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BACK

C6.02 Biogeography and Biodiversity

Chairperson(s): Suraj Mal, Dmitry Zolotov

Response of Mountain Ecosystems to Climate Change

- *Climate Change Impacts On Bioclimatic Conditions And Terrestrial Ecosystems In Central Asia*
  Robert Zomer, Xu Jianchu, Wang Mincheng

- *Epilithic Lichen Communities In Alpine Life Zone Under Climate Change*
  G. Insarov, E. Davydov

- *Peatbogs Of The Russian Altai: Indication Of Climate Change And Landscape Reference*
  D.V. Chernykh, D.V. Zolotov, R.Yu. Biryukov

- *Current Dynamics Of Low-Mountain Landscapes In The Russian Altai Under Climate Change And Anthropogenic Impact (The Maima River Basin As A Case Study)*
  D.V. Chernykh, R.Yu. Biryukov, L.F. Lubenets, O.P. Nikolaeva, D.V. Zolotov, D.K. Pershin

- *Trends In Ecosystem Services Of Northern Altai*
  M. Sukhova, O. Zhuravleva, A. Karanin, E.Chernova[2]

- *Analysis Of Temporal And Spatial Distribution Of Grassland Fire In Mongolian Plateau*
  Yulong Bao

BACK

PEATBOGS OF THE RUSSIAN ALTAI: INDICATION OF CLIMATE CHANGE AND LANDSCAPE REFERENCE

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Peat bogs are important indicators of climate change and anthropogenic impact especially in the intracontinental mountains, where peat accumulation is constrained due to increased drainage of the territory, lack of heat or moisture. Firstly, it is possible to restore the past climatic change and landscape evolution using the botanical and spore-pollen analysis in combination with radiocarbon dating of a peat deposit taking into account its location. Secondly, the wetlands respond to the current climate change and environmental loads.

Considering the distribution of peat bogs within the landscapes of the Russian Altai physical-geographical provinces (Chernykh, Samoylova, 2011), they can be divided into three groups:

1. Automorphic landscapes with sporadic development of bogs: Pre-Altai (1707 km^2 that is 9% of the province area and 10% of the total area of this group of landscapes in the Russian Altai), North-Western Altai (1107 km^2, 8%, 7%), Northern Altai (650 km^2, 5%, 4%), North-Eastern Altai (1847 km^2, 10%, 11%), Central Altai (5157 km^2, 13%, 31%), Eastern Altai (4278 km^2, 26%, 26%), and South-Eastern Altai (2033 km^2, 16%, 12%).

2. Semihydromorphic and hydromorphic landscapes with limited development of bogs: Central Altai (675 km^2, 2%, 38%), Eastern Altai (520 km^2, 3 %, 29%), and South-Eastern Altai (593 km^2, 5%, 33%).

3. Hydromorphic and semihydromorphic landscapes with maximum development of peat bogs: North-Eastern Altai (559 km^2, 3%, 60%) and Central Altai (372 km^2, 1%, 40%).

By location, the bog landscapes of the Russian Altai can be divided into the following groups:

1. Depression-valley: a) floodplain; b) terrace; c) intra-moraine; d) dammed (moraine-dammed, etc.).

2. Watershed-slope: a) saddle; b) pedestal and step-like slope; c) exaration (kar, etc.); d) catchment basin (funnel); e) land subsidence (thermokarst, karst, suffusion, etc.).

Landscapes with maximum development of peat bogs are the most promising for their study in terms of paleoreconstruction and indication of modern changes. For climate paleoreconstruction, it is advisable to use bogs of more conservative relief elements (terrace, saddle), and to study the evolution of landscapes and current climate change – more dynamic ones (floodplain, catchment basin, land subsidence).

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Keywords: peat bogs, landscape structure, the Russian Altai, indication of climate change and anthropogenic impact.