# Baulks, cultural heritage elements as ecological corridors in some traditional Romanian landscapes

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**SUMMARY.** The key objective of the current study is to make a general analysis about baulks, one of the structural elements that define a natural – cultural landscape, and that can be considered in a way "elusive". Baulk can be defined as a narrow stripe of land acting as a border between two agricultural fields that are used in a rather traditional manner. They have a important role in the traditional rural communities, marking private properties, and there are special rules for the management of these structures. Within the landscape, baulks work as ecological corridors, linking the various natural and anthropic habitats. The interconnectivity of the different habitats and the maintenance of a high degree of biodiversity is practically assured, in the landscapes where these structures have been conserved. We especially focused on the baulks found in Banat, Maramureş and for other regions we used data from references.

Keywords: baulk biodiversity culture ecological corridors

#### Introduction

The contemporary social ecological system is mainly characterized by two dynamic aspects, namely: *growth* (Bargatzky,1986)) and *change*, as an effect of growth, changes that transcend the social system and the contemporary human communities, and that have an effect also on the environment that human communities inhabit, effects which range from positive effects to negative ones, and which are contributing to the ongoing process of the erosion of biodiveristy.

Environment is a part of nature, and nature is understood and conceived in varying ways, according to the different viewpoints, ideologies, scientific branches or even the cultural contexts one looks upon it. Mostly nature is viewed as an external

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reality different from man or human society, which in it's pristine shape is considered to be untouched by man and his activity (Bargatzky,1986). This romantic concept is considered nowadays to be obsolete, because man has had an impact on every corner of nature, in a way or another (Bargatzky,1986).

On the other hand, man as integral part of nature, in his pursuit for survival, is using his intelligence and culture as more effective way of coping with environmental constraints, perpuating his species and successfully adapting to the environment (Schutkowski 2006, Sutton and Anderson, 2010).

In the view of these, we will use the concept of enviroment to outline the type of nature that is shaped and transformed by human society and it's subsistence activities. As long as human activities were maintaining the subsistence of local and regional communities, modelation as an efect of human activity on biodiveristy has had an overall positive effect in Europe. An exception could be considered the extinction of several big mammals in Europe, during the XVI and at the end of the XVIII centuries, when *Bos primigenius*, *Equus ferus gmelini* gone extinct (Filipaşcu, 1969). A radical shift in balance, occurs when people start moving from extensive subsistence agriculture, which sometimes is controlled by ethical percepts with regional or ethnic nuances (Cristea and Rákosy, 2011; Rákosy 2011), to intensive agriculture, driven only by yield and profit.

Actual landscapes are fragments of nature, that belong both to the cultural and the natural environment, a particular type of landscape is considered to be the *cultural landscape*, which is a result of the interaction between humans and nature, and which owes its existence and persistence in time due to human presence and it's activity. The concept of cultural landscape has a long history, bearing the imprints of the main paradigms that influenced scientific research at various times (Calcatinge, 2013).

Even within the concept of cultural landscape there are some major differences and distinctions to be made (Calcatinge, 2013). Urban cultural landscapes or the different theories that label and classify the various cultural landscapes (Calcatinge, 2013), are not within the field of our research or interest. We will insist instead on what is commonly considered as being a natural – cultural landscape, sometimes also reffered as natural – cultural landschaft (Rákosy, 2011), which is usually understood and used to outline the part of nature that is shaped by traditional activities, as part of subsistence agriculture, and due to that, assures a high degree of biodiveristy (Rákosy, 2011). Some classical theories speak about a natural landscape, that has a series of dynamic elements and some stable ones, within the dynamic elements, human activity is considered to be most important driving factor that shapes the structure and dynamics of a given landscape (Teaci, 1983). Thus it seems very hard or almost impossible to make a clear demarcation betwen human activity and the notion of landscape or *landschaft*.

Another very interesting concept which has been coined and used within the biology school of Cluj Napoca, by some researchers like Nicolaie Boşcaiu (Cristea and Rákosy, 2011), or Alexandru Filipaşcu (Filipaşcu, 1977) is that of the *ethnoecosistem*. The *ethnoecosistem* concept was utilized, but sadly it was not defined until very recently by Cristea and Rákosy (2011, manuscript). This considers an *ethnoecosistem* to be: "A partycular type of secondary ecosystems, with an important note of originality and a susbtantial state of native life, a type which is adjusted, and maintained in time by specific human communities by "ethical instructions" (specific cultural practices), in a determined geographical space".

A different viewpoint on the natural – cultural landscapes, is one linked to the ethnic factor, which is considered to be responsible for shaping, the perception, representation and the differentiation of certain landscapes (Gnädinger *et al.*, 2011), as a result the concept of *ethnic landscape* was coined and it refers to: "areas, that are perceived in a certain, diverse, often characteristically way by one or more ethnic groups. The perception depends mostly on the properties of the area, which are the result of actions and interactions between human and natural factors (Gnädinger *et al.*, 2011, p.4).

Beside the more obvious aesthetical values, some elements have some very special functional and structural values, given by the human community, which allowed their development. But despite these values and roles which the human community is giving to a certain element, it can also have a function that is unknown, or acknowledged on a small scale. In this case both functions, the social one and the one which is imprecisely aknowledged, define the multifunctionality and the importance of the certain elements. From this point of view we can acknowledge and understand the variety of definitions which are given to a landscape (Gnädinger *et al.*, 2011) and why the different specialists have so many different viewpoints on the issue (Cristea and Rákosy, 2011), as the landscape is viewed separately by geographers, tourists, consevationists, landscape architects or ecologists (Godart and Deconick, 2003), we see how different elements of the landscape can have different significance and functions, but taken alltogether they offer us a more complex view upon the landscape as whole and it's valor for biodiveristy and human culture.

# Baulks as structural element of the natural – cultural landscape

Certain structural elements of the landscape, features such as green fences, woodsides, orchards, terraced slopes etc., are typically taken into consideration when it comes to analysing the characteristics of a landscape (Gnädinger *et al.*, 2011).

However within the natural – cultural landscape there are some other structural elements, that can be considered a bit more "elusive" but which have an outstanding cultural and ecological importance, and are also structuring the landscape. "The baulk" is certainly such an element, which has both cultural and ecological importance.

A baulk is a strip of land that separates two agricultural fields, whether they are cultivated or not, practically it can be considered as a border which delineates the different private properties within a given community, especially the agricultural fields. In some cases and in some regions of Romania, baulks are separating orchards, backgardens, hay meadows, vineyards etc. Baulks are usually managed differently by the two neighbours and special property rules apply.

#### Materials and methods

For this study we investigated two villages from two distinct historical regions of Romania, Maramureş in Northern Transylvania and Banat in the South – West of Romania. The linear stripes of land that separate the different terrain types and properties, have different names, but have the same role althought a slight different management can be observed. The different shapes is due to geographic differences in both regions, although the social role is exactly the same. In Banat we investigated the village of Forotic which is situated in the ethnographic region of the Caraş Valley, county Caraş – Severin. In Maramureş county, we conducted our research in Ieud, a village situated on the Iza Valley. We used semi – directed interviews, but the results will be published in another paper. We relate our findings with literature data from other regions of Romania.

# The origin of baulks in Romania

The general Romanian term for a baulk is "răzor" (according to Dicționar Tehnic englez – roman, 1997), but this landscape structural element has a variety of names, according to region, shape and even village. The most widespread name is "răzor", in the historical regions of Banat it is known as a "slog", in Maramureş it is named "hat" or "mejdă", in other regions of the country it is known under different names such as dâlmă, mejdină, mejdrină, mezuină, răstav (Scriban, 2013). The significance and function of this structure is the same all over Romania, including the hilly – mountainous Maramureş where *hat* or *mejdă* is considered to be a strip of land that separates two cultivated terrains, more certainly two agro - terraces, but also in regions with lower altitudes, where as simple furrows (Stănică, 1937), strips of uncultivated land or a border of trees (Scriban, 2013), they separate and mark private properties. What we name under the generic Romanian term "răzor" or English baulk had, the initial role of delineating different parcels which were utilized in various ways, being a symbol of private property and of neighbourhood, thus being implicitly a symbol of traditional extensive agriculture, with terrains that were differently utilized.

In Romania the genesis of baulks can be definitely linked to certain changes that have arisen within an community, being a result of a shift from absolute collective ownership ("devălmășia absolută", Stănică, 1937) of land, to the collective proportional ownership and then finally to the private property (Stănică, 1937). It is not our task, within this article, to analyse the different customs and practices of land division in the traditional Romanian culture, for it is known that is the appanage of the advent of the group and individual property (Togan, 2005). Some authors have suggested that division was done in accordance with the topography of the place, the forms resulting being thus similar to geometrical figures, having as fix marks barrows, hummocks, springs, rivers and only in rare cases isolated ancient or old trees (Stănică, 1937), although in medieval documents trees weren't at all rare in demarcations, some were specially marked with symbols or the coat of arms of the country (Giurescu, 1975). These demarcation practices may had some magical or mythical implications according to other authors (Togan, 2005).

Due to geographical factors, two types of baulks have been originated, which depend on the relief and nature of the landscape. One that is common at low altitudes like small hills and plains, and another one that separates two agricultural terraces, which is a horizontal line on the hill, and ranges from the hilly to the mountainous regions, up to 1200 - 1400 meters (Someşan, 2011, Idu, 1999).

The exact origin of baulks is hard to determine, but some researchers suggest the hypothesis that the various structures have their origin in different historical. The baulks we encounter in the hilly areas of the Transylvanian Plain, but also in the Para - Carpathian and Intra - Carpathian depressions, are of possible Pre-Roman age, while those which are in the mountainous areas on the ridge of the mountains, could have more recent origins, connected with the Migration Period and the early Medieval Age (Someşan, 2011).

In Romania baulks that have been made on the crest of hills and mountains, are the result of terracing and agricultural use of these relief units (Fig. 1, 2), their direction is transversal on the cliff, their forms is horizontal and they have some very sharp dividing stripes. These baulks have a more pronounced aspect because of the sharper cliffs and due to a long time agricultural use. The horizontal form of the terraces towards the versant, is the result of ploughing starting from the top and the gradual down throw of the furrow. In time the result of this ploughing method was that some terraces are divided by baulks of a relative height of 7-8 m, sometimes the breadth of those being even bigger than of the actual cultivated terrace (Someşan, 2011).

The form and shape of the agro-terraces has been developed in such a manner that it prevents or at least minimizes the dangers of soil erosion but also the washing of the natural fertilizers by rainfall (Someşan, 2011).



Figure 1. Agro – terraces and baulks ("haturi, mejde") in Botiza village, Maramureş.



Figure 2. Terraced hills in the villages Bogdan Vodă, Maramureș

Another type of baulk is the one found in regions with low altitudes and by default agro - terraces are not be found here. However their function is the same, they are a boundary between cultivated terrains, their orientation is parallel with the direction of those. In some regions of Banat, such a baulk is named *slog*, in some regions it has a standard admeasurement of 40 cm, while other informants told us that the normal admeasurement of this structure is that of a furrow (more or less). The *slog* was made after plotting a terrain in the following way, a strip of land was left unploughed between the two neighbours which had a width of a furrow or was meticulously measured to be 40 cm wide. This newly created strip of unploughed land was also marking the border between the two newly separated parcels, but on the other hand the baulk itself was subject to a division and particular type of property, so half of it was the property of one neighbour and the other half was the property of the other

one. In the case of 40 cm baulk, it was divided giving 20 cm to each one of the neighbours. In the traditional custom and rules of land division, in this area, the *slog* was a mandatory structure which normally was covered by grasses (Fig. 3 a, b), very rarely bushes were left growing on them for an additional mark, even less trees were planted or left to grow, for shade.



**Figure 3**. Baulks ("slog") in Banat, village Forotic, covered by spontaneous vegetation, dividing tillage grounds (a) and crop fields (b).

In another historical region of Romania, in Oltenia or Lesser Wallachia, in the village of Orodel, these structures are named *răzoare* (the standard Romanian name), and they have originated around 1858 when the joint proprietors were divided into sole proprietorships (Stănică, 1937). Their main role was to divide the different cultivated areas, together with some bushes that were left on them: "The baulk is a simple furrow made by the plough, which is renewed each time the places are ploughed, and by this, it's replacement is very easily done. As a consequence of this, quarrel, trials, beatings and sometimes even murders were not very uncommon." (Stănică, 1937, p. 29). Baulks with grasses were called in local speech "*pârciuri*", being fewer at that time than the ones represented by simple furrows. "Between some fields, the baulks had bushes, blackthorn and hawthorn left to grow on them as marks, other baulks were planted in this sense with quince, the bushes and the planted fruit trees were the marks which maintained the border, the baulk was being drawn as a straight line" (Stănică, 1937, p.29).

Another traditional structure of the cultivated areas, found in many parts of the country, but with different meaning and role, is the "obraţ". In some regions the term refers to a measurement unit used in land division, or to the unplanted margins of a vineyard (Scriban, 2013). In Banat (Fig. 4), this structure has a special logistical role, as it represents the common road situated at the end of the cultivated terrains which assures the access of all land owners to their properties. For this reason it is the common property of all neighbours and therefore it is especially designated by all neighbours when land division is done. The "obraţ" is separated by the actual cultivated terrains by an indicator furrow. It is fallow ground, ploughing and planting of trees is prohibited on this stripe of land, and, since it is a common property, any damage brought to it is sanctioned. Its width is of approximately two meters, just enough to let a carriage pas on it.



**Figure 4**. Obraţ – a communally managed field road with spontaneous vegetation specific to the region of Banat, village Forotic.

## The traditional and the current management of baulks.

In past times these structures have been subject to an intensive management, which also had some deep social implications. For example in Banat when ploughing was done near a baulk, it was done in such manner which avoided bringing any damages to it. It was accepted to cover the baulk with a furrow thus transforming it into a hilly linear structure next to the neighbouring ploughed terrains. But the next year, when the new ploughing was being executed, it was bared of the soil bed so that it would again become visible. So this band was left to fallow, and people were not allowed to touch it even with the harrow, so that the slightest damage would not occur to it.

Every neighbour was supposed to clean his part of the baulk, bushes and shrubs springing up, were considered to be a shame, and which had some repercussions upon the one who did not respect this ethical exigence. Sometimes, very rarely, as an additional sign to help mark it's presence or when ploughing was done, to avoid trespassing, a tree was planted on it (for example acacia or fruit trees). Regarding the traditional management we can observe that this structure, was left to fallow, but bushes and shrubs were removed, people being bound to this by the local management system (unpubl. results).

Thus, after the baulk was created, beside these "technical" instructions regarding the management of the structure, some other aspects of this issue can be considered under "ethical instructions", a necessary result of the common vicinity. By this we consider the ethical exigence of not damaging the baulk at any costs, some locals relate that is better to let pieces of your land into the baulk then to bite from the baulk (unpubl. results). To avoid bringing any damage to the baulk, was an ethical exigence with highly deep implications upon the life of the neighbours, but in a broader sense also upon of the whole local community, it thus pictured the mutual respect, and assured a sort of social stability within the community and the avoidance of conflictual states.

Almost the same type of management is found in the mountainous area of Maramureş, here the baulks are called "mejdă" or "hat" and they are also divided in two halves, between the two neighbours. A significant difference is that here, more than in other regions, shrubs and bushes, or even trees were left to grow on the baulks, for better marking this border (Fig. 5), but also for utilitarian purposes (for example: firewood or for tools). As the shrubs and bushes broaden on the structure, they were cleared by each individual neighbour, which also managed his part of the baulk, in the way he wanted, some were mowing it, some grazed it with their cows that were not sent in the mountains etc.



Figure 5. Shrubs and bushes left on baulks as marks, in Ieud, Maramureş.

An interesting interdiction is regarding the planting of trees or fruit trees on these structures, so that it wouldn't shade the neighbour's terrain. Also if there were some fruit trees, and the fruits fell on the side of the baulk, which belonged to the neighbour, automatically these fruits became his property as well, and not of the person who owned the tree. Despite the fact that various shrubs and trees were left on the baulks as an additional mark (for example: Prunus spinosa, Alnus glutinosa, Salix Caprea, Quercus robur, Populus alba, Fraxinus excelsior etc.), most commonly these structures were mowed, the resulting hav was carried home in a blanket ("ciumău" is the local term for designating such a transport and also its quantity which is limited by the person's strength and his tool – the blanket). In Maramures, there wasn't any social commitment in clearing the baulk, mowing it was a necessary labour, which in turn brought an surplus of food for the domestic animals. Also the trees that were left to grow on the baulk, had been the subject of an active management, their branches were chopped (Fig. 6) for two reasons: to avoid shading the neighbour's terrain and to stimulate the growth in height of the tree. Other trees that were planted by locals on these structures are mainly spruces (Picea abies), because of their importance in the local economy.



Figure 6. Maramures, Ieud. A pollarded tree left to grow on a baulk.

A slightly different management was that of the baulks found in the region of Oltenia, not all of them were left for fallow, the ones that had grassland vegetation on them had an distinctive local name "pârciuri". Here also some spontaneous shrubs (like *Prunus spinosa* and *Crataegus sp.*) or planted fruit trees like quince (*Cydonia oblonga*) served as additional mark for the baulk. The importance of these baulks for the stability of the social system was highly remarkable, because trespassing or damaging these limits has had negative conflictual effects within the community like beatings, lawsuits or even sometimes murder (Stănică, 1937).

Nowadays due to some very important social and historical factors, the management of baulks has had a major shift, but it is still different in the individual regions of the country. The beginning of the communist regime in Romania marked also the start of the "socialization of agriculture", and baulks along with other structures of traditional agriculture have been seen as symbols of and outdated farming system, connected with private property, an barrier to the modern scientific socialist development of society, as they saw it. As a result a process of destruction was waged upon these traditional structures of extensive agriculture like baulks, wood-pastures (Sutcliffe *et al.*, 2014), wetlands (Teaci, 1983) etc. The process of agricultural collectivization has started in 1948 and ended in 1962, it had resulted in a fundamental shift within the structure of the rural communities, thus also affecting the traditional Romanian landscape. Some of its effects were the massive emigration to the city, "agricultural mechanization" and the "aging" and "feminisation" of rural work-force in agriculture (Surd, 2003).

After 1990, and the fall of the communist regime in Romania, most of the former owners had reclaimed their land, as result, baulks have naturally reappeared in the natural-cultural landscape of most regions, while in some places they have never disappeared completely (in more remote regions which were not so affected by collectivization). Even nowadays in the village of leud in Maramureş, although there was a partial collectivization, there is a traditional pre-collectivization type of management of these baulks. Meanwhile, in other regions, like Banat, the management had undergone some major mutations. In some regions the mechanization of the agriculture meant that bushes and shrubs are no longer removed from the baulks, and some of them have been completely covered by this type of vegetation (*Prunus spinosa*, *Crataegus monogyna*, *Rosa* sp.) (Fig. 7 a, b).





**Figure 7.** Bushes of *Salix sp.* (a) and *Prunus spinosa* (b) covering some baulks, after active local management ceased, in Banat, village Forotic, Romania.

In the ethnographical region of "Tinutul Pădurenilor" in Hunedoara county, Transylvania, the agro-terraces are several centuries old (some authors suggest that they have a pre-roman age), and they haven't been cultivated for forty or fifty years. The abandonment of these agro-terraces is due to the migration of work force to the highly industrialized urban centers of the county, but also because of the abandonment of wheat cultivation, since this is supplied from other regions. Nowadays those ancient agro-terraces are covered by grassland, bushes or even secondary forests (Coste and Arsene, 2003).

Baulks also differ in their length and width by region. We have measured a standard width of 40–45 cm, but some baulks had a width of almost two meters, in Banat. Those found in Maramureş had an even more considerable size, this is mainly because of the local geographical factors: these structures follow the backfall of the hills and mountains on which they are found. For this reason, the average width starts at 70 cm and height at 40 cm, but there are baulks which are 3.6 m wide and 1.6 m height.

## The ecological functions of baulks

Baulks, regardless of their various forms and local denominations, are a linear landscape elements, in which fragments of local flora and fauna can survive, enhancing their ecological, agro-ecological and aesthetical functions. They constitute a sanctuary for the flora and fauna that has been less affected by pesticides, they are literally and functionally binding corridors between the various types of ecosystems. In many cases these baulks work as reservoirs and seed banks supplying the local biodiversity.

Biodiversity is definitely higher on baulks, than on the neighbouring agricultural terrains, we can assume that species distribution is more balanced and that the presence of species considered rare is also higher.

Baulks give shelter to a higher number of predatory coleoptera (Carabidae) than any other form of crop fields (Raskin *et al.*, 1992), from where these are largely affected by pesticides. For many bird species these structures represent a niche where they can survive even after the traditional use of the terrains has been abandoned (*Perdix perdix, Coturnix coturnix, Crex crex, Lullula arborea, Lanius collurio, L. minor, Miliaria calandra, Oenanthe oenanthe*). Many mammalian species use them as shelter (hedgehog, deer, rabbits, foxes) or as a permanent habitats (various species of mice, hog – *Cricetus cricetus*). They are an important habitat for lizards as well.

Plants number is about 3–4 times higher than on the neighbouring agricultural terrains (Raskin *et al.*, 1992), the baulks which are located on chalky and skeletal soils have the highest species diversity.

Baulks increase the diversity of the natural-cultural landscape, especially those which are covered by various species of shrubs (*Prunus spinosa*, *Crataegus monogyna*, *Salix* sp. *Cornus* sp., *Rosa* sp.), but also old trees (Fig. 8). In these baulks we can find a

wide range of species, starting from predatory insects, parasites, spiders to insectivorous birds, which all contribute by their presence and activity to higher yields on the neighbouring cultivated terrains. Besides the useful flora and fauna for which baulks have a sheltering role, the ones with a more complex structure can house even rare or endangered species. For example such species of butterflies found in these structures are: *Iphiclides podalirius, Satyrium acaciae, S. ilicis, S. pruni, Eriogaster catax, E. lanestris* etc.

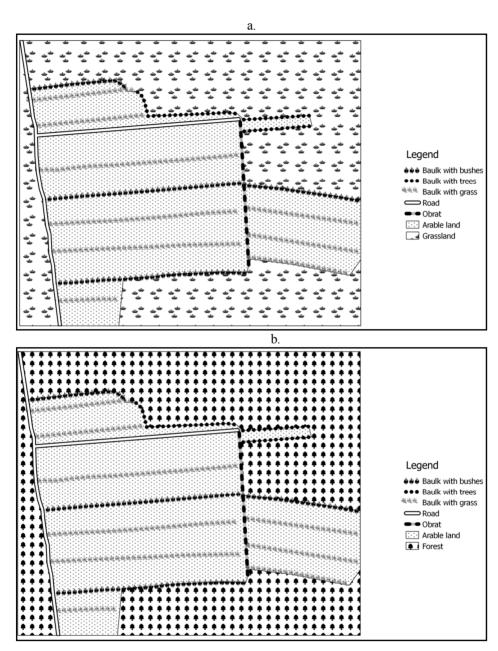


Figure 8. A baulk completely covered by bushes and shrubs in Ieud, Maramures.

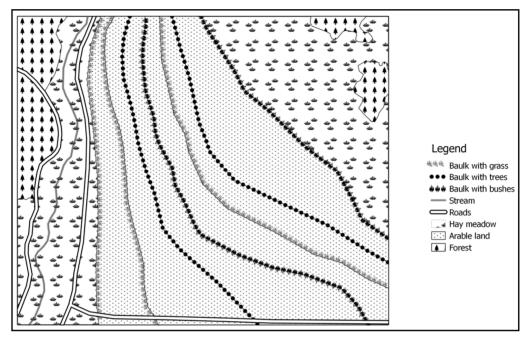
Within a monotonous agroecosystem, baulks can represent a complex network of areas with spontaneous vegetation, linking also neighbouring areas with natural or semi-natural vegetation, thus working as authentic ecological corridors that are enriching the patchiness of the landscape. By this, the flux of energy and information within the landscape is being facilitated (Fig. 9 a, b).

We can consider the aesthetical effect to be of meaningful importance as well, especially by its role in fragmenting the monotonous sight of crops before and after harvesting, but also in structuring various relief forms like hills or mountains (Fig. 10).

Although the sole and primary role of these structures for the local community was a strictly social – administrative one, still the locals have done some empirical observation upon the importance of them for some animals. Some locals have observed that, along with chemical fertilizers and mechanical agriculture which had the major role in the drastic reduction of the density of wild rabbits in their area, the destruction of baulks during the socialist agriculture was also of a major importance, since these worked a shelter in the way of intensive agriculture (unpubl. results).



**Figure 9.** A hypothetical schema illustrating how various types of baulks create a complex network of spontaneous vegetation within a crop field, in a lowland region. The network of baulks and obrat structures are linked directly to a grassland (a) and a forest (b).



**Figure 10**. A hypothetical schema illustrating how various types of baulks create a complex network of spontaneous vegetation on a terraced relief unit.

Some other locals have asserted the importance of these structures in the biology of some bird species, since some species use these as shelter, nesting place, or feeding habitat. These structures have been regarded of great importance also for micromammalians, although those are seen rather in a negative way (i.e. sheltering the pests, damaging the crops) (unpubl. results).

## **Conclusions**

Baulks are a structural element of the traditional natural-cultural landscapes, and a common trademark of traditional subsistence agriculture. Nowadays they are in decline or have completely disappeared in many regions throughout Romania due to shifts that have affected human society and especially farming practices.

In Romania we can find baulks under several different local names, admeasurements, and shapes, from the ones with no vegetation (simple furrows), through those covered only with grassland vegetation and to the ones with bushes, scrubs or even trees, depending on the geographical conditions and the management system of the local community.

We have distinguished two forms of baulks which are geographically determined. The first one includes baulks developed horizontally on the backfall of more pronounced relief units (hills or mountains), which practically are separating the cultivated terraces, while the second form is found on small hills and planes, separating agricultural terrains.

Their initial role, that is also the one which generated their appearance, is that of marking the border separating different properties, while their management was done according the needs of the local communities, but mainly of the two neighbours.

These structures are highly important in the conservation of local biodiversity, especially in agroecosystems. They constitute authentic shelters for the local fauna and flora against the agricultural practices from the neighbouring cultivated terrains, working as ecological corridors that are building a complex network of natural or seminatural vegetation, with beneficial effects even for some endangered or rare species.

Therefore, baulks have an extraordinary socio – cultural, ecological and scenic value. Their conservation and maintenance is an obligation of those who understand the uniqueness of and value of the natural – cultural landscape of Romania, in broader national and especially European context.

## Acknowledgements

Special thanks goes to Belu Sabin for designing the figures 9 and 10 and to Kinga Öllerer for the constructive comments and ideas regarding the paper.

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