

## **The Potential For Development of an Integrated Network of Greenway Trails on Medieval Hedgerows Landscapes in the Czech Republic.**

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### **Introduction**

Today in the Pilzen region of the Czech Republic, remnants of medieval fields known as “pluzinas” represent an extremely valuable historical landscape pattern. The character of a pluzina landscape is in many aspects comparable to the hedged field (bocage) landscapes that are well known as a symbol of some parts of Europe, e.g. Belgium (Flanders), England, Scotland, Wales, France (Brittany and Normandy) or the Irish highlands. The character of preserved pluzinas in the Czech Republic differs from that of typical bocage landscapes in some respects, especially in spatial composition. In pluzinas, long parallel plots connected to the individual farmsteads of the village prevail, with a minimum of shorter, transversal hedgerows (see Figure. 1).

### **Background/Literature Review**

The medieval field pattern called “pluzina” in the Czech Republic can be defined as the economically useful part of the landscape belonging to the original medieval village. Pluzina landscapes include all crop fields, meadows and pastures mutually interconnected by the system of field roads and often belonging to one village (Gojda, 2000). As such, these landscapes are an important agricultural and cultural icon that is representative of a region’s historic past and agrarian land use. These artifacts are important to archaeologists and historians, but the distinctive field patterns are also visually attractive landscape features. In addition, they help to characterize and distinguish many scenic pastoral views that are important in defining landscape character, pattern, and rhythm, particularly of this region. The pluzina landscapes hold tremendous potential in fostering visitation and ecotourism development to this region – but how best to accommodate visitors? Building on the tourism and recreation potential of the pluzina / hedgerow landscapes, there is great potential to introduce non-motorized greenway recreation trails in select areas as a means by which to see and physically experience these distinctive field patterns.

The phenomenon of hedgerows or hedgerow networks has been the subject of a range of studies in other continents (e.g. Rao et al., 1999; Schmucki et al., 2002; Tang et al., 2003; Wood and Stahmann, 2004; Harvey et al., 2005). Hedgerows as linear features composed of trees and/or shrubs constitute a stabilizing network of the pluzina landscape. The historical purpose of hedgerows was to provide firewood for heating and other basic survival needs, cattle management, erosion control, and

drainage. Hedgerows were also useful as permanent fences (Thoen and Lachaert, 2006), which, in Britain, were erected by landlords after the introduction of the Enclosure Acts in the 13th century (Russel, 1972; Williamson and Bellamy, 1987). Today, however, people value hedgerows especially for ecological, historical, visual, and educational purposes (Oreszczyń, 2000; Rich et al., 2000).



**Figure 1. Pluzina bring many important qualities to the landscape: they represent historical and cultural value, illustrating a dominant landscape character in this part of the world for many centuries. Their aesthetic value lies in the layout of the landscape, while they also provide connected corridors of biodiversity in the agricultural landscape. *Photo credit: Marketa Hendrychova***

Experiencing a pluzina landscape through an integrated network of walking, hiking, bicycling trails has not yet been explored in the literature, and is the primary function for this research. The challenges and opportunities for development of public access trails on pluzina landscapes has tremendous potential for expansion and development of tourism based experiences in this important landscape.

### **Goals and Objectives**

This research discusses the principles of conservation and restoration of these valuable historical landscapes, and how greenways can foster interpretation of the pluzina landscape. This premise is based upon the belief that greenways are excellent tools for providing the public recreational access to key areas; interpreting

historic landscape features through educational media; protecting important habitat structure and function through the development of management and protection approaches for these important areas; and the potential for localized economic growth in rural agricultural landscapes of the Czech Republic.

### **The Study Area**

The best-preserved pluzina landscape can be found in the vicinity of Bruntál, in the Northern Moravia region. The Nizky Jeseník mountain area forms the eastern section of the Sudeten mountain system in the northern Czech Republic. The range lies in northern Moravia, bordering Poland. In this area, it is still possible to find nearly intact pluzina networks surrounding the individual villages and covering areas of several square kilometers each, which is a phenomenon unique on the Czech scale, and perhaps even on the Central European scale. As mentioned, this area is a part of the Nížký Jeseník mountain range, with a rather steep topography and elevations varying from 400 to 800 meters. There is at present some arable land in the lower lying areas of the region. However, in the higher elevation landscapes, with the best-preserved pluzinas, a mosaic of woodland and grassland predominates (see Figure 2).



**Figure 2. A landscape mosaic of woodland and grassland predominates this pluzina.**

*Photo credit: Petr Sklenicka*

The settlement of this area in its current form, with long-hillside villages and croft pluzinas, dates back to the 13th and 14th centuries. Since this time, many of the villages have repeatedly disappeared and been re-established, however the general pattern of settlement and field patterns have prevailed. A relatively recent event that had a fundamental impact on the sociology and economy of the region was the deportation of German inhabitants from the area after WWII and the subsequent decline in agriculture.

Presently, this area is sparsely populated and agricultural land use is particularly extensive. This area is also not greatly used by tourists, as opposed to the neighboring area of Vysoký Jeseník mountain range, a traditional recreational area with many facilities for skiing, hiking and other outdoor activities. This is not to say that the pluzina landscape has nothing to offer for a tourist seeking outdoor recreation experiences – at present, it has not been typically thought of as a place to promote such experiences. As described above, the landscape character of this region has not been disturbed by development of dense housing settlements or industry; it retains much of the form and function dating back to medieval times. Given the typical pluzina landscape functions with strong historic connections to farming, human settlement, natural and scenic beauty, this area can and should be considered for the development of ecotourism experiences in general and greenways specifically.

The village mayors in the area of Nížký Jeseník are interested in fostering localized economic development in the form of ecotourism. Specifically, they are keen on attracting tourists into this area and they very much support non-motorized recreation; some of the municipalities have initiated several greenway projects. However, in these cases, greenways are mostly understood merely as “roads” for bicycles, without the multifunctional educational, and cultural landscape aspects typically found in a greenway network.

### **Landscape Access in the Czech Republic**

In the Czech Republic, the law guarantees free access to any unfenced land. Typically, it is only possible to fence a garden area but not larger tracks of farmland. In the Czech Republic, even private forests cannot be fenced or restrict public access because of the traditional and historical right to pick forest berries, mushrooms, and gather fallen timber. Similarly, fields of crops and grass are private, but anyone has a right-of-way across them – of course it is frowned upon to walk across a sown crop field.

### **Routes for Greenways in Pluzina Landscapes**

Greenway trails can provide important and necessary off-road linkages between villages for local residents. In the Czech Republic, many people will use field edges, ridgelines, and riparian corridors to walk between villages as opposed to

using the shoulder of narrow roads. This traditional pattern of movement between key points in the landscape by local villagers can be readily applied to the hedgerow corridors of the pluzina, making it an attractive route for recreational by tourists and others (see Figure 3).



**Figure 3. Pluzina corridors are attractive routes for recreational tourists. Photo credit: Peter Kumble**

Given the public right of access to open areas in the Czech Republic, such as the pluzina landscape, it would be possible for the users of a pluzina greenway to readily enter the surrounding landscape. Specifically, land would not have to be purchased or access easements established for the development of greenway trails. The greenway itself could be built wherever there is a traditional path of field road, however the intention would not be to cover the landscape with greenway trails (see Figure 4). In fact, in many pluzina landscapes, the network of these existing pathways and field access treks (roads) is quite prevalent in the landscape; these access routes are typically up to one (1) meter in width. For this reason, as well as to respect the scale of the Czech landscape, the greenways should not be greater than 1.5 meters wide. Therefore, they would accommodate bicycle riders and hikers, but not horseback riders.



**Figure 4.** A traditional pathway or road through a pluzina landscape can readily accommodate a public recreation greenway. *Photo credit Peter Kumble.*

### **Discussion and Conclusion**

At issue in this paper are multiple agendas; recognition and interpretation of an important cultural icon of the Czech landscape; and the potential for development of passive recreation trails in the form of greenways on this landscape. The pluzina landscape represents a wonderful window into traditional and historic patterns of agricultural land use, much of which is not recognized or fully understood by many people today. Current research is documenting the importance that this hedgerow landscape has relative to habitat structure and form, and stabilization of erodible soils. From a social and cultural perspective, research is identifying the connection that this pattern of open space and vegetation has for the Czech culture in Central Europe.

Concurrently, the need to foster localized economic development through the guise of ecotourism, cultural tourism, and outdoor recreation is not unique to this region of Europe. Greenway development on a cultural and functional landscape, such as the pluzina, represents a rational approach to preservation and interpretation of an iconic cultural landscape, while providing alternative recreation opportunities. The traditional and accepted culture of open access to private land for its use as an access-way also suggests that the development of greenway trails in the Czech

Republic on pluzina landscapes would not face challenges of land acquisition, and easement dedication as typically found in North America and elsewhere. Future research will need to develop design standards for trail surfacing, appropriate signage and wayfinding, developing an educational “story” of this landscape, and obtaining joint public and private funding in support of greenway development and management, and marketing of the experience.

*The study was supported by grant no. QH 82162 of the Ministry of*

*Agriculture "The possibilities of defragmentation of agricultural*

*land" and by a grant-aided project ME 897 of the Ministry of Education, Youth and Sports "Landscape-architectural principles of rural landscape restoration."*

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