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Sessions/Presentations

Leave uncut refuge strips on hay meadows to support arthropods

📅 Monday, July 24
🕒 12:30 - 12:45
📍 Mezzanine

🗉 Oral - Contributed Session

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Leave uncut refuge strips on hay meadows to support arthropods (AB454)

🗉 Oral - Contributed Session

📅 Mon, July 24

📍 Mezzanine

Part of:

Environmental Impact Evaluation

Info

Abstract:

Vast grassland areas are disappearing as a result of abandonment and conversion to agricultural fields or urban areas. Thus, grassland species declined dramatically during and since the last century. The majority of remaining European grasslands are managed, many of them by mowing, which, in general, decreases arthropods' abundance and species richness. We aimed to study the effectiveness of uncut refuge strips and their arrangement in arthropod conservation. We established refuge strips with different width (3 and 9 m) and ratio (10 and 25 %) in semi-natural grasslands using a randomised block design with six replicates per combination. We studied four arthropod groups (grasshoppers, spiders, true bugs and ground beetles), which we sampled two weeks after mowing by pitfall traps and sweep-net. Furthermore, we recorded relative moisture and air temperature. Uncut strips were moister and warmer than the mowed areas. Mowing negatively affected all studied taxa and the effect was stronger on vegetation-dweller arthropods. Furthermore, grasshopper abundances were positively affected by increasing ratio of uncut strips. The negative effect of mowing was stronger in case of wide strips and high ratio of uncut strips on the abundance of vegetation-dwelling true bugs. Our results suggest that leaving uncut refuge strips in hay-meadows strongly supports the conservation of arthropods. Wider strips and higher ratio of strips would presumably support the successful overwintering of arthropods by offering more suitable overwintering sites and more hiding places against vertebrate predators