

Layman's Report

The practical protection of Angelica palustris habitats



Hungary, 2002 - 2006



Supports:

**LIFE02/NAT/H/8630
KÖVICE K-36-04-00024L**

Angelica palustris

- Treasure of European significance in the Nyírség

Angelica palustris is a rare remnant plant species from the Ice Age which managed to survive on a few proportion of its original habitat, despite the gradual warming of the cold climate dominating several thousand years ago. All but a couple of the westernmost habitats of the plant are found in Hungary, where the plants are only found in some parts of the Nyírség: in cool-microclimate birch and willow swamps and damp swamp meadows of depressions among sand-hills.

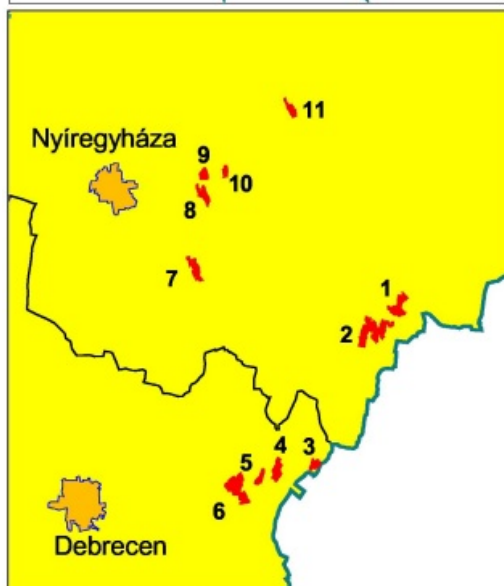
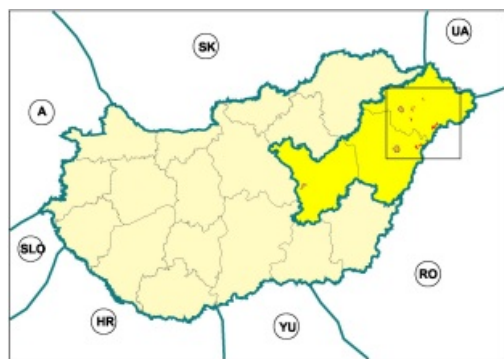
The plant is threatened with extinction throughout Europe, which is why it is included in the Red Book, and protected under the Bern Convention and the EU Habitat Directive (NATURA 2000) as well. It is highly protected in Hungary, and its intangible value is 100,000 HUF.

The rare treasure in danger

Today, the habitats of *Angelica palustris* (swamps and swamp meadows) encompass only small, fragmented areas. Due primarily to human activities, the size of the habitats is gradually decreasing, and their condition is degraded. Lack of public awareness of the preservation of the community's natural values, inadequacy of knowledge about the protection of the areas and the plants, shortcomings in the legal regulations, and economic forces endanger the sustenance of this rare plant and its habitats in the following ways:

- 1) The natural flora and fauna in swamps and swamp meadows are destroyed through ploughing-up, afforestation, the creation of fish ponds and orchards.
- 2) Due to the decreasing ground water level caused by drainage canals in the region, the valuable plants and animals of the swamps are vanishing, and the wetland habitats are shrinking. Species that live on the edge of swamps and have constant demand for water are disappearing.
- 3) Excessive cutting, grazing, sowing, fertilization and goose-keeping pose a severe danger because certain swamp plants require careful (conventional, mosaic-like, extensive) cutting and grazing. In some places, the lawn that was earlier maintained by cutting and grazing is now overtaken by shrubs, which also poses a danger on the plant life of swamp meadows.
- 4) The chemicals that get into the soil as a result of the proximity of towns, villages and intensively cultivated agricultural areas, as well as the drying out and the intensive land use give rise to weeds, which, in turn, drive out the sensitive and rare species from swamp habitats.





Project objectives 2002-2006

In order to protect the habitats of the endangered *Angelica palustris*, E-misszió Nature Conservation and Environmental Protection Association, with its partners (Directorate of Hortobágy National Park, Liget Public Foundation for Nature Conservation, Fűvészkert Association, the Society of Young Botanists, and Bors Foundation), and with the financial support of the European Union's LIFE NATURE fund and the Hungarian state's KÖVICE fund, launched a 5-year complex nature conservation programme in 2002.

The principal goal of the project was to provide practical protection for the most important domestic habitats of *Angelica palustris*, and ensure the long-term sustenance of the habitats as well as the improvement of their condition.

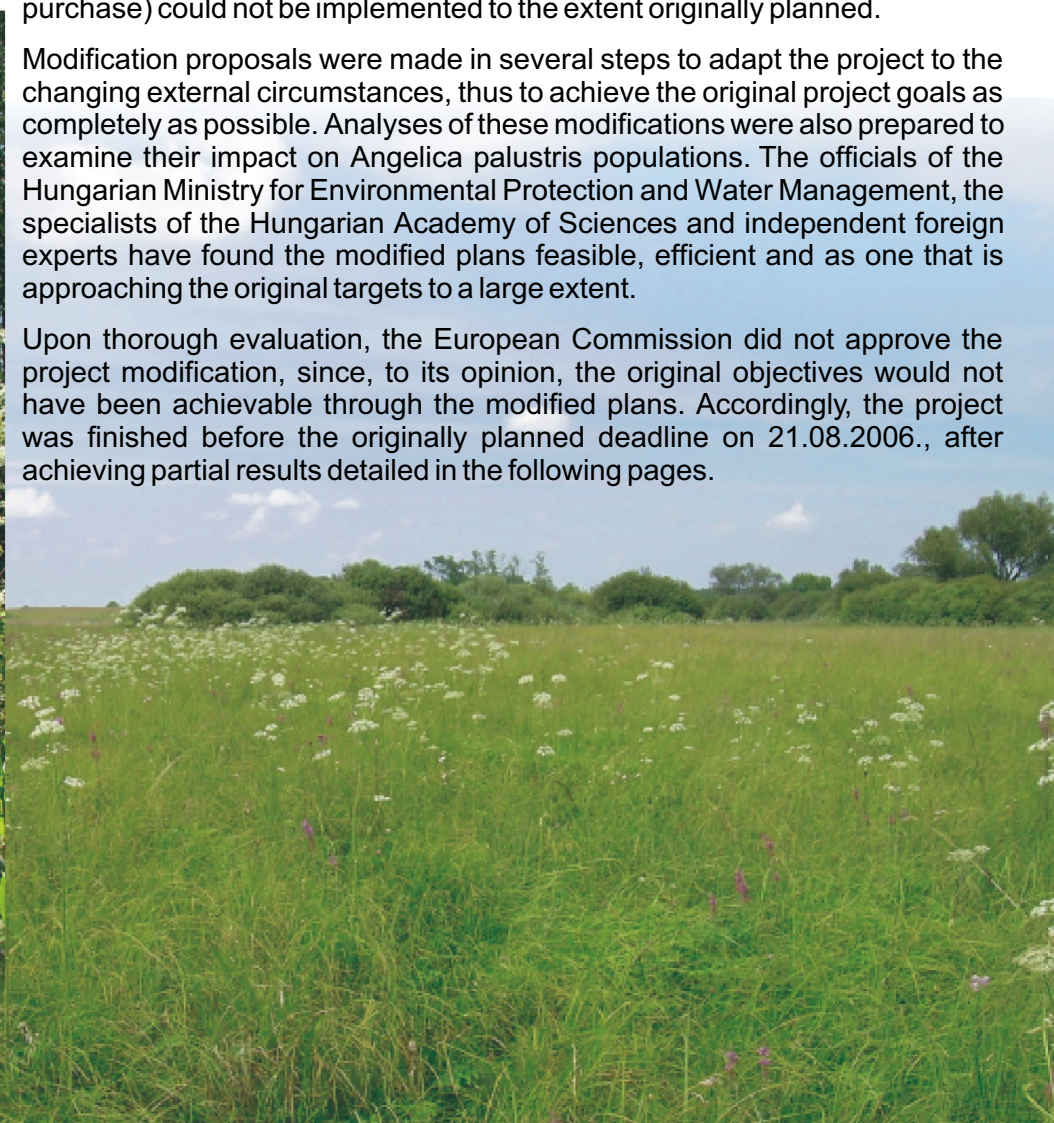
Planned project activities and the problems of implementation

Planned activities of the project covered the preparation of the management plans of the 11 project areas, purchasing of 1,033 hectares, afforestation of 150 hectares, grassland reconstruction of 100 hectares, carrying out water retention at 32 sites, machine mowing of 400 hectares, manual management of 100 hectares, performing the guarding and presentation of the 11 project areas, carrying out numerous communication works, botanical and zoological researches, and continuous project management.

During the implementation the project (application in 2001, start in 2002) met considerable obstacles unforeseeable in the planning stage. The agrarian policy, the domestic propaganda related to the accession of Hungary into the EU, and the accession itself resulted in a considerable increase in land prices and a decrease in selling inclination. Since no additional financial sources could be used for the project implementation, by 2004 it became evident that certain project activities (land purchase and the activities based on the land purchase) could not be implemented to the extent originally planned.

Modification proposals were made in several steps to adapt the project to the changing external circumstances, thus to achieve the original project goals as completely as possible. Analyses of these modifications were also prepared to examine their impact on *Angelica palustris* populations. The officials of the Hungarian Ministry for Environmental Protection and Water Management, the specialists of the Hungarian Academy of Sciences and independent foreign experts have found the modified plans feasible, efficient and as one that is approaching the original targets to a large extent.

Upon thorough evaluation, the European Commission did not approve the project modification, since, to its opinion, the original objectives would not have been achievable through the modified plans. Accordingly, the project was finished before the originally planned deadline on 21.08.2006., after achieving partial results detailed in the following pages.



Summary of results

- 1) **Planning:** the nature conservation management plans were prepared for 11 project areas (3,917 hectares). On the basis of the management plans submitted to the competent authorities and nature conservational managers, the authority procedures and management activities can be performed in these Natura 2000 areas more efficiently during and after the project. During the project implementation but independently from the project budget, the species protection plan of the *Angelica palustris* was also prepared by the participants of the project, which is a further tool for the domestic preservation of the species.
- 2) **Land purchase:** Within the project 255 hectares of land have been purchased of which 212 hectares (83%) are actual, or potential biotopes of *Angelica palustris*, or important buffer lands within the 100 m range of these biotopes. As a result of the project, the proportion of *Angelica palustris* habitats in nature conservation property increased from 38% to 66%, and the proportion of potential *Angelica palustris* habitats in nature conservation property increased from 15% to 34% within the project areas. It is a supplementary result that further 56 hectares - prepared for purchase in the frame of the project but sale contracts not completed - will be purchased by the national nature conservation after the project.
- 3) **Non-recurring management:** The grassland reconstruction has been performed on 34 hectares during the project. One water-retaining facility has been built by the project (further 9 water-retaining facilities have been erected by water-management associations as a result of the authority efforts of the project). It has been defined which of the purchased areas can be grassed and forested. Sites suitable for water retention in the present circumstances were identified. The investments can be realized from subsequent domestic and EU financial sources.
- 4) **Recurring management:** An area of 209 hectares was treated with mechanical and manual grassland management (mowing and scrub cutting). As a result of the grassland management, the living conditions of *Angelica palustris* and numerous marshland plant and animal species improved. As a result of the project, guarding of each habitat is solved; the guarding of the areas became more efficient and regular. The damaging of nature by the local inhabitants considerably decreased.



5) Social communication: Two press conferences and numerous media publications took place. Publications were prepared on the project in 3,000 copies each. Three awareness raising boards were prepared for events, which were presented on several domestic conferences, annual meetings and expos. In total 33 information boards and 110 official nature protection area signs were purchased and placed in the project areas. The homepage and the Layman's Report of the project were also prepared in Hungarian and in English. Through social communication and other project activities (land purchase, management, guarding), the affected local population understands the importance of the endangered habitats much better, the relationship between local inhabitants, farmers and people working in nature conservation has improved, the respect for natural values and the inclination to preserve European natural values have increased.

6) Monitoring: Continuous botanical monitoring and 2 habitat mappings were carried out in the areas. The location of the known habitats became more precise, the population sizes were counted. During the project we have discovered 20 new biotope patches of *Angelica palustris* and some areas separated from the known sites, where a relevant population of the species can be found. We found new habitats of several other protected species within the territories (*Veratrum album*, *Dactylorhiza incarnata*, *Dianthus superbus*, etc.). Thanks to the zoological researches, numerous new habitats of some highly protected and Natura 2000 species were found (*Maculinea teleius*, *Vipera berus*, *Crex crex*).

7) Project management: Thanks to the project, the cooperation between the project partners increased and improved. The project considerably promoted the cooperation among nature conservation and other affected parties (water management bodies, forestry, hunting, agricultural and local political agents).



The project's cost-benefit implications:

Although it is difficult to carry out specific cost-benefit analyses of nature conservation activities, the following apply to our project:

- 1) Thanks to the thorough preparation, a great portion (83%) of the purchased area directly affects *Angelica palustris* habitats. This means that the land purchases were carried out in a cost-efficient manner.
- 2) Due to the land purchases, reconstruction, treatments, guarding and PR activities, the condition of the core areas managed earlier by nature conservation will improve. The improvement will bring about a decrease in management costs; therefore, the project expenses will yield savings in the medium and long run.
- 3) As a result of the project activities (planning, implementation, guarding, PR, authorities' work), fruitful cooperation was established among counter-interested sectors (forest and water management, farmers, nature conservation). As a result of this, the occurrence of harmful activities and conflicts will decrease after the project. Nature conservation organizations will have to fight harmful activities in the region with the help of the authorities and other means less frequently. The decrease in the number of conflicts and the frequency of environmentally harmful activities will result in both, financial and social benefits.
- 4) The five non-governmental organizations that take part in the project activated a large number of volunteers during the project. The volunteers of NGOs will play an important role in labour-intensive post-project activities (for example manual treatments, monitoring). The involvement of volunteers has enabled and will continue to enable savings.
- 5) As a result of the activities accomplished, and the ongoing afforestation and planting of lawn on the areas purchased, sand pollution and the occurrence of allergy-causing weeds have decreased and will continue to do so. This, in turn, will lower the state's healthcare expenses.
- 6) The increase in biodiversity, enabled by the project activities, will result in important social and economic benefits.





E-misszió

Természet- és Környezetvédelmi Egyesület



**Liget
Természetvédelmi
Közalapítvány**

Transferability

- 1) The cooperation within the project among state and non-governmental organizations as well as nature conservation and other sectors resulted in exemplary and cost-efficient solutions.
- 2) One of the major reasons for the destruction of natural values is the "ignorance". The provision of information for the inhabitants as well as the guarding of the areas play a highly important role in the prevention of damage to nature, as is proved by the decreased number of such incidents on our project areas.
- 3) Natural values can be preserved safely only through the complex employment of the available tools. Raising public awareness, purchasing, treating and managing the affected areas may together provide sufficient safety even under varying circumstances.
- 4) The implementation of programmes in the field of nature conservation, due to the characteristics of nature and the investment, requires flexibility of both the implementing organizations and the grantors.

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Short summary of results achieved:

Thanks to the European Commission Life-Nature program and the Hungarian State KÖVICE funding, with this project we have made a great step forward in the protection of this highly important and vulnerable value of the European Union:

The proportion of *Angelica palustris* habitats in nature conservation ownership increased from 38% to 66% on the project areas.

The practical field activities of the project (land purchases, water retention, grassland reconstruction, manual and machine treatments) influenced 84 hectares (86%) of the biotopes of *Angelica palustris*.

During the project's operations, the known *Angelica palustris* habitats positively affected by nature conservation activities increased from 37 to 87 hectares (from 38% to 89%).

The purchase of 255 hectares, the management of 209 hectares, the research activities, the 11 prepared management plans and the plans identifying reconstruction possibilities, the continuous guarding as well as the diverse contact with the local residents significantly decreased the threats of the populations, and in numerous cases improved the condition of *Angelica palustris* habitats.

Additionally a great opportunity has been created for a larger management and reconstruction work (37 hectares grassland reconstruction, 57 hectares forestation), through which the survival chance of *Angelica palustris* populations could become stronger.



With the contribution of the LIFE financial instrument of the European Community, and the KÖVICE Hungarian State Fund.

A program az Európai Közösség LIFE és a Magyar Köztársaság KÖVICE pénzügyi támogatásának segítségével valósult meg.

