostratigraphy	.txt	Data from Table 6 of the manuscript, which contains the results of the analyses of plant macrofossils and testate amoebae. For explanation, see caption in the manuscript.
Table7	.txt	Data from Table 8 of the manuscript, which contains the radiocarbon dating results for core S17. For explanation, see caption in the manuscript.
Table8	.txt	Data from Table 8 of the manuscript, which contains the radiocarbon dating results for core S18. For explanation, see caption in the manuscript.
Table9	.txt	Data from Table 8 of the manuscript, which contains the radiocarbon dating results for core S20. For explanation, see caption in the manuscript.

OrganicMatterGradient

In this folder all the R scripts that were used to generate figures 6 and 7 of the manuscript are available, including the underlying organic matter data. The files are listed below (TABLE 3).

TABLE 3: File overview for folder 'OrganicMatterGradient'.

<i>Filename</i>	<i>Filetype</i>	<i>Description</i>
OM S17 dataset	.csv	File that contains the organic matter content data of core S17, based on 1-cm-thick slices.
OM S18 dataset	.csv	File that contains the organic matter content data of core S18, based on 1-cm-thick slices.
OM S20 dataset	.csv	File that contains the organic matter content data of core S20, based on 1-cm-thick slices.
OM S17 script for dataset	.R .txt	R script that uses the file 'OM S17 dataset' to generate the graph in figure 7c in the manuscript. Note that to run the script, first a workspace needs to be defined in the script.
OM S18 script for dataset	.R .txt	R script that uses the file 'OM S18 dataset' to generate the graph in figure 7g in the manuscript. Note that to run the script, first a workspace needs to be defined in the script.
OM S20 script for dataset	.R .txt	R script that uses the file 'OM S20 dataset' to generate the graph in figure 7k in the manuscript. Note that to run the script, first a workspace needs to be defined in the script.
OM trends dataset	.csv	File that contains the organic matter content of the five cores from which the organic matter gradient was studied as a contiguous sequence of 1-cm-thick slices.
OM trends script for dataset	.R .txt	R script that uses the file 'OM trends dataset' to generate the graph in figure 6a in the manuscript. Note that to run the script, first a workspace needs to be defined in the script.

StudySites

This folder contains shapefiles of the studied locations (TABLE 4) and accompanying metadata files.

TABLE 4: File overview for folder 'StudySites'.

<i>Filename</i>	<i>Filetype</i>	<i>Description</i>
Sites_LOI	.shp ¹	Point feature that contains the location of the five cores from which the OM gradient was obtained (in Dutch RD_new projection). Also see figures 2 and 6 in the manuscript.
Sites_RadiocarbonDating	.shp ¹	Point feature that contains the location of core S17, S18 and S20 (in Dutch RD_new projection). Also see figure 2 in the manuscript.

¹ Note that this file should be opened with GIS software (e.g. ArcGIS).

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