

Genesis and evolution of peat deposits on island territories of the southwestern Okhotsk Sea Region in the Holocene

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Абстракт. The paper considers the results of studying of wetland ecosystems within the boundaries of the “Shantar Islands” National Park in 2016–2018. The characteristics of peat deposits in main bog areas that developed over the Holocene on the surfaces dating back to the Late Pleistocene are described. The features of waterlogging in the flattened watersheds of the Bolshoy Shantar Island in different periods of the evolution of studied peat bogs are considered on the basis of the results of botanical, palynological and radiocarbon analyzes. The settlement of green mosses among areas sparsely vegetated by shrub-sedge communities in small closed depression with a melting substrate during the growth season was determined as the initial centers of waterlogging on the archipelago. The regressive effect of cryogenic processes on the formation of specific organogenic landforms in oligotrophic bogs of the permafrost zone of the southwestern Okhotsk Sea Region has been identified by analyzing cartographic materials, Earth remote sensing data of medium and high spatial resolution (Landsat-8, Sentinel-2), as well as aerial images taken by DJI Phantom 4 UAV. There is a relationship between the thickness of the peat deposit, the natural and climatic circumstances of different Holocene stages, and successional changes in bog vegetation. These shifts' chronometric parameters and order have been established. The order and chronologic parameters of these shifts have been determined. In contrast to the mainland, the transgression of the sea and the confinement of the archipelago to the cryolithic zone of eastern Eurasia were the main factors that defined the features of the development of island swamp phytocenoses and surrounding vegetation.

Ключевые слова:

Holocene, bog formation, peat deposit, cryolithic zone, biodiversity, sphagnum cover, transgression

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