Freistaat Thüringen
Ministerium für Umwelt, Energie und Naturschutz

The LIFE Project "Conservation and development of the steppe grasslands in Thuringia" (2009 – 2015)

LIFE07 NAT/D/000213

Layman's report 2015

NATURA 2000

Yellow scabious (*Scabiosa ochroleuca*) (TS)

Swallowtail (*Papilio machaon*) (TS)

Austrian flax (*Linum austriacum*) (TS)

Medick broomrape (*Orobanche lutea*) (TS)

Schaeffer's dung beetle (*Sisyphus schaefferi*) (TS)

St. Bernard's lily (*Anthericum liliago*) (TS)

Woolly milkvetch (*Oxytropis pilosa*) (TS)

Pantaloon bee (*Dasypoda hirtipes*) (HW)

Purple milkvetch (*Astragalus danicus*) (TS)

Knotted clover (*Trifolium striatum*) (SP)

Ladybird spider (*Eresus kollari*) (TS)

Hairy feathergrass (*Stipa capillata*) (TS)

Steppe grassland with Golden feather grass (*Stipa pulcherrima*) on the Bottendorf hill (PG 2). (TS)

Pheasant's eye (*Adonis vernalis*) is a characteristic species of continental semi-dry grasslands. (TS)

Stemless milkvetch (*Astragalus exscapus*) (TS)

Red-backed shrike (*Lanius collurio*) (CR)

Snail (*Xero-crassa geyeri*) (KB)

Black pasqueflower (*Pulsatilla pratensis* ssp. *nigricans*) (TS)

Steppe habitats ... ... in Thuringia ?

Steppes are naturally treeless grasslands that are found mainly in regions with dry summers and less than 500 mm rainfall per year. In Europe, the fertile chernozem soils that once supported huge expanses of steppe vegetation have now almost all been ploughed and turned into arable land. It is only in the more extreme habitats, such as steep slopes and plateau areas with shallow soils, that patches of steppe have been able to survive. These can be seen as the "outposts" of the Eastern European steppes.
In Germany, there are now less than 1000 hectares of steppe left. Almost one third of this area is found in the dry and warm climate of the Upper Triassic and Upper Permian rocks of central and northern Thuringia. There are now around 1450 hectares of steppe grassland left in Germany, and roughly a third of these are found in the dry and warm areas of Upper Triassic and Upper Permian rock in central and northern Thuringia.

... beautiful and rare

Steppes and dry grasslands support many rare and protected animal and plant species. Many of these are native to the steppe habitats of Eastern Europe and Western Asia, or from the Mediterranean. These "steppe relicts", such as *Astragalus exscapus*, *Pulsatilla pratensis* ssp. *nigricans* and *Xerocrassa geyeri* are particularly threatened as they cannot disperse easily to new areas.
They need full sunlight and high temperatures to grow, meaning that they disappear if the traditional grazing by sheep and goats stops and scrub and trees take over their habitat.

… conservation – goats as gardeners

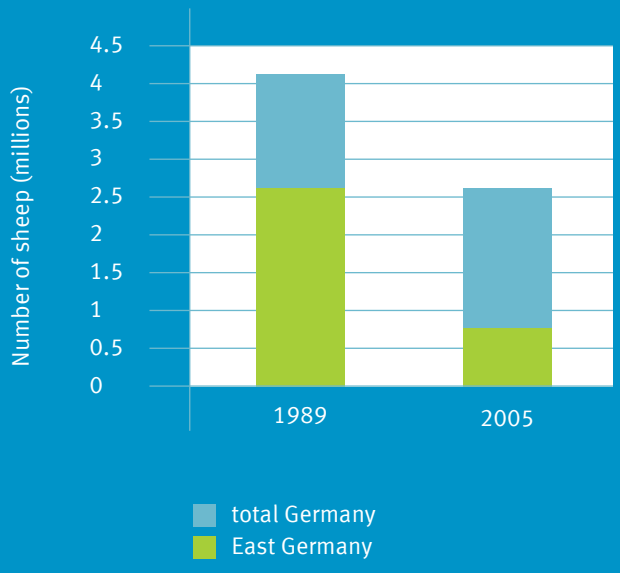
Dry grassland habitats have survived in Thuringia only in areas that are unsuitable for crops. For example, hillsides with often stony soil were traditionally used as pastures for sheep and goats. Their selective grazing formed the typical species composition of these grasslands. Browsing by the animals prevented the growth of trees and shrubs, maintaining the open character of the landscape.
In the steppe grasslands of Thuringia, sheep and goats thus play a similar role to that once played by the antelopes and wild horses in the natural steppes of Eastern Europe and Asia. If grazing stops, the natural process of succession begins and within a few decades, most of the dry grasslands would be covered by open oak forests.

Shepherding is one of the oldest types of agricultural land use. (HB)

Effective landscape management with goats. (HB)

Shepherds – a dying profession?

Shepherding is one of the oldest professions in the world. However, the import of cheap meat and wool from abroad has led to structural changes in German agriculture, and the changing consumption behaviour of the population has meant that sheep farming has become less and less profitable over the last 150 years.
Today, sheep farming plays less of a role in meat and wool production, but is increasingly important for landscape management.



Changes in sheep numbers in Germany between 1989 and 2005.

View of the Schwellenburg north of Erfurt (PG 9). (TS)

Implementation period: 01.01.2009 – 31.07.2015

Beneficiary:	State of Thuringia
Budget:	4.999.444 EURO
Financing:	75 % EU; 25 % State of Thuringia
Project area:	14 Natura 2000 sites
Extent:	16,101 ha, of which 756 ha dry grassland

Target habitat types:

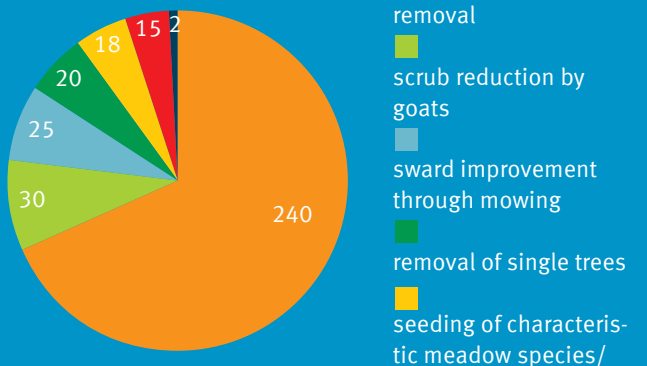
- Sub-Pannonic steppic grasslands (habitat type 6240*)
- Semi-natural dry calcareous grasslands with orchids (type 6210(*))
- Rocky calcareous grasslands (type 6110*)
- Calaminarian grasslands (type 6130)
- Lowland hay meadows (type 6510)

* priority habitat type

The LIFE project

The uniqueness of the Thuringian steppe grasslands as outposts of the large Eastern European steppes and hotspots of biodiversity means that their conservation is of high priority for Europe. This was the reason for the implementation of the EU LIFE project "Conservation and development of the steppe grasslands in Thuringia", managed by the federal state of Thuringia. The aim of the project was to conserve, restore, and en-sure the long-term survival of the steppe grasslands as well as the areas of orchid-rich dry grasslands occurring alongside them. Without sheep grazing, these valuable habitats and the rare species they support would be smo-thered by bushes and trees.

The restored dry grasslands were entered into agri-environment scheme agreements in order to secure their continuing management. The compensatory payments linked to these schemes support the incomes of the land managers, and without them it would be difficult to farm these areas without making a loss.



Conservation through use

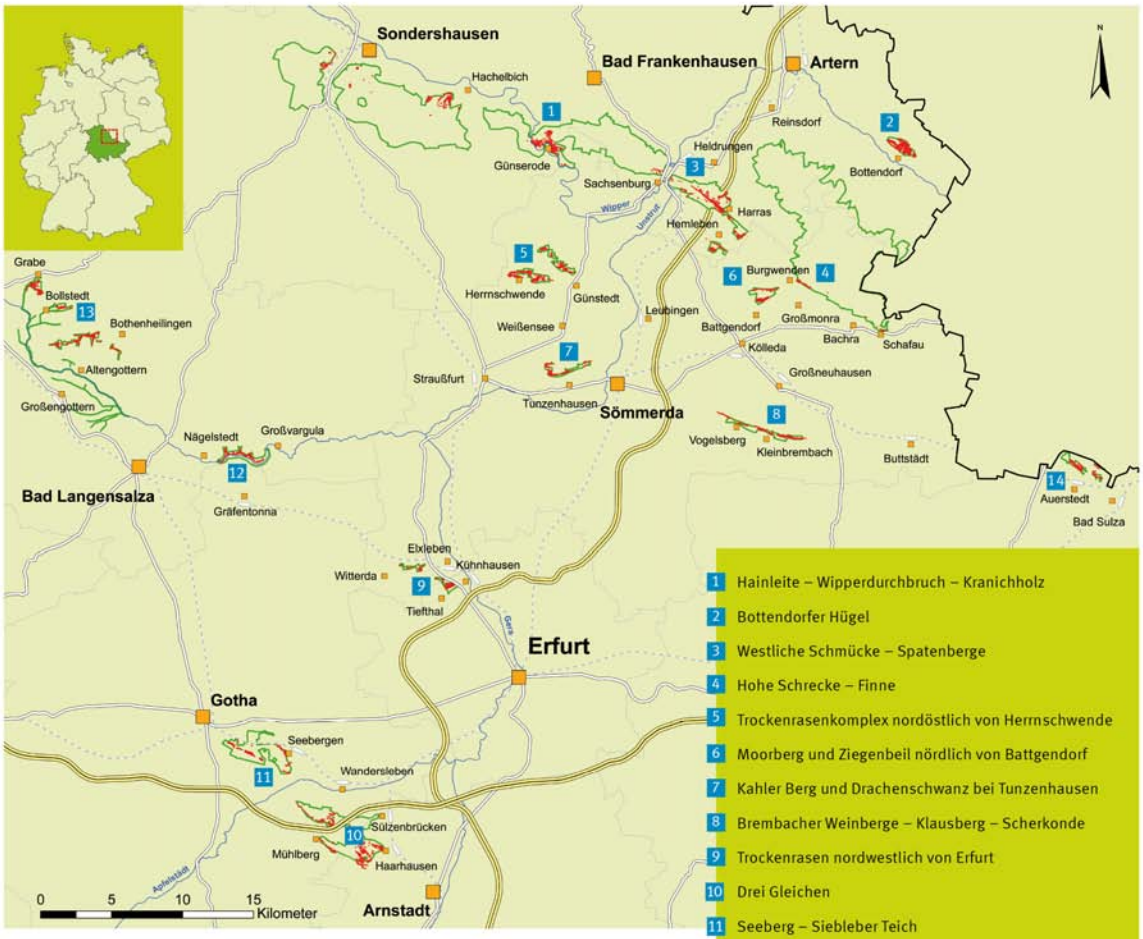
The main objective of the project was therefore to promote the continuation of grazing and to return abandoned grasslands to regular use. Support was offered to local shepherds through mechanical clearance of scrub, reestablishment of traditional drove roads and the provision of pasture equipment, as well as conservation-related advice.
As a result, from 2009 to 2015, more than 120 individual activities were carried out on over 300 ha of grassland in the 14 project areas.

Overview of the restoration measures completed by 2015 (in hectares)

The LIFE project areas

View of the Spatenberge hills and the eastern Schmücke ridge near Hemleben from the Segelberg hill (PG 3). (SP)

Most of the steppe grasslands of Thuringia are found in “Special Areas of Conservation”. These areas are part of the Natura 2000 European network of protected areas, designed to conserve valuable habitats and the wild plant and animal species they contain.
A total of 14 Natura 2000 areas and their neighbouring grasslands were supported by the LIFE project.



Project areas (Natura 2000 sites)
Steppe habitats in the project areas

An aerial view of the hills of the region between Haarhausen and Holzhausen (PG 10). (DS)

From planning to implementation

Analysis

Mapping of habitat types and species, socio-economic surveys, identifying threats and barriers

Management and development plans

Assessment of opportunites for development, establishment of management and development measures, creation of grazing plans

Implementation

Scrub clearance, grassland restoration through mowing and burning, removal of woody vegetation, repair of stock roads, purchase of pasture equipment

Monitoring

Reviewing the success of the management and development plans, and if appropriate modification of the measures

Comprehensive management plans were created for the conservation and sustainable development of the project areas. Based on detailed habitat and species mapping data, a range of specific management measures were established. The most important factor for the long-term survival of the steppe grasslands is their regular use, therefore grazing plans were integrated into the management scheme. The measures were implemented in close cooperation with local farmers, land owners, administrations, volunteers and relevant authorities. The success of the project was reviewed through a monitoring system.

Land purchase

Grasslands of particularly high nature value, as well as those intended for restoration measures, were transferred to the ownership of the state of Thuringia for their long-term protection. During the project period, around 140 ha of grassland were purchased, and the entry in the land register for these areas was changed to ensure their management to promote nature conservation. Long-term leases of these areas to local shepherds and farmers were established to ensure their continuing management.

A further 67 hectares of grassland and arable land, which were transferred free of charge by the national authorities to the ownership of the State of Thuringia as areas of national natural heritage, were made available from 2013 onwards for various LIFE measures.

Controlled burning on the Kippelhorn near Elxleben (PG 9). (HB)

LIFE in the steppe...
... with chainsaws and fire

Scrub encroachment is the greatest threat to the steppe grasslands, and must be countered by mechanical as well as manual clearance. On around 300 ha of grassland, blackthorn, hawthorn and rose bushes were therefore cut and removed. Further restoration measures on the pastures included the felling of non-native trees such as black pine and northern red oak. For this work, brushcutters, chainsaws and a remote-controlled hedge-cutter were purchased as part of the project.

The condition of areas choked with grassy vegetation was improved using controlled burning. Relative to conventional methods such as mowing or mulching, this is particularly efficient as it has low financial and labour costs.

Dry grassland management with a remote controlled scrub-cutter. (CB)

Semi-motorised management with brushcutters and rakes is often the only way to keep steep dry grassland slopes clear of scrub. (CB)

Removal of felled black pine at the Burg Gleichen castle near Wandersleben (PG 10). (CB)

... with JCBs and shovels

Using heavy machinery if necessary, deposits of earth and rubbish were removed, old quarries were cleared, drove roads were repaired and a visitor car park at the foot of the “Burg Gleichen” castle was created. This made the steppe grasslands more accessible for the shepherds and their animals, as well as for the visitors wanting to explore this habitat.

Clearing a gypsum quarry on the Spatenbergen hills near Hemleben (PG 3). (HB)

To support the work of the shepherds, equipment such as this mobile water tank was acquired through the LIFE project. (TS)

Pasture equipment:

- 7,500 m sheep fencin (90 cm)
- 2,350 m goat fencing (120 cm)
- 13 electric fence batteries
- mobile drinking troughs / 4 water tanks
- 2 shelters
- as well as 75 goats

... with sheep, goats and other livestock

The work of the shepherds and their flocks is the most important aspect in the long-term survival of the steppe habitats. This is why the core aim of the project was to support their activities. The removal of scrub and trees increased the size and quality of the pastures, as well as improving access through the clearance of drove roads. In addition, 21 shepherds as well as other livestock farmers in the project area were supported through the provision of pasture equipment.

In addition to the sheep, the most efficient landscape managers are goats, as they love to eat young tree and shrub saplings. The project therefore encouraged the inclusion of some goats in sheep herds, or grazing only with goats. In this way, alongside the mechanical clearance, around 30 ha of land was cleared of scrub purely through targeted goat grazing.

Other grazing animals such as horses and cattle can also be effective in managing semi-natural grasslands, as they also help to maintain warm and high light conditions for the steppe species.

Goats are particularly effective at keeping the growth of bushes and trees in check. (TS)

... less is sometimes more

The transformation of purchased arable fields into grassland produced further pasture areas, and at the same time served as a buffer zone for the adjacent dry grasslands. To further protect the steppe vegetation, wide strips at the edges of arable fields were created on which no fertiliser or pesticide use was allowed. However, the main purpose of these strips is to protect rare arable weed species that occur close to dry grasslands and provide birds and insects with important feeding and nesting opportunities.

Wild fennel (*Nigella arvensis*) (CB)

Scarlet pheasant's eye (*Adonis flammea*). (SP)

Exchanging information with shepherds from the LIFE project "Wetterauer Hutungen" in Hesse (2010-2014) during a field trip in Thuringia. (HB)

Weidewonne – high quality meat and landscape management

The conservation of steppe grasslands depends on grazing, but the fodder in these grasslands does not support high production rates. With the aim of improving the profitability of shepherding, the project also developed a new Weidewonne ("pasture delight") meat label to emphasise the high quality of the pasture-fed lamb. This should sustainably promote the sales of regionally produced meat.

The logo and criteria for using the "Weidewonne – Thuringian Basin" label were developed together with local shepherds. The businesses using the label must guarantee the meat is of regional origin, that high standards of animal welfare have been met and that the animals have grazed areas of high conservation value.
The label was patented in May 2013 and provides a basis for the development of a regional direct marketing system for lamb.
The label has been promoted at numerous regional and national events using the motto "You can be a landscape manager too – enjoy high quality regional lamb".

Weidewonne activities

- Annual shepherds-day in Hohenfelden
- Participation at the annual meeting of Thuringian lamb producers
- Shepherd afternoon meetings in the Museum of Natural History
- Recipe book "Weidewonne – a taste of landscape conservation"
- Cookery demonstrations at farmers' markets in Elxleben and Braunsroda
- "Green days" in Thuringia / the International Green Week in Berlin
- Lamb promotion week in the Thuringian State Parliament
- Promotion on regional radio
- Intensive media work through advertising campaigns and the showcasing of individual sheep farming businesses

The recipe book "Weidewonne – a taste of landscape conservation".

An information and activity stand for children during the shepherd's day in Hohenfelden. (HB)

The guided nature walks, such as this one given by Bert Schönewerk in the Wipperdurchbruch near Günserode, were very popular in all of the project areas. (TS)

Experience the steppe – public relations in the LIFE project

Bringing together experts on steppe habitats and the general public is not only the goal of this report, but was a central theme in the public relations work carried out in this project.

Regular press communications, information events, guided walks, meetings between conservation professionals and scientists from across Europe and Asia, a temporary and a permanent exhibition, information boards and nature walks, promotion of regional lamb meat, a film and a series of detailed publications have all contributed to considerably advance the topic of steppe conservation in Germany.

Steppe informative

- Filmproduction
  „Federgras und Erdbock“
  “Feather grass and Longhorn beetles”
- Temporary exhibition
  „Karge Schönheit – Steppenrasen in Thüringen“
  in the Museum of Natural History in Erfurt
  (24.05. – 30.09.2012)
- Permanent exhibition
  in the Burg Gleichen castle
- Educational leaflet
  „Burggeist und Steppenhexe“
- Wall calendar for 2013
- International conference
  “Steppe habitats of Europe – threat, conservation measures, and protection“
  (03. – 06.06.2012)
- Conference volume
  “Steppe habitats of Europe – threat, conservation measures, and protection“ (2013)
- Info flyer
  “The LIFE Project Conservation and Sustainable Development of the Steppe Grasslands of Thuringia”
- Information panels
  in the 14 project areas
- Nature trails
  in the Wipperdurchbruch (PA 1) and Burg Gleichen (PA 10)
- Guided natural history tours
  field trips and presentations
- A mobile exhibition
- Information brochure
  „Steppengebiete des Thüringer Beckens – Inseln der Vielfalt“ (2015)

One of a total of 17 information boards situated in the 14 project areas. (HB)

The temporary exhibition „Karge Schönheit – Steppenrasen in Thüringen“ (2012) in the Museum of Natural History in Erfurt (HB)

Branched St. Bernard's lily (*Anthericum liliago*) in the Brembach vineyards (PG 8). (TS)

... After six and a half years ...

The goal of the LIFE project was to maintain and sustainably develop the steppe grasslands of the Thuringian basin as biodiversity hotspots. After six years of project activities, the project has successfully improved the conservation condition of around 350 ha of grassland and secured a further 140 ha of important steppe habitats.

The financial support from the EU LIFE programme made it possible to carry out thorough restoration activities on dry grasslands in poor condition and improve the infrastructure for the shepherds. However, the conservation management of these grasslands will not end with the conclusion of the LIFE project. The project areas, local farmers and shepherds need to continue to be supported, new landscape management contracts need to be made, and the development of habitats as well as their flora and fauna monitored, in order to ensure the long-term success of the project.

The success of the project results from the close coope-ration with local farmers, shepherds and land owners, as well as volunteer conservation organisations, local administrations and relevant authorities. It was only through the support and engagement of many people and institutions that the 120 individual measures of the project could be carried out.

Balkan clary (*Salvia nemorosa*) on the Kippelhorn near Elxleben (PG 9). (HB)

Thousands of green-winged orchids (*Orchis morio*) can be found on the Bottendorf hill (PG 2). (TS)

Sheep grazing on the Kahle Schmücke ridge near Gorsleben (PG 3). (HB)

Many thanks to all those who participated in and supported the project

Environmental consultants:
AVENA (Marburg), IBS Jörg Weipert (Plaue), PGNU (Frankfurt a. M.), RANA (Halle)

Landscape management firms:
Forstbetrieb Fröhlich (Frankenhain), Garten- und Landschaftsbau Gebhardt (Ringleben), Landschaftspflege Götze (Sondershausen), Landschaftsbau Sören Haselhuhn (Borxleben), Forstbetrieb Markus Koch (Schmalkalden), LBL – Forstservice Lars Bauer (Langenroda), THF GmbH – Thüringer Holzhandel und Forstservice“ (Kleinneuhausen), Landschaftpflege Romeiß (Kirchheim), Landschaftspflege Weber (Kahla), Garten- und Landschaftsbau Steinicke (Riethgen), ZIWO (Erfurt)

Land purchase / administration:
Thüringer Landgesellschaft mbH

Marketing:
Marketingberatung Bernd Körber (Weidewonne)

Illustration, film and photos:
Atelier Marianne Conrad, Corax Color & Stempel – Rabe GmbH, Thomas Stephan, Heinz Wiesbauer, LaNaServ – Detlef Stremke

Participants of the planning group for the “Weidewonne” initiative and shepherds‘ meetings:
Sheep farm Gerlind Brand (Vehra), Dr. Dierk Conrad (Natur-(stiftung David), Sheep farm Karina Denner (Tiefthal), Georg Eisenhardt (Agricultural cooperative Bollstedt), butcher Klaus Götze (Rastenberg), Yvonne Lesser and Gerhard Schuh (Regional association of shepherds of Thuringia), Wolfgang Martin and Eckhard Meyer (Agricultural cooperative Großengottern), shepherd Michael Meister (Agricultural cooperative Drei Gleichen), Daniel Reuber (Beichlingen), Sheep farm Heiko Rohkohl (Oberheldrungen), Sheep farm Karsten Seifert (Dielsd rf), Thomas Spittel und Gerd Steuding (Agricultural cooperative Schwabhausen), Eckart Stolle (Regional agriculture authority (Bad Frankenhausen), Dorrit Uhrich (farm shop Sömmerda), Sheep farm Ingolf Weimar (Esperstedt), Kerstin Laue and Manuela Wiegler (Regional agriculture authority Sömmerda)

Administrative districts:
Gotha, Kyffhäuserkreis, Ilm-Kreis, Sömmerda, Unstrut-Hainich-Kreis, Weimarer Land

Municipalities:
Landeshauptstadt Erfurt, Stadt Bad Langensalza, Stadt Sömmerda, Stadt Roßleben, Gemeinde Elxleben, Gemeinde Herbsleben, Gemeinde Drei Gleichen, Verwaltungsgemeinschaft „An der Schmücke“, Verwaltungsgemeinschaft Buttstädt, Verwaltungsgemeinschaft Kindelbrück, Gemeinde Kyffhäuserland, Amt Wachsenburg, Verwaltungsgemeinschaft Weinbergen, Verwaltungsgemeinschaft „Unstrut-Hainich“

Regional authorities:
ThüringenForst / Regional forestry authorities: Erfurt-Willrode, Finsterbergen, Hainich-Werratal, Sondershausen; Regional agriculture authorities: Bad Frankenhausen, Bad Salzungen, Leinefelde, Rudolstadt, Sömmerda, Thuringia regional office of agriculture, Thuringia regional office of enviroment and geology

Tour guides:
Andreas Gerth, Dr. Wolfgang Klug, Dr. Jürgen König, Dr. Gunther Löbnitz, Erwin Schmidt, Bert Schönewerk, Cornelia Schuster

Volunteers:
Landcare Germany (DVL), Young firefighters Mühlberg, NABU Gotha, RABE e.V., Schutzgemeinschaft Kyffhäuser-Unstrutlandschaft e.V. (Roßleben), Voluntary fire brigades of Altengottern, Bollstedt, Elxleben, Kühnhausen

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Others:
Dr. Thomas Becker, Geopark Inselsberg – Drei Gleichen, Präparationsatelier Lars Mandler, Natural history museum of Erfurt, Natural park Kyffhäuser, Friedhelm Petzke, Rose Saatzucht, Foundation Thüringer Schlösser und Gärten, Regional association of shepherds of Thuringia

Translation:
Laura Sutcliffe

The northern wheatear (*Oenanthe oenanthe*) prefers open, rocky habitats. (TS)

Imprint

Project reference
LIFE07 NAT/D/000213
Duration
1st January 2009 to 31st July 2015
Total budget
4,999,444.00 €
EU co-financing
3,749,583.00 €

Publisher
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Editor
Claudia Barnkoth
Stephan Pfützenreuter
Design and layout
Marianne Conrad, VBK
Printing
Druckhaus Gera GmbH

Photos
Claudia Barnkoth (CB)
Henryk Baumbach (HB)
Klaus Bogon (KB)
Stephan Pfützenreuter (SP)
Christoph F. Robiller (CR)
Thomas Stephan (TS)
Detlef Stremke (DS)
Heinz Wiesbauer (HW)

Autumn lady's tresses (*Spiranthes spiralis*) (TS)

Wrynecks (*Jynx torquilla*) (CR)

Pasqueflowe (*Pulsatilla vulgaris*) (TS)

Miltary orchid (*Orchis militaris*) (HB)

Golden ground beetle (*Carabus auratus*) (HW)

Bee orchid (*Ophrys apifera*) (HW)

Sea thrift (*Armeria maritima*) (HW)

Blue-winged grasshopper *(Oedipoda caerulescens*) (TS)

Sainfoin (*Onobrychis arenaria*) TS)

Purple viper's-grass (*Scorzonera purpurea*) (TS)

Corn bunting (*Emberiza calandra*) (CR)

Grape hyacinth (*Muscari tenuiflorum*) (TS)

”The LIFE Project Conservation and Sustainable Development of the Steppe Grasslands of Thuringia”