

Abstract

Non-forest woody vegetation is an integral part of the Central European landscape. It includes all possible forms of woody vegetation growing outside of forests, agricultural production, and human settlements; it thus represents a non-productive habitat crucial to the conservation of farmland biodiversity. In this dissertation, I am looking for an answer to the question of what factors affect biodiversity in non-forest woody vegetation and in what way, observing the effect mainly on birds as an indicator group sensitive to changes in the agricultural landscape. In a total of four publications, we focused on the white spots in research to date – habitat characteristics of non-forest woody vegetation, characteristics of the landscape mosaic, and applied management. We have shown that all these factors significantly affect bird biodiversity and, thus, the success of conservation measures and agricultural subsidies oriented towards non-forest woody vegetation. While woody vegetation in the form of mature and species-variegated stands of native trees will rather support forest species and, at the same time, a high total number of species, stands enriched by various earlier stages of succession will rather support farmland species. Furthermore, we show that in the landscape context habitat diversity is key for a large number of bird species, but for endangered species the fine-grained mosaic of non-forest woody vegetation is especially beneficial. We show that such a valuable fine-grained mosaic of non-forest woody vegetation can be found, for example, in military training areas thanks to the special disturbance regime arising as a secondary effect of military training. When these disturbances end, the mosaic of non-forest woody vegetation gradually disappears by transformation into urban areas, as well as by natural succession. The effect of natural succession can be reversed by suitably chosen disturbance management - based on to our results, conservation grazing (but also agricultural grazing) appears to be particularly suitable for the protection of bird biodiversity. However, comparisons of birds with other taxa reveal considerable differences in management preferences. The results of this work emphasize the fact that non-forest woody vegetation hosts a wide range of species with different ecological requirements and that the key to protecting biodiversity is, in addition to ensuring its sufficient quantity in the landscape, above all ensuring its diversity, both on a local and landscape scale.