



Taxonomic and functional pedodiversity of forest and semidesert zones of the European part of Russia at different hierarchical levels of soil cover formation

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Pedodiversity studies of the soil cover were carried out in the areas of broadleaf forests (54.9 N, 38.7 E, Moscow Region) and semideserts (44.5 N, 46.6.E, Caspian Lowland, Dagestan).

The following methods and equipment were used: DGPS geodetic referencing and creating a DEM, Ejkelpen penetrometer to measure the penetration resistance, and routine morphological descriptions of soils combined with data on chemical analysis and soil micromorphology.

The soil sampling was performed at a grid with the size that allowed us to catch the typical variations of soil properties for these landscapes: in Dagestan - 3 key sites of 300-400 m² in size with a step of 1.5-2 meters (52x3 sampled points); in the forest zone - one key site of 1 km² with 100-m interval of soil sampling (100 sampled points).

The morphological heterogeneity of the soil cover correlated well with the physical properties such as soil density, moisture content, resistance to penetration.

The presentation will show the relationship between taxonomic and functional pedodiversity, their differences in the broadleaf forests and semidesert zones.

The work was carried out with the support of the grant of the Russian Science Foundation № 17-17-01293.