

# **Zoltán, László, Ferenc Szmorad, Tibor Standovár (2024): Heavy Ungulate Pressure behind the Disappearance of Regeneration in Hungarian Forests. Forests 2024, 1-15, 54.**

Reference: Zoltán, László, Ferenc Szmorad, Tibor Standovár (2023): Heavy Ungulate Pressure behind the Disappearance of Regeneration in Hungarian Forests. Forests 2024, 1-15, 54.

Short reference: Zoltán et al. (2023)

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## Abstract

Ungulate populations have surged to unsustainable levels in multiple areas in recent decades due to human intervention, making forestry and conservation practices arduous. The population of ungulates is also currently displaying a rising trend in Hungary, prompting decision-makers to commence substantial reduction efforts. Our study examined the ungulate impact in three forested regions of Hungary, employing field survey sampling plots on almost 50,000 hectares. Our findings revealed that regeneration browsing and soil disturbance were evenly high in these areas, while the cover of the regeneration layer was extremely low. Ungulate pressure was suspected as the cause of the lack of regeneration. Based on habitat and vegetation conditions, we divided our sample as favourable and unfavourable for regeneration. The cover of the regeneration categories was not significantly different between the two sets. The evidence of the direct indicators, including browsing and soil disturbance, coupled with the lack of regeneration, leads us to infer indirect signs of ungulate pressure. The absence of older and taller vegetation in the area also suggests long-standing ungulate pressure. Our investigation suggests that the high ungulate population can cause low abundance, even the lack of regeneration, not only locally but also at a regional scale.

habitat: open/dry oak forests

habitat: oak-hornbeam forests, beech forests

forest ecology: game affect, browsing

forest structure: shrub layer

forest structure: regrowth

game management

Journal: Forests

Location: ER Archívum - digitális

URL: [DOI](#) Type: scientific paper

Strict forest reserves: [Alsó-hegy Forest Reserve](#)

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