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## Pedogenesis on volcanic rocks in protected landscape areas in Central and North Bohemia

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The development of soil cover on volcanic rocks in Central and North Bohemia was analyzed. The study was performed in the protected landscape areas on basalt, andesite, and dolerite. Parent material was characterized on the basis of thin-section study. Petrography of the parent material makes it possible to document the differences in the texture, character, and amount of rock-forming minerals. All the studied sequences exhibit the same configuration of soil profiles but various thicknesses. The soil profiles were evaluated on the basis of particle size distribution, chemical properties, soil organic matter parameters, and mineral composition of clay fraction. The major specific pedogenic process in soils developed on volcanic rocks is weathering of parent material and development of the Bw horizon with the formation of mainly smectite from the group of swelling clay minerals. The results revealed differences in the formation of the Bw horizon which is significantly affected by the petrography of the parent material and local geological conditions. According to the type of volcanic rocks, the intensity of the developmental process of the Bw horizon is as follows: andesite (Týřovické skály) > dolerite (Záhrabská) > basalt (Březina).

**Keywords:**

andesite; basalt; Bw horizon; dolerite; mineral composition; main pedogenic process

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