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GENESIS OF ECOSYSTEMS AND THEIR COMPONENTS

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CARBONATED SOIL PROFILE AS A GENETIC INDICATOR FOR DRY-STEPPE (CHESTNUT) SOILS OF MONGOLIA

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V.V. Dokuchaev Soil Science Institute
Russia, 119017, Moscow, Pyzhevski Per., 7. E-mail: pankova22@mail.ru

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In the most of the cases, Mongolian chestnut soils are specified by the presence of powdery carbonates horizon, the content of which reaches 1.25-25-30% for $CaCO_3$. At the same time, the carbonate horizon is usually not equally manifested on different walls of even one soil pit. It is characterized by the presence of highly carbonated spots with different diameter, 20-50 cm, or it is detected as interlayers of various thicknesses at different depths of the soil profile. At the same time, a carbonate horizon may be detected on one wall of the soil pit. However, on the other side of the soil pit wall, this horizon may be absent. The paper describes carbonate specification as a genetic indicator of dry-steppe soils of Mongolia. The carbonated profile of Mongolian chestnut soils is considered. It is shown that soils may vary significantly in effervescence depth and in amount of carbonates, which is, in our opinion, due to the specificity of soil-forming rocks, however, not due to modern soil formation. Lenses and layers of powdery carbonates in the profile of chestnut soils are not the result of modern soil formation. This is the relic horizon, inherited from the parent material. Presently it is in the process of decomposition. At the same time, the modern carbonating process still manifests itself in the chestnut soils of Mongolia as a very weak carbonation of the fine-earth material. This is due to the biogenic accumulation of carbonates, or due to the aeolian intake of carbonates, as evidenced by carbonate crusts occurring even on the surface.

Keywords: calcareous horizon, powdery carbonates, travertine calcareous crusts, modern and relict calcareous formations.

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