

ACG031-P05

Room: Convention Hall

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Reconstruction of knowledge on circumpolar region.

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Ecosystem classification in circumpolar region often divide tundra and boreal forest, and main soil types are tundra gley soil and podzol, respectively. We are facing on new phase of revision of our knowledge under sophisticated earth science discipline and database construction.

Circumpolar forests should be classified into evergreen coniferous and deciduous coniferous types. The critical environmental factor which controls forest types is permafrost distribution. Vast deciduous conifer larch forest exists in northeast Eurasia, where continuous permafrost exists. On the other hand, no vast area of evergreen coniferous forest exists on continuous permafrost. Soil classification map revised drastically in recent. Podzolic soil and tundra gley soils do not show zonal distribution patterns in circumpolar region. Podzol dominant area are northeast North America and Scandinavia. Organic soil distribution is not accompanied by tundra vegetation zone, rather associated with past glacier lake position.

The reconstruction of knowledge on circumpolar region is necessary to understand northern ecosystems and to make more reliable model output.

Keywords: circumpolar region, permafrost, tree limit, soil, forest ecosystem, structure and function