Data Article

Quantitative data on plant macrofossil distribution in the Holocene sediment cores of mires in the Kaliningrad region, Russian Federation (South-Eastern Baltic)

Maxim Napreenko a,*, Tatiana Napreenko-Dorokhova a, b

a Shirshov Institute of Oceanology, Russian Academy of Sciences, 36 Nahimovskiy Prospekt, 117997, Moscow, Russia
b Immanuel Kant Baltic Federal University, 14 Nevskogo Street, 236041, Kaliningrad, Kaliningrad region, Russia

1. Data

The data file contains the quantitative information on relative content (%) of the abundant (>1% of concentration) plant macro-remnants (identified to species or genus) the in the Holocene sediment cores from peatlands in the Kaliningrad region. For certain horizons, the radiocarbon data are provided. The plant macro-remnants is a basic substrate of the peat sediments which have generally no hiatuses.

* Corresponding author. Shirshov Institute of Oceanology, Russian Academy of Sciences, 36 Nahimovskiy Prospekt, 117997, Moscow, Russia.
E-mail address: maxnapr@gmail.com (M. Napreenko).
in sedimentation and may have reliably been dated by the $^{14}$C method. This enables to obtain data on environment and climate development with a high time resolution. We provide data for 45 peat sediment cores retrieved from 6 mire ecosystems in the Kaliningrad Region (Fig. 1; Table 1). The data were collected during 2007–2018.

2. Experimental design, materials, and methods

The peat bed coring and peat samples retrieval were carried out by means of the Russian D-corer (model TBG-1) taking into account standard methodological guidelines [1]. The laboratory treatment of sediment samples and specimen preparation were executed according to the standard technique [2,3]: in order to remove non-structured humus particles, a sample of wet peat was cleaned under running water, and the washed material was retained on a 250 μm sieve in case of slightly decomposed peat and on a 100 μm sieve at a high degree of decomposition. For the microscopic analysis, a specimen was prepared in the following way: a small amount of the washed peat has been placed on a microscope slide, several drops of water were added in order to spread the plant residues equally over the slide with a thin layer. The specimen was studied under the microscope which included both identifications of plant macro-remnants and estimation of percentage for different systematic groups of plants in a peat sample. No less than 4 standard microscope slides were examined for each peat sample. A number of atlases and taxonomic keys were used for identification of a systematic group of the plant residues [2,4–7]. In some cases, plant residues were stained with methylene blue for identification purposes, in particular, for more distinct detection of pore shape and pore arrangement throughout a leaf.

The radiocarbon analysis of peat and gyttja samples was performed by conventional ($^{14}$C) dating at the Radiocarbon Laboratory of the Institute of Geography of Russian Academy of Sciences (Moscow, Russia). All radiocarbon dates were calibrated using the $^{14}$C calibration program CALIB, version 7.1.0 14ChronoCentre, QueensUniversityBelfast and the calibration curve IntCal13 [8].
Fig. 1. Location of the sediment cores which are provided with data files: a) Svinoye raised bog, b) Kozye raised bog, c) Bolshoye Mokhovoye raised bog, d) Zehlau raised bog, e) Vittgirrenskoye peatland, f) Maloye Olenye terrestrializing lake 1 – unterrestrialized part of Maloye Olenye lake.


Table 1  
Location of sediment cores.

| Mire                                  | Number of boreholes | Core length, m (min-max) | Area                                                                 |
|---------------------------------------|---------------------|--------------------------|----------------------------------------------------------------------|
| Svinoye raised bog                    | 2                   | 6.4–7.5                  | Heavily drained raised bog occupying a proximal part of the offshore bar (Curonian Spit) between the Baltic Sea coast and the Curonian Lagoon N 54° 57.80' E 20° 30.96' |
| Kozye raised bog                      | 18                  | 1.5–7.0                  | Nearly natural raised bog in deltaic lowland landscape (Neman Delta area), 7 km from the Curonian Lagoon coast N 55° 14.96' E 21° 23.80' |
| Bolshoye Mokhovoye raised bog         | 9                   | 5.8–11.0                 | Nearly natural raised bog in deltaic lowland landscape (southern Neman Delta area), 9 km from the Curonian Lagoon coast N 54° 58.24' E 21° 22.81' |
| Zehlau raised bog                     | 8                   | 2.15–5.85                | Nearly natural raised bog on a glaciolacustrine plain, 55 km inland from the Baltic Sea coast N 54° 31.89' E 20° 55.01' |
| Vittigrenskoye peatland               | 7                   | 0.3–1.1                  | A morainic plain peatland abandoned after peat extraction, 70 km inland from the Baltic Sea coast N 54° 47.98' E 21° 39.47' |
| Maloye Olenye terrestrializing lake   | 1                   | 3.4                      | Pristine transition mire on a buoyant mat developing inward a lake on a glaciolacustrine plain, 85 km inland from the Baltic Sea coast N 54° 34.01' E 21° 42.15' |

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Conflict of interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.dib.2019.104138.

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