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Hydrochemical Peculiarities of Bog Ecosystems in the North-Siberian Lowland

PDF (Size: 1928KB) PP. 665-674 DOI: 10.4236/jwarp.2010.27077

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ABSTRACT

Surface waters of eutrophic bogs (fens) in the North-Siberian (Taimyr) lowland are characterized by hydrocarbonate, sulfate as well as hydro carbonate-sulfate calcium-magnesium composition. They relate to the type of oxygen waters, mainly, to the class of neutral weakly alkaline and to the family of ultrafresh and fresh waters and to the kind of waters poor with dissolved organic matter. Natural hydrochemical background of bog ecosystems makes in heavy metals in the first approximation: Co– 0.16, Pb– 0.57, Ni– 4.67 and Cu– 5.94 mg/L. In most cases the surface waters are not polluted by heavy metals. Bog waters located in immediate closeness from Norilsk mining and smelting industrial complex are polluted by nickel at mid-level.

KEYWORDS

Bogs, Hydrochemical Characteristics, Heavy Metals, Pollution

Cite this paper

T. Efremova and S. Efremov, "Hydrochemical Peculiarities of Bog Ecosystems in the North-Siberian Lowland," *Journal of Water Resource and Protection*, Vol. 2 No. 7, 2010, pp. 665-674. doi: 10.4236/jwarp.2010.27077.

References

- [1] N. Y. Kats, " Bogs of the Globe," Nauka, Moscow, 1971, p. 295.
- [2] N. I. P' yavchenko, " On Studying Bogs of Krasnoyarsk krai," In: " Paludified Forests and Bogs of Siberia" , Press of the USSR Academy of Sciences, Moscow, 1963, pp. 5- 32.
- [3] " Middle Siberia," Nauka, Moscow, 1964, p. 480.
- [4] O. A. Dyuzhikov, V. V. Distler, B. M. Strunin et al., " Geology and Ore-Bearing Capacity of Norilsk Region," Nauka, Moscow, 1988, p. 279.
- [5] T. T. Taisaev, " Geochemistry of Taiga-Frozen Land-scapes and Searching the Ore Fields," Nauka, Novo- sibirsk, 1981, p. 136.
- [6] " Standard Methods for Analyzing Water," Chemistry, Moscow, 1973, p. 376.
- [7] Methodical Instructions, " Methodology for Performing Measurements of the Mass Sulfate Concentration in Waters Using The Titrimetric Method with Barium Salt," Rostov-na-Donu, 2006, p. 23.
- [8] Methodical Instructions, " Methodology for Performing Measurements of the Mass Sodium and Potassium Concentration in Surface Waters of the Land Using the Flaming-Photometric Method," Rostov-na-Donu, 2008, p. 14.
- [9] " Water Quality. Definition of Cobalt, Nickel, Copper, Zinc, Cadmium, Lead. Flaming Atomic and Absorption Spectro-Photometric Methods," p. 20.
- [10] A. I. Perel' man and N. S. Kasimov, " Geochemistry of Landscape," Astreya-2000 Press, Moscow, 1999, p. 768.

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- [11] S. P. Suslov, " Physical Geography of the USSR," Asian Part. State Education Pedagogical Press, Vol. II, Moscow, 1954, p. 711.
- [12] O. A. Alekin, " General Hydrochemistry," Hydrometeo Press, Leningrad, 1948, p. 206.
- [13] O. A. Alekin, " Essential Principles of Hydrochemistry," Hydrometeo Press, Leningrad, 1970, p. 444.
- [14] V. V. Dobrovols' ky, " Essential Principles of Biogeo- chemistry," Higher School Press, Moscow, 1998, p. 413.
- [15] H. J. M. Bowen, " Environmental Chemistry of the Ele- ments," Academic Press, London, 1979, p.