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Effects of historical charcoal burning on soil landscapes in West Connecticut, USA

Alexander Bonhage (1), Thomas Raab (1), William Ouimet (2), and Alexandra Raab (3)

(1) Brandenburg Univ. of Technology Cottbus-Senftenberg Geopedology and Landscape Development, (2) Univ. of Connecticut, Dep. of Geography and Center for Integrative Geosciences, (3) Brandenburg Univ. of Technology Cottbus-Senftenberg Research Center Landscape Development and Mining Landscapes

Relict Charcoal Hearths (RCHs) are small anthropogenic landforms that are typically found in forested areas close to historical iron works and other charcoal consuming industries. Most commonly upright standing charcoal hearths where used in which wood was converted to charcoal. Today RCH sites are still visible as circular, button-shaped elevations in the landscape and on shaded relief maps (SRM). The sites are characterized by a high content of charcoal in the remaining soils. Recent findings of several thousand RCHs in the North German Lowland and the use of very accurate Digital Elevation Models (DEMs) have increased awareness that historical charcoal production may significantly contribute to Late Holocene landscape change. In several regions in the North-eastern United States large scale charcoal production was also carried out. Historically, Litchfield County was the location of the Salisbury Iron District, known nationally for production of quality pig iron and derivative iron products manufactured at nearby foundries and blacksmith shops. Recently, a SRM analysis has revealed more than 20.000 RCHs in a 1170 km2 large area in Litchfield County in North-western Connecticut. In a first field campaign as part of the DFG-Project “Effects of historical charcoal production burning on soil landscapes in West Connecticut, USA” several selected RCHs where sampled and their I) geographical distribution in the landscape; II) general shape and geometry and III) soil organic carbon content where analysed. Here, first preliminary results of the 2017 field campaign are presented.