



Bechstein's Bat *Myotis bechsteini*

Almindingen forest on the island of Bornholm is regarded as one of Denmark's most important bat habitats. Open Woods is actively involved in conserving the natural environment in this area.

Bechstein's bat needs old deciduous woods that have many large oaks and a rich diversity of species and structural variation. The bat benefits from any effort made to promote the creation of niches and hollows in trees (veteranisation) and exposing tree trunks to sunshine.

Hermit Beetle *Osmoderma eremita*

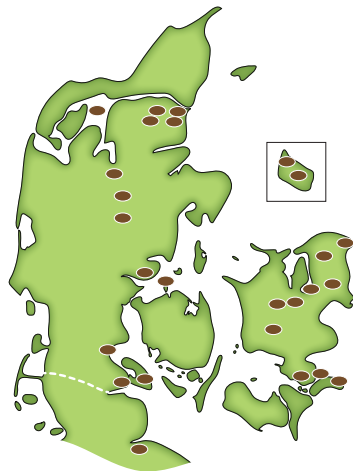
The beetle spends its entire life in old, hollow broadleaf trees in a sunny location. The larva lives in cavities in living trees, and the adult beetle never flies more than 100 m from the tree, in which it lived for 3-4 years in its larval phase.

The project will set up humus boxes that simulate hollow trees. These boxes will be set up in several private forest areas and at Stiftung Naturschutz Schleswig-Holstein's forest near Kiel in Germany.



Larva of *Osmoderma eremita*.

Photo: Ole Martin



Woodlands included in LIFE Open Woods projects

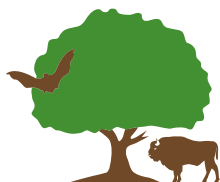
LIFE Open Woods 2019-2027

LIFE Open Woods is a nature restoration project that aims to improve the biodiversity of our woodland habitats. The project supports the transition from commercial forestry to a biologically richer natural woodland environment.

The LIFE Open Woods project engages in planning, gathering knowledge, providing further education, introducing specific initiatives in woods and forests, and communicating this work in a broad perspective.

Over the eight-year project lifetime with a total project budget of about DKK 50 million, LIFE Open Woods will participate in physical nature management initiatives in 24 woodland areas across Denmark and one forest in Northern Germany.

The Danish Nature Agency is responsible for project management in collaboration with Aage V. Jensen Naturfond, Amphi Consult, Skovskolen, Stiftung Naturschutz Schleswig-Holstein and the Danish Environmental Protection Agency.



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Photo front page: Naturstyrelsen. Photo Bechstein's Bat: Shutterstock. Layout: hjorth-freelance.dk, 2022



LIFE Open Woods

Our woods - a peek into the future

Most of Europe's woods and forests are wholly or partly planned and developed for the production of timber. Our woods are therefore often uniform, i.e. they are made up of the same species of tree of the same age. Furthermore, woods are drained, and the trees planted and cultivated with a view to commercial timber production. LIFE Open Woods projects repurpose many woods and forests from timber production to sustaining biodiversity. Active restoration of the natural environment is often needed to create optimal conditions for the animals, plants and fungi in our woods.

The restoration of woodland environments primarily involves reintroducing dynamic natural processes that in time will create more varied woodlands and therefore more natural habitats for animals, plants and fungi. The introduction of grazing animals in our woods, rehydration and the provision of trees of various ages and species are significant elements in natural restoration.

The woods will change over time and be open to sunlight. They will be wet and untidier. All of these initiatives will create more and better habitats for wildlife in our woods - for endangered and common species alike. In the end, different, more varied woods will grow up, and these woods will consistently change and develop. Learn more about our woods as eco-systems and their natural processes. Watch the video (link below).



Photo: Kasper Nielsen, Naturen i Danmark

LIFE Open Woods partners:



Naturstyrelsen (The Danish Nature Agency)

The Danish Nature Agency has overall responsibility for project management of LIFE Open Woods projects in Denmark. The Danish Nature Agency also restores the natural environment in LIFE Open Woods projects at 18, typically large and connected, broadleaf woodland sites in Denmark.



Miljøstyrelsen (The Danish Environmental Protection Agency)

Coordinates with private landowners and other stakeholders, has special focus on preserving the hermit beetle. In addition, the Danish Environmental Protection Agency facilitates a network of landowners and stakeholders who are interested in promoting biodiversity in privately owned woodlands.



Skovskolen (Københavns Universitet) (University of Copenhagen, Forest and Landscape College)

In cooperation with the Danish Environmental Protection Agency, the college is developing a forest biodiversity management programme. The primary target group for this further education programme is administrative staff who work in forest and nature planning, and forestry and natural resource technicians.



Aage V. Jensen Naturfond

In the Open Woods context, the foundation focuses on releasing European Bison in Tofte Skov in Northern Denmark. The foundation is also involved in other measures to improve the natural environment in Tofte Skov and neighbouring Høstemark Skov (both forests) and on the island of Æbelø.



Konsulentfirmaet Amphi Consult (Environmental Consulting Company)

With focus on habitat management and comprehensive biological expertise, Amphi Consult provides specialist consultancy services related to species conservation and knowledge sharing in a network of European organisations and stakeholders.



Stiftung Naturschutz Schleswig-Holstein

The foundation manages natural environments in Northern Germany. In Open Woods, the foundation has specific focus on managing and improving hermit beetle habitats.

Activities:

- Preparing management plans and official applications
- Monitoring the effect of biodiversity projects
- Species management - hermit beetle and Bechstein's bat
- Selective felling to expose veteran trees to sunlight
- Planting indigenous trees and bushes
- Veteranisation
- Managing water in woods and forests
- Forest grazing
- Accumulating and disseminating knowledge
- Rescuing trees at risk.



Facts & figures about LIFE Open Woods

LIFE Open Woods is a project specifically designed to conserve natural woodland environments and wildlife. This far-reaching project will create more and better habitats for insects, birds and bats by veteranising at least 1,000 trees, felling selectively to expose about 1,200 old trees to more sunlight (and therefore prolong their life) and improving woodlands diversity by introducing grazing animals on 5,000 hectares, restoring more natural water table levels in woodlands and sealing off up to 60 kilometres of drainage ditches.

About LIFE

The LIFE programme is the only EU funding instrument that is dedicated exclusively to environmental and climate action.

The programme supports efforts that contribute to achieving the goals of the European Green Deal and underlying policies and strategies. Green Deal environmental action includes two independent programmes, of which LIFE Open Woods is supported by the nature conservation programme.

In the period 2021-2027, a sum of about EUR 16 billion is set aside for to support EU nature and biodiversity projects.



Photo: Helle Hjørth

Woodland as an ecosystem

Managing water in woods and forests

The objective of this initiative is to restore a more natural and dynamic variation in our woods by means of hydration. Ditches and drainage channels will either be entirely or selectively sealed off. In time, this initiative will create a higher water table and potentially restore natural seasonal water table variations. Where the effect of water is greatest, parts of the woods will become wetter, boggier and lighter. Water adds dynamics and creates more, and more varied, habitats.

Grazing

Animals that graze in the woods impinge on the woodland ecosystem and increase the number and variety of habitats. Most importantly, grazing exposes the woods to sunlight. This means that there are more flowering plants, butterflies, hover flies and many other species.

However, grazing produces more than woodland glades. Animal traffic also creates a great deal of indirect variation and dynamics. For example, their hoof prints and scuffing expose mineral soil, their droppings provide micro-habitats and nutrients for many insects and fungi, and grazing animals transport plant seeds from one open area to the next. Grazing is beneficial as it helps to create greater biodiversity, and more space and variation for more species in our woodlands.



Photo: Kasper Nielsen, Naturen i Danmark

Spreading the word

Accumulating and verifying professional knowledge and promoting public awareness of natural woodlands are key features of the LIFE Open Woods project. The project focuses on the following activities:

Gathering and accumulating natural and environmental forestry management expertise from Denmark and abroad. Producing a catalogue of best forestry management practices.

Developing a comprehensive further education programme for forestry professionals that focuses on managing virgin forests.

Implementing a scheme to monitor the effects of all our initiatives. By the end of the project period, our results will be used to verify our catalogue of best forestry management practices, after which we will communicate our results to forestry professionals in Denmark and other EU Member States.



Photo: Kasper Nielsen, Naturen i Danmark

Woodland trees and species

Stable, lasting habitats

Trees are of course the cornerstones of our woodlands. In LIFE Open Woods, we seek to plant more trees and therefore create more, and more varied, habitats. Old living trees are vital for the survival of very many woodland organisms. Veteran trees are full of cavities, fungi and timber damage that are ideal habitats for a substantial number of woodland species.

Much of LIFE Open Woods' work involves ensuring that more trees provide more varied habitats that otherwise only old trees can provide. In practice, we expose younger or mature broadleaf trees to damage to encourage a variety of species to colonise and initiate a slower natural veteranisation of the trees.

The goal here is to create stable, lasting habitats that over many years will develop into valuable habitats. We do not intend to kill off trees but to create a consistent and durable interaction between growth and decay in living trees.



Photos: Naturstyrelsen



Photos: Naturstyrelsen

Woodland structure

Woods develop all the time

Woods renew themselves. New plant life germinates in the glades, copses mature, and trees grow up at random distances to each other, old trees slowly develop hollows and host fungal growth. In time, the trees die and fall to the ground, and the entire process is repeated.

Modern production forests often lack very old trees - trees with many cavities and even completely hollow trees. The oldest trees are often in the darkest parts. Modern forests also lack indigenous Danish and biologically very valuable tree species - those that provide habitats for many insects, fungi and lichens, such as quaking aspen and small-leaved lime. These trees will often have been replaced by commercially more profitable tree species.

In LIFE Open Woods, we work to establish a range of structures lacking in our woods. We age the trees artificially via veteranising, we plant indigenous Danish flowering trees and bushes, and we fell selectively to expose old oak trees to more sunlight when they are overshadowed by a new productive generation of trees, usually beech. Exposing oak trees to light prolongs their life and creates warm, sunny glades in the woods. Many insects only thrive in the hollows of sun-kissed old oaks.



Photo: Kasper Nielsen, Naturen i Danmark

Communication

Every LIFE project is obliged to communicate project goals, initiatives and results. The LIFE Open Woods project will be communicated via:

The project website:

www.nst.dk/openwoods

Video production.

For examples, see the project playlist

[LIFE Open Woods on Youtube](#)

Guided tours for the public and information boards in project woodlands.

Articles and knowledge sharing on social media.

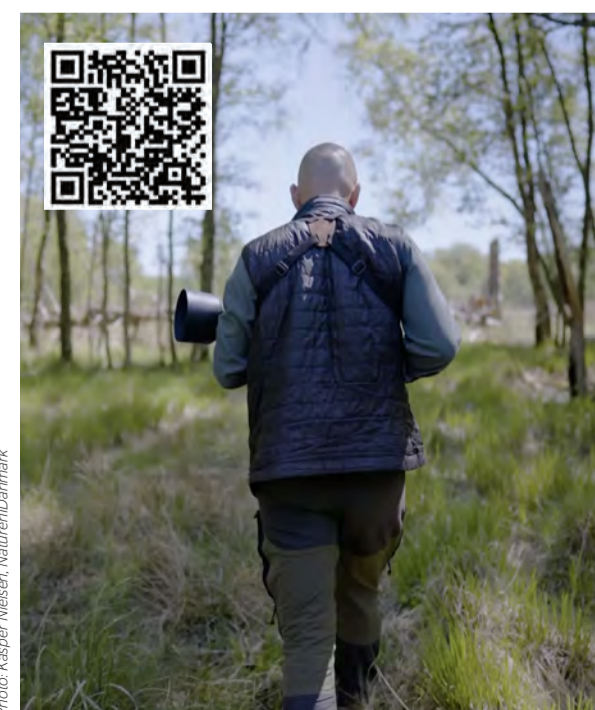


Photo: Kasper Nielsen, Naturen i Danmark