



SCHMETTERLINGSLAND
AM UNTERSBERG

UNTERSBERG FORELAND
LIFE NATURE PROJECT



A NATURAL

SALZBURG JEWEL

BLOSSOMS!

PREFACE



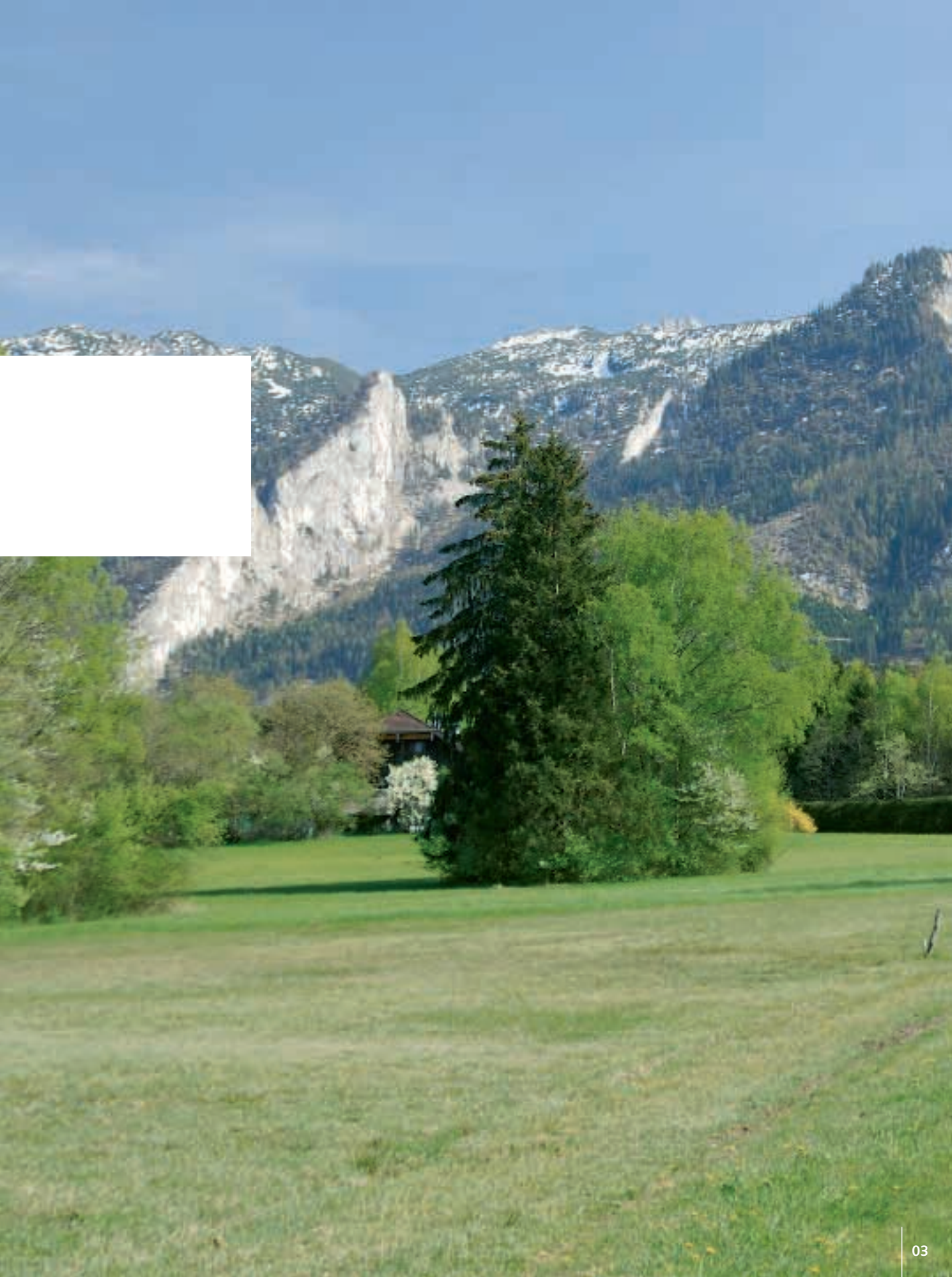
Only when we look at nature together, can we preserve this treasure in the province of Salzburg. Nature conservation is only successful when working together with citizens and land owners.

This is why this Natura 2000 site, with the new observation tower, the butterfly educational path and the hay meadow exhibition is so important. It offers everyone the opportunity to come in close contact with the various animals and plants. At the foot of the Untersberg mountain, in the Salzburg open-air museum the visitors can experience a cultural treasure, as well as an animal and plant world of European importance.

The importance of the region becomes particularly clear in the "Land of Butterflies" film. We have a natural treasure at our doorstep, which we have to take good care of. This film shows us before our eyes, how diverse our nature can be. The citizens and farmers have newly discovered the importance of the Untersberg Foreland.

I am pleased that the conservation of this valuable landscape is successful through the support of the European Union.

Your Member of the Regional Government
Sepp Eisl



THE LAND OF BUTTERFLIES ...



At the foot of the Untersberg mountain, before the gates of Salzburg lies the Natura 2000 site Untersberg Foreland, a butterfly paradise, where 70 different butterflies are found, some of which are very rare Europe-wide

The “star” among them is the Scarce Fritillary (*Euphydryas maturna*) ¹ who has one of its last significant habitats here in all of Central Europe! The butterflies are dependent on the traditional agricultural cultivated landscape of the Untersberg Foreland. Here, there is still the typical near-natural mosaic of only extensively used habitats, from forests with structural-rich forest edges to species-rich hay meadows ². The grass cuttings of these hay meadows are used as

bedding in the stables. Since the meadows are not fertilized and only mowed once a year in the autumn, they are particularly rich in meadow flowers and insects. Their attractive flowering plants, many of which are botanical rarities, are also particularly pretty to look at. The Salzburg open-air museum also lies in the middle of the Natura 2000 site.

Natura 2000

“Natura 2000” is a European network of protected areas. With Natura 2000 all European Union member states cooperate to secure the unique European natural heritage for the upcoming generations.

... WAS IN GREAT DANGER



But there were problems in the Land of Butterflies: Some hay meadows were abandoned years ago because the laborious scythe mowing was not productive for the farmers anymore. The tractors could not be used on the wet meadows which could not bear the load.

Woods began to overgrow the meadows **3** and threatened the butterfly's habitat. In addition, the still existing meadows and forest biotopes were often separated from each other by spruce forests **4** and monotone intensely used grassland **5**, so that butterflies from different parts of the area found it ever more difficult to find common ground.

The genetic exchange and therefore the long-term survival of the species were in danger. The Scarce Fritillary was particularly affected which found

less and less suitable ash-rich forest edges and clearings needed for living space and walking passages. High time to do something!

Therefore in 2006, a European Union co-sponsored LIFE Nature project was started with the goal of preserving the various species and habitats of the Untersberg Foreland. The local farmers and the citizens should also be made more aware of the value and the worthiness of the Nature 2000 site

What is LIFE?

LIFE is a European Union subsidy program to co-finance nature conservation projects in the NATURA 2000 sites.



THE LIFE MEASURES IN OVERVIEW

- **Three and a half kilometers of forest edges** were reshaped in such a way that they could be used as habitat for the Scarce Fritillary.
- **Six hectares** of hay meadows and fens were restored and saved from being overgrown.
- **A special "mowing-mobile"** for the maintenance of particularly wet hay meadows was acquired.
- **Typical hay meadow plants** were bred and then planted in the area.

- **Two hectares** of grassland were purchased and regeneration into a species-rich wet meadow was initiated.
- **The maintenance** of 20 hectares of hay meadows was optimized together with the farmers for the butterflies and plants present there.
- **A "butterfly path"**, an "observation tower" and a "hay meadow exhibition" were established for the visitors of the Salzburg open-air museum.

- **Numerous small ponds** to be used as spawning pools were laid out for the Yellow-bellied toad.
- **There are new guided tour offers** for school classes about "Butterflies and Hay Meadows" at the open-air museum.
- **The film "Land of Butterflies"** was produced in professional quality and is continually shown in the open-air museum.
- **Various public relations** and conscious-shaping information



NEW FOREST EDGES FOR THE SCARCE FRITILLARY



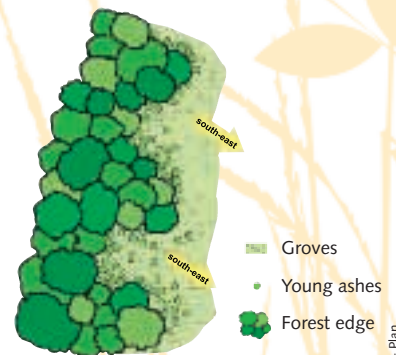
3.5 km of monotone forest edges were reshaped into new habitats for the Scarse Fritillary.

were provided (flyers, brochures, posters) and numerous excursions and informational meetings were held for farmers, other interested people and students.

■ **The project website** www.untersberg-vorland.at supplies background knowledge about the Natura 2000 site and current information about the LIFE project.

www.untersberg-vorland.at

For this purpose spruce groups were removed and young ashes were newly planted in suitable locations (southeast facing, damp grounds). By doing so innumerable forest edge bays 1 were developed thus creating humid microclimates important for the Scarse Fritillary caterpillar 2.



Sketch of an ideal Scarse Fritillary Habitat

INSTEAD OF SHRUBS MULTICOLORED HAY MEADOWS AGAIN



At the beginning of the LIFE project many former hay meadows had already nearly disappeared. After many years the abandoned land was heavily overgrown with bushes and trees and the tufts of the hay meadow grasses formed half meter high mounds and the so-called “Bulte” developed.

Mowing the meadows with normal equipment, at the time was not possible. One could hardly cross these areas by foot. In order to achieve hay meadows that could be mowed, a lot of effort had to be put into “initial care”.

First the trees and shrubs were removed - partly by hand, partly with the help of a power saw and partly with special machines. Afterwards,

the meadows were cleared with a € 300,000 mowing-crawler **1**. The extremely robust mowing attachment had its European premiere in the Untersberg Foreland! Step by step real hay meadows developed again. Now they can be mowed by farmers again, who in return are offered special subsidies.

A further desired effect of the maintaining strategies was that

light-needy plants, such as the insect-eating sundew spread once again. In this way over six hectares of hay meadows were restored and thus secured the butterfly’s habitat for the future!

A MOWING MOBILE FOR “DIFFICULT MEADOWS”



Some particularly wet hay meadows could not be cultivated with normal agricultural equipment even after the LIFE “initial care”. Tractors and self-loading bale trailers would have sunk into the soft ground. Also the previous scythes mowing technique cannot be expected to be done today by anyone.

Thus an alternative had to be found. After a long search and critical expertise by experts and field workers one finally found the ideal equipment:

The mowing mobile 2, developed by the inventor Peter Estner from Großgmain, can complete mowing and loading in one operational step. The delicate meadows must be driven on much less. Furthermore,

the soil pressure is comparatively low.

Purchasing the mowing mobile within the LIFE project insures that after the conclusion of the LIFE project further maintenance of the “difficult hay meadows” will be continued. The farmers can rent the mowing mobile for a reasonable price. Meanwhile, the mowing mobile is also used in other protected

areas in Salzburg for example in the Natura 2000 site Weidmoos. Within the framework of a school project Großgmain students created a colorful-bright design for the mowing mobile.

NEW FLOWERS FOR THE UNTERSBERG FORELAND



Under the leadership of the University of Salzburg Botanical Gardens seeds from typical hay meadow plants in the Natura 2000 site were collected and 1,500 pot plants were cultivated ¹. The reproduction project took place in cooperation with the HALM Biotope Nature Conservation Group. Some of the plants were planted on the purchased two hectares grassland ² – as a “starting-help” for regeneration into a species-rich damp meadow. Another part was used in the hay meadow

exhibition in the Salzburg open-air museum, in order to be able to present the typical hay meadow plants there.

NATURE EXPERIENCE

IN THE SALZBURG

OPEN-AIR MUSEUM



5



3



4



The Salzburg open-air museum with its excellent infrastructure offers the ideal conditions for many people to come in closer contact to the Natura 2000 site without harming nature.

In close cooperation with the museum management the new nature experience facilities were established around the so-called "Sillweiher" (pond). They consist of three elements: "butterfly path" 3, "observation tower" 4 and "hay meadow exhibition" 5. On the butterfly path one becomes acquainted with the miraculous world of butterflies at numerous partially interactive stations.

From the observation tower one has an overview of the traditional culti-

vated landscape of the open-air museum and at the same time a look into the Scarce Fritillary's habitat. Climate measuring instruments illustrate the special warm-humid microclimate in this habitat. The third element is the innovative hay meadow exhibition. Here the visitor immerses into a light and rain permeable metal platform and into a typical hay meadow, which was "enriched" with numerous bred hay meadow plants. The visitor can experience all of the typical

meadow flowers during the changes of the seasons. These three attractions are complemented by the new guided tours for school groups about "Butterflies and Hay Meadows". This offer is rounded off by the film "Land of Butterflies" which is presented in the museum. The film shows the unique pictures of the diversity and beauty of the butterflies and hay meadows in the Natura 2000 site and presents the LIFE project.

HAY MEADOWS – OPTIMAL MANAGEMENT



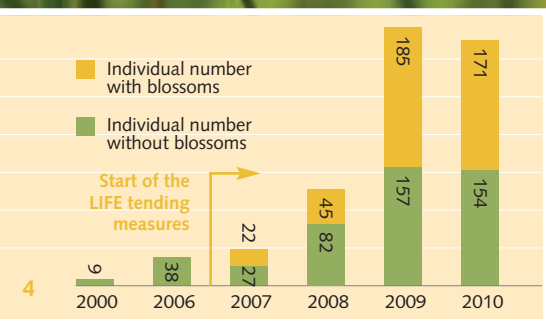
The LIFE project also served to find out, which maintenance for which hay meadows is best. Together with the farmers five different types of care were developed. Depending upon plant population and present butterflies every hay meadow was assigned a certain type of care.

Along with the nature conservation requirements a practice-oriented cultivation was naturally also taken in consideration. A characteristic of most management types is the so-called “migrating piece of fallow land” **1**. Thereby, five to ten per cent of a meadow are left to stand and not mowed. Here, an important retreat and hibernation area can be

found for the caterpillars of the Marsh Fritillary **2** as well as many other insect species. Also late blooming and fruit-bearing hay meadow plants such as the Marsh Gentian can mature their seeds in peace here. However, it is important that the piece of fallow land is moved every year, so that it will not become overgrown with woody

plants again. In order that this maintenance can be continued after “LIFE”, special subsidies will be offered.

HOW HAS THIS ALL HELPED?



Development of the Fen Orchid population in the Natura 2000 site

■ **The population** of the Fen Orchid **3**, one of the rarest orchids in Europe, has multiplied thanks to the optimized hay meadow maintenance **4**.

■ **Scarce Fritillary:** Newly created habitats were already populated by the butterflies' caterpillars. Thus the project made an important contribution to conserve the Scarce Fritillary before becoming extinct.

■ **Consciousness** for the uniqueness and worthiness of protection of the Natura 2000 site clearly rose from the property owners and the citizens. Many farmers actively take part in the nature conservation measures and identify themselves with THEIR hay meadows and butterflies.

■ **Through the initial care** measurements and the guaranteed subsequent care of the hay meadows a unique cultivated landscape was protected from disappearance.

FURTHER INFORMATION ABOUT THE PROJECT

Background information about the project and brochures to download are on the project website www.untersberg-vorland.at

The official final project report is available starting at the beginning of 2011 which is also possible to download.

The 17 minute film "Land of Butterflies" can be ordered at the webshop "LandVersand" at www.salzburg.gv.at or by tele-

phone under: +43 662 8042 5532. Information on guided school groups about "Butterflies and Hay Meadows" in the Salzburg open-air Museum is under: www.freilichtmuseum.com and/or by telephone under: +43 662 85 00 11

LIFE PROJECT

DATA AND FACTS

Duration:	October 2006 – October 2010
Size of the area:	190 hectares
Responsible for the Project:	Land Salzburg – Nature Conservation Department
Project Partner:	Großgmain Municipality
Budget:	€ 819.500
Financing:	50% EU-LIFE 46% Land Salzburg 3% Federal Ministry of Agriculture, Forestry, Environment and Water Management 1% Großgmain Municipality



PHOTO

REFERENCES



Page 1: View in the project area, hay meadow in foreground, Untersberg mountain in the background

Page 4: Scarce Fritillary on a dogwood blossom; hay meadows with orchids (Green-winged Orchid)

Page 5: Species-poor spruce forest without forest edge; abandoned hay meadow with wide-spread trees and shrubs; species-poor grassland.

Page 6: The project area in the summer from a birds perspective

Page 7: Scarce Fritillary butterfly eggs on ash leaf; newly established forest edge bay with ash saplings; Scarce Fritillary caterpillar on ash leaf

Page 8: Hay meadow with Hochstaufen mountain in the background; the mowing caterpillar, a converted snowcat, with initial care of a hay meadow which was uncultivated many years

Page 9: The Stemless Gentian benefits from the tending strategies during care operations; the purchased LIFE "mowing mobile"; the Peacock butterfly also loves the flowery hay meadows

Page 10: Offspring of the hay meadow plants in the University of Salzburg Botanical Gardens; the attractive

Small Scabious also multiplied from the wild seeds; members of HALM biotope protection group while planting the bred hay meadow plants

Page 11: The hay meadow exhibition, with the light and rain permeable visitor platform; one of the interactive stations on the butterfly path; the observation tower; Member of the Regional Government, Sepp Eisl (right in picture) and LIFE project manager, Bernhard Riehl at the presentation of the film "Land of Butterflies"

Page 12: In the annual migration of the fallow land on the hay meadows the seeds of late flowering species can also mature; the European-wide protected Marsh Fritillary also profits from the fallow land

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Page 14/15: The Natura 2000 site Untersberg Foreland in the overview

Page 16: Hay meadow with the Hochstaufen mountain in the background; students on a LIFE excursion; beetle on a *Laserpitium prutenicum*.

A hearty thank you to everyone who contributed
to the successful implementation of the LIFE project!

Bernhard Riehl, Project Manager



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LIFE is a EU
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to co-finance nature
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in Natura 2000 sites.



Natura 2000 is a
European network of
protected areas to secure
Europe's rich and diverse
natural heritage.



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