

Biodiversity-promoting measures: landscape structures



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Creation of stone and deadwood piles

Description of the measure

Location

- Sunny and sheltered from the wind, along margins

Material and construction of a stone pile

- Use typical local stone, ideally from fields in the region.
- 80 % of the material with grain size of 20-40 cm; the rest can be finer or coarser
- Volume of at least 2-3 m³, ideally 5 m³ or more
- Stones are poured/layered on the ground, size and shape of the pile can vary as desired
- Fringe the edge of the pile to achieve a wide transition between vegetation and stones (perennial herbaceous margin interspersed with stones).

Material and construction of a deadwood pile

- Use wood/hedge cuttings of different diameters from the surrounding area, do not use treated wood.
- Diameter from 1.5-2 m, height at least 1.5 m
- Piling wood of different lengths and diameters
- Leave a herbaceous margin of at least 50 cm at the edges.

Management

- Avoid overgrowth (cut free as needed)
- Bushy vegetation on the side of the piles facing away from the sun can be retained
- No application of pesticides and fertilisers, ideally also within a radius of 3 metres

Effects on biodiversity

Stonepiles are dry and warm habitats and thus important biotopes for native species:

- Hiding places, sunny locations and winter quarters for many different heat-dependent animals such as insects, lizards or worms
- larger holes near the ground are also used by mammals
- Hunting habitats for nocturnal insects and reptiles (stones store the heat of the day)
- Habitat for heat-loving plant species

Woodpiles provide nesting, development, hibernation and hiding opportunities for various species:

- specialised beetles and larvae feed on dead wood

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- specialised beneficial insects settle in the deadwood
- Insects, amphibians and reptiles, as well as small mammals use deadwood piles as winter quarters

Other positive effects

Stone and deadwood piles support many different beneficial insects. From wild bees, which find nesting sites and are important pollinators, to small predators such as martens, foxes and weasels, which can help control harmful rodents. Amphibians and reptiles such as toads, sand lizards and slow worms feed on pests. Overall, this measure can also help reduce the use of pesticides.

Further recommendations

The wood should be checked for pests such as elm splitting beetles or bark beetles before piling to avoid spreading into the surrounding forests.

Further reading

<https://www.landwirtschaftskammer.de/landwirtschaft/naturschutz/biodiversitaet/lesesteine/index.htm>

https://www.lfu.bayern.de/natur/artenhilfsprogramme_zoologie/kreuzotter/doc/karch_kleinstruktur_und_holzhaufen.pdf

Sources

<https://www.landwirtschaft-artenvielfalt.de/die-massnahmen/landschaftselemente/1-10-lesesteinhaufen-steinwaelle/>

<https://www.nabu.de/umwelt-und-ressourcen/oekologisch-leben/balkon-und-garten/grundlagen/elemente/25136.html>

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