



## **Carbon Storage within the Transitive Layer of Permafrost**

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Depending on climatic fluctuations, weather conditions, soil cover and vegetation genesis, zone of contact between soil profile and permafrost can appear as the component of active layer or as the component of frozen ground. On the Kolyma-Indigirka Lowland (North Yakutia, Russia) this transitive layer of permafrost, which thaws in the warmest conditions, often contains even more organic carbon, than in the upper parts of soil profiles (except of peat soils in nanopolygonal cracks). The mean thickness of peat (or duff) horizon is not more than 7-13 cm and the quantity of organic carbon here is about 9% (n=4). And for the mean samples of coarse organic material from the transitive layer, total organic carbon content is 10.1% for the first experimental site (n=10), and 8.9% for the second (n=6). Distribution of such soils is limited and the main requisition is the relatively shallow thickness of active layer, when cracks filled with peat reach the surface of permafrost. The lateral structure of transitive layer here consists of three main components: ice, ice-ground and frozen coarse organics. Such well-expressed structure is determined by cryogenic lateral redistribution, migration and accumulation of matter within these soils.