



Assessment of chemical element migration in soil-plant complex of Urov endemic localities of East Transbaikalia

Ermakov Vadim V., Danilova Valentina, Khushvakhtova Sabsbakhor, Degtyarev Aklexander, Tyutikov Sergey, Berezkin Victor, and Karpova Elena

Vernadsky Institute of Geochemistry and Analytical Chemistry, Russian Academy of Sciences (GEOKHI RAS), Biogeochemical Dept., Moscow, Russian Federation (ermakov@geokhi.ru)

The comparative evaluation of the levels of biologically active chemical elements and their migration in the soil-plant complex of two Urov endemic locations in East Transbaikalia (Zolinsky and Uryumkansky) and background areas (Western Baikal region and the western area of the Trans-Baikal region) was conducted. The predominant soil-forming rocks in East Transbaikalia are weathering products of Proterozoic carbonated granitoids PR2. The surface rocks consist from granite, granodiorite, diorite quartz diorite, gabbro, norite, gabbro-norite and other. Soils - mountain and cryogenic meadow forests, mountain permafrost taiga podzolised, meadow alluvial, peaty meadow [2]. The paludification of narrow valleys and thermokarst phenomena are typical in Urov endemic localities. It reflects on the spotted of soil and differentiation of chemical composition of soils and plants. Most of the chemical elements in soils were determined by means of X-ray fluorescence, and trace elements in soils and plants - by atomic absorption spectrometry. The selenium content was measured by spectrofluorimetric method [3]. The research processed by methods of variation statistics. It was found that the soils of two locations of the Urov subregion of the biosphere were more enriched with iron, barium, calcium, uranium, thorium, phosphorus, and to a lesser extent strontium compared to background soils. The ratio of Ca: P was significantly higher in the soil of background areas, and Ca: Sr, on the contrary, in endemic soils. In assessing the migration of trace elements in soil-plant complex by means of the total content of trace elements and biological absorption coefficient found a marked accumulation by plants manganese, chromium, arsenic and weak plants accumulation of cobalt and nickel. Soil landscape is not much different in content of selenium, but its migration in plants was reduced in places of spread of Urov disease [1]. The concentrators of cadmium (leaves of different species of willow - Salicaceae) and selenium (needles of larch - *Larix sibirica* L.) were found among the plants.

References

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Supported by the Russian Foundation for Basic Research, grant number 12-05-00141a.