ETHNOGEOBOTANICAL STUDIES IN GYIMES (GHIMEȘ) II: KNOWLEDGE OF HABITATS

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ABSTRACT
We performed our ethnobotanical studies in a part of Gyimes (Ghimeș) called Hidegség (Valea Rece), in the Eastern Carpathians of Romania, which is inhabited by a Hungarian-speaking ethnic group called the Csángó. We studied local people’s knowledge of the abiotic and biotic habitat requirements of wild plants, as well as the types of habitats they distinguish. Between 2005 and 2009 we collected information from 50 people.

Gyimes people know the habitat requirements of wild plants amazingly well. They describe in detail the habitat requirements of characteristic species, but it seems to us that this knowledge is often synthesized and verbalized for the first time on our question. The characterization of specialist species is similar irrespective of the person, and less so in the case of generalist species. We found species that people feel to be (abotic) habitat indicators (e.g. Nardus stricta, Urtica dioica, Carex spp. of wet habitats).

Gyimes people separate at least 130 types of habitat in the landscape, many of them have several names (see Appendix). The edaphic habitats (with usually extreme soil conditions) are named after the soil characteristics, while habitats with higher fertility are named after the dominant species or by the type of land use.

INTRODUCTION

In the case of fens and rocky habitats, the classification of Gyimes people is coarser than the scientific, while in the case of other habitats it is at nearly the same resolution or is even more detailed. They don’t use the concept of naturalness when discussing habitats.

24% of the names are used often in everyday conversations, 21% fairly often, while the others are used rarely (some names exist only as toponyms).

The comparison of habitat names from Gyergyó (derived from toponyms) and our data from Gyimes show that we can get only a distorted picture about folk vegetation knowledge through toponyms.

Contrary to previous ideas, we believe that there are no folk names which convey the meaning of botanical plant associations. Asking about a given habitat’s characteristic species, we got only 2.0 species names on average. If we ask “What kind of forests are in Gyimes?” they rarely (14%) mentioned vegetation names, but list characteristic tree species instead. The names formed from one species name and the word hay meadow refer rather to hay quality than to a plant association.

While habitat names might indeed indicate a recognition of plant associations, in our view these names refer just to the dominant species, not a typical composition of species.
In the Carpathian basin very few studies were made of folk knowledge of vegetation. By folk vegetation knowledge we mean the knowledge of “traditional” farming people (peasants and shepherds) of vegetation and habitats. People’s knowledge of vegetation is investigated by ethnogeobotany (Szabó in Péntek and Szabó 1980). Szabó T. Attila emphasizes: it is worth examining the vegetation and soil conditions simultaneously, because the peasant watches not only the vegetation, but the unity of vegetation and soil, bedrock and water supply. Unfortunately, the concept of ethnogeobotany has not become widespread in science, although its international introduction happened almost two decades ago (Szabó and Rab 1992, Rab 1993).

Péntek János and Szabó T. Attila have developed a detailed methodology for ethnobotanical and ethnogeobotanical research (Szabó and Péntek 1976, Péntek and Szabó 1985): data collection that is suitable for statistical analysis, parallel botanical and ethnobotanical collection, name collection combined with precise species identification, and parallel collection of Hungarian and Romanian names. Although their ethnobotanical investigations are exemplarily diverse, regarding vegetation they relied almost on a single source: on knowledge coded in geographical names (toponyms). Their main research questions focus on these: what is the role of particular plant species and of vegetation in geographical name-giving, and how toponyms are related to former phytogeographical state and changes that happened through time. They studied only tangentially local people’s living knowledge of vegetation, as well as their knowledge of plant habitat requirements (Péntek and Szabó 1980). Their work was continued by Rab János in the Gyergyó Basin (Rab 2001), who studied folk vegetation knowledge based also on geographical names.


In our article we sought answers to the following questions: (1) What do the Gyimes people know about wild plant species habitat requirements? (2) What kind of habitats do they distinguish in the landscape, what do they know about these, how do they characterize them, how do they name the units? We did not study toponyms in detail for two reasons: on the one hand we were interested in living ecological knowledge, on the other hand we tried to document ecological knowledge in considerable detail. Because of this we studied a small area, so we would only have been able to work with a relatively small number of geographical names.

We also collected data about what people from Gyimes know about vegetation dynamics, and how they use this knowledge in everyday farming. We would like to report about this in a future article.

MATERIALS AND METHODS

Gyimes is located in the Eastern Carpathians, in an environment determined by sandstone and sedimentary rocks (Dobos 1939). From a natural and ethnographic point of view it is a relatively homogenous area (Rab et al. 1981). Its inhabitants, the
Csángó people from Gyimes, primarily settled in the valley of the Tatros river and its tributaries. The climate is boreal-mountain, mean annual temperature is 4-6 °C. In the valleys the annual precipitation is 700-800 mm, in the mountains up to 1000-1200 mm (Ilyés 2007). The studied area belongs to the South-eastern Carpathian flora province, and within this to the Tarkő – Tázló – Csík flora district (Pálfalvi 1995). Its dominant natural vegetation a few hundred years ago was spruce-dominated forest, and to a lesser extent beech forests (Pulmonario rubrae-Fagetum). After the clearing of most forests, a typical clearcut-vegetation has developed (Senecioni sylvatici – Epilobietum angustifolii, Rubetum idaei). In the place of the cleared mixed beech forests xeromesophylic grasslands have developed, while in places with a better water supply, primarily former spruce forests, meadows with Festuca rubra have developed (Agrostio – Festucetum rubrae). As a result of moderate grazing Alchemilla spp. dominated Festuca-associations have developed (Festuco – Alchemilletum vulgaris). As a result of adverse changes Nardus stricta appeared, initially constituting grasslands with Festuca rubra (Hieracio pilosellae - Nardetum strictae), forming a transition between Festuca grasslands and almost monodominant Nardus grasslands (Viola declinatae - Nardetum strictae). The vegetation of springs and their surroundings is dominated by species of the Caricion davallianae alliance. We omit a detailed description of the vegetation because of lack of space: see Pálfalvi (1995, 2001), Kovács (2001, 2004), Nechita (2003) for the directly adjacent areas to the north and Rab (2001) for the areas to the west.

We made our data collections using participatory observations and structured interviews, as well as performing fieldwork with Gyimes people between 2005-2009 (approximately 260 days of field work). We collected data from a total of 50 persons and recorded 90 hours of intensive interviews with a voice recorder from 30 people, of which 20 are typewritten (a text of 855,000 characters). We produced a questionnaire containing 135 folk taxa, which contains not just questions referring to the knowledge of species discussed earlier, but questions about their habitats, too (“On what kind of place does it grow?”).

We collected at least 1-1.5 hour information from each person, but usually 3-4 hours, and with some of them we talked about plants and vegetation for several dozens of hours during the past years. During our conversations we collected around 2500 data regarding habitats.

For a better understanding of folk plant knowledge we illustrate our reasoning with quotations from local people. The quotations from different people are separated by semicolon, the thoughts of the interviewer and interviewee by a dash. For clarity, folk plant names were replaced in this article with Latin names (and in the case of woody species with English names), and habitat names were often translated into English. At the end of the quotations we marked the monograms of people, and their full names are listed in the Acknowledgements. For the meaning of the Gyimes plant names see Molnár and Babai (2010).

**RESULTS AND DISCUSSIONS**

**Knowledge of the habitat requirements of individual plant species**

To learn about the habitat requirements of individual species we asked the following question: “On what kind of places does [the beech] grow?”. In other words we tried to ask not where the species is (geographical location), but its habitat requirements (ecological requirements). (We would get location answers for the question “Where does the beech live?”). However, knowledge about habitat and location is very closely connected (see Péntek and Szabó 1985). The two concepts often are not separated from each other, so that information about species locations turns up even if the conversation has been about habitats for some time. In some cases, the
species location and the habitat are mentioned almost at the same time, especially in the case of species that occur in a characteristic habitat and in a single place (e.g. *Leontopodium alpinum*: “It is in the rocks of Bárány mountain” (J. Gy.)).

The answers about the habitat are usually correct, only 15% are wrong (Molnár and Babai 2008). Often they are short and general, for example “That is there too, in the forest”. (J. P.); “Between the grass, there, where they mow, there. In the grass.” (J. P.). In other cases the answers are short, but very exact: *Parnassia palustris* / “That is on semi-watery places.” (J. Gy.).

It is not uncommon that when defining habitat they emphasize that the species occurs in all potential habitats: “The *Juniperus communis* grows everywhere, so it is not sensitive to this.” (F. D.). The generalist species, as a concept, does not exist in the thinking of Gyimes people. At other times they suggest that the species has special needs, but where these exist, the species will be present: “It is not everywhere. But where it likes, there is a lot.” (T. S.).

Sometimes the answer is not instant, but it is born step by step (as an iteration), getting more specific. “Well the *Bunias orientalis* likes it near the water, on the stream bank. It usually grows in such watery places but not in spring-fens. Not in spring-fens, just in such watery places. It isn’t on the mountain slopes, just in the valley bottoms” (K. J.). It occurred to us that this iteration may suggest that the knowledge is synthesized and verbalized for the first time in answer to our question, and there is no “ready” expression or answer for the species habitat. However, this is difficult to prove. It is typical, that in some cases they characterize the species habitat with much detail and accuracy.

In the case of some species (e.g. *Onobrychis, Fragaria*), the characterization given by most members of the community is surprisingly similar. For example *Onobrychis viciifolia*: “That likes rather such rocky places. Sunlit, rocky places.” (P. E.).

In certain cases they describe the habitat by reference to other species. Those species, which have well-defined habitat requirements, become “ethnobotanical” indicators (Péntek and Szabó 1980, Rab 2001). Thus they are suitable for the characterization of a habitat, to specify other species’ habitat requirements, too. In this context *Nardus stricta* is the most important, as a typical representative of nutrient-poor places: “Tall grasses (imola) are everywhere across the meadows, pastures. Where there is no *Nardus*.” (P. K.). Some species can exclude each other too: “Where there is strawberry, there is raspberry, but where there is raspberry, strawberry is not really allowed to grow (in this case the habitat is described thus: it grows "where it is allowed").

Further typical examples for a species habitat: *Vaccinium myrtillus*: “Where the forest is dense, there it is too, but it doesn’t have a fruit. Because it needs the sunlight.” (T. E.); *Ribes alpinum*: “Well, this is on the high mountains, too, where the tree breaks down from the rock, then it rots there, it crashes down, on such devious places, and on the edge of a *Rubus idaeus* dominated clearing, there, too.” (P. K.), *Petasites spp.*: "Well along the ditch, but wait a minute! In a place where there is a wider space from the ditch, and it is rich in water. Places rich in water, and that makes
these huge leaves”. (P. K.). Lycopodium spp.: “Not exactly in the forest, but in the edges.”. (F. P.); “Well, the Taraxacum officinale is also here, where the soil is fatter, there it is. It is, where they are using more manure” (F. D.); Arctium spp.: “That is in abandoned gardens, or the place of buildings, or...” (Cs. P.).

We get a more complex picture about knowledge of habitat, if we analyze the answers received from 20 people for certain species. The featured examples present three different cases: (1) csigolya (bushy Salix spp.), is a folk taxon, which prefers a well-defined habitat, stream banks (porond) (a specialist species). Accordingly, the answers show a remarkably uniform picture (e.g. Along streams, Along waters, Along waters on stream banks, On stream banks). (2) In contrast, for Gentiana cruciata, although it is also well known, opinions about its habitat are divergent. This species of Gentiana is a more generalist species, and people highlight the habitat considered most characteristic by them. As a result, the responses are heterogeneous (e.g. On pastures, In summer pastures, On clear-cuts, On hay meadows, On southern slopes). (3) The spruce (Picea abies) is a true generalist species in this landscape, occurring almost everywhere. In its case almost nobody highlights a characteristic habitat, but they try to capture this generalist behavior with spoken phrases (e.g. In forests, Everywhere, Everywhere, On northern and southern slopes, Where there is a forest).

The habitat descriptions used by Gyimes people – based on the quantification of answers received from three people (Molnár and Babai 2008) - refer mainly to the soil (46%), to land use (27%) and to the formation (e.g. forest, grassland) (7%). Our opinion is that the perception of Gyimes and scientific habitat characterization is very similar, the differences are mostly that botanists more frequently refer to the vegetation type in which the species occurs, to the geographic area, where the species is typical, as well as to the naturalness of the vegetation (Molnár and Babai 2008).

Habitats differentiated by the Gyimes people

From the answers received on our question “On what kind of place does it grow?”, and from data collected during field work, emerges what kind of habitats Gyimes people differentiate in the surrounding landscape, what properties of these they know, and how they name them. We summarize our experience so far in the following. For a total list of habitats see Appendix.

**Forests:** The habitats found in forests are very characteristic. The names and knowledge related to these are remarkably rich. First of all, it is important, that in Gyimes two types of forest are differentiated: the coniferous forest dominated by spruce (fenyveserdő), and the beech forest dominated by Fagus sylvatica (bikkfás). In the past beech forests were more common, and the extent of forests richer in beech decreased rapidly because of its high-quality, versatile wood. Nowadays there are no big, continuous broadleaved forest patches in the area.

If we ask “What kind of forests are there in Gyimes?”, we get the following answers (68 answers are available): “Over here beech, and silver birch (Betula pendula), and then white fir (Abies alba), and spruce, and then... ” (K. B.); “Well the most common is the spruce, and there are valley sides where there is a lot of white fir.” (Cs. P.); “Well, the most common is the spruce forest, beech, beech-forest, Larix decidua, spruce. Then, there is cseréserdő (Alnus forest), down here in the valley bottoms. Alnus incana, I think that's the Alnus. But the most common are the spruce forest and beech forest. There are two types of spruce-forest: there is the white-fir.” (T. S.); Spruce, white fir, Scotch pine, beech, Salix caprea, Acer pseudoplatanus, Ulmus, Fraxinus. (...) And then birch. (T. E.). It can be seen that although we asked about forest types and not tree species, they rarely mention vegetation (in 9 cases, 14%), mostly they enumerate the characteristic tree species (a total of 57 mentions), but often
quite a lot of species, such subdominant species that do not form forests. The question is whether we face the phenomenon emphasized by Pénytek and Szabó (1980) and Rab (2001): the toponyms containing plant names often do not get the Hungarian suffix that means “a place with” [beech]: instead the name is often only Beech.

A characteristic habitat distinguished by Gyimes people is “among the forest”. This is a general expression for the habitat of forest species. Those forest species, which according to our terminology grow “in the forest”, in the Gyimes terminology grows “among the forest” (the expression “in the forest” usually(!) does not mean a habitat, but a person being in the forest). Also typical expressions are the “under the trees”, “under the spruce trees”, too. Occasionally they highlight the shady nature of the forest habitat. In addition to forest type, they separate dense (gyakor) and sparse (gyéres) forest. The second type is primarily formed as a result of logging and grazing.

They distinguish between different stages of succession after a clearcut, too. The area left after a clearcut is the vágtér. Its microhabitats are areas with twigs and trunks (csapos, gyüttés, csutakos). The clearcuts overgrown by bushes, difficult to walk through are called veszes (meaning: a dangerous place). They distinguish the vész with raspberry and strawberry (epervész, málnavész). The names of bushy places refer to dominant species or density of the young forest (rakottvás, apróbojtos, bezeny). Gyimes people differentiate two major types of spruce tree: the bojt and the szelha tree (the former is branched to the ground, it grows in more open places, the latter is long, branchless, the older trees are suitable as shingle). The growing forest is called forest with bojt or young forest, later karós forest, then in older age borona forest (26-30 cm trunk diameter; “The wood is not wasted” during the constructions, the right thickness trunks can be exploited), and finally becomes the mature forest (szelhás erdő, szálas erdő). Here there are trees of 70-100 cm diameter, the forest gives wood for lumber. Its characteristic is that “the bottom is not bushy, you can see a long way through it.” (V. K.). Finally we can differentiate the big forest (nagy erdő: big forest means a large forest with old trees: “Human hand does not interfere with it.” (V. K.).

The forest’s edge (erdőszél) is important, as an “independent” habitat. Gyimes people differentiate species that are linked to the edge of the forest. In addition, there is another habitat which offers completely similar habitat conditions to forest edge. This is the narrow band formed along fences (kert mellett), not affected by farming activity. Gyimes people have more names for bushy places, too (magyarós, fügés, gyüngyeményes, bojzás), although the latter is just a toponym nowadays.

Another type of characteristic and important habitat are mossy places (bundzsákos), which are species-poor habitats, covered by a thick moss-carpet, characteristic habitats of Vaccinium and Lycopodium species (occurs in forests, meadows, near fences).

Grasslands: The Gyimes people generally describe grasslands with the following terms: between grasses (fűközt), open, treeless place (puszta hely), grass (pást), but the most important is the differentiation of meadows (kaszhőlő) and pastures (regő, legelő). Some of the pastures are on the hillsides near the village, in-bye or inner pastures (bennvaló legelő), the others are more distant from the village, in the mountains (hegyi legelő). The differences in their vegetation also justifies this differentiation. The name of pastures grazed in the summer is “nyáraló” (a place for the summer). By the end of the summer the quantity of food decreases, then the stock is moved to a meadow which was only mowed once, called “őszlő” (place for the autumn), where the cattle graze the aftermath (csuga).

On pastures that are not properly cleaned of saplings, the overgrowth of bush is fast, and the area is covered by mainly Juniperus communis and Rosa canina agg. (borsikás, hecsellis). On the more
abandoned parts dense, young spruce forest renews (apróbojtos, bezeny). Anthills form specific habitats (hangyáboly), and are sometimes moved with shovel to the property’s border as a kind of boundary marker (more frequently anthills are spread over the pasture).

Meadows are also divided in two groups: in-bye meadows (i.e. near the village, bennvaló kaszáló), and out-bye or mountain meadows (kinnvaló or hegyi kaszáló). Because they manure and mow twice the inner meadows, their vegetation differs significantly from the mountain meadows. Gyimes people say, that what is on the in-bye meadows is found on the mountain meadows, too, but all that is on the mountain meadows is not found on the in-bye meadows. One of the reasons is the manuring of in-bye meadows, which results in monocot proliferation, and the regression of dicots.

Gyimes people know in detail the grass quality of each meadow parcel. However, it was difficult to decide how widespread are habitat names formed by a species name and the word “meadow” (e.g. meadow with Salvia pratensis, meadow with tall grasses (imola), or Trifolium spp.). According to our knowledge, these are not habitat names, rather adjectival structures. At the same time they characterize the quality of hay with the species’ name which increase or decrease it (e.g. Laserpitium latifolium, Helleborus purpurascens, Leucanthemum vulgare, Alchemilla spp., without creating a habitat name. Rab (2001) also found hay quality indicators in Gyergyó (e.g. Carlina acaulis, Equisetum spp., Rhinanthus spp., tall grasses, Laserpitium, Carex spp., Nardus).

There are areas in the landscape that are not practical for meadow- and pasture farming, nor for plant cultivation. Such are the organic waste storage sites, where tree branches are collected after clearcut, or waste produced in other farming activity. Often the otherwise unused areas near fences become such dirty places (mocskos hely). In contrast, ugly places (csíf hely) are steep, rocky, almost impassable hillsides, which also are not suitable for farming, while the wild places (vad hely) are wildernesses, hardly accessible areas, narrow, steep valley-heads which are refuges for big game (bears, wolves). Ugly and dirty places often have tall herb vegetation. Depending on nutrient content and disturbance of the soil they are near-natural and rich in species, or degraded, dominated by Urtica.

Péntek and Szabó (1980), and Rab (2001) emphasise, that the geographical names related to grasslands are significantly more infrequent than those related to forests, and pertain mostly to more extreme site conditions (e.g. wet or acidic grassland types). We did not detect this imbalance in the living knowledge of vegetation.

Edaphic habitats: A number of habitats are determined by soil properties (edaphic characteristics). One of the most important pairs is the fat place (kövér hely) and thin place (sovány hely). “Fat” refers to manured, nutrient-rich soils, while “thin” refers to areas which are not manured regularly, and are quite poor in nutrients, and this is reflected in the vegetation. The most extreme thin places are the szörcsés (grasslands dominated by Nardus stricta), while the fattest places are typically in the surroundings of buildings connected to livestock, around stables (eszténás hely, lősósdis, csihányos – the latter two with Rumex and Urtica). From the structure of valleys in Gyimes, the northern and southern slopes are sharply distinguished (verőjény vs. észkos).

A difficult group to grasp is the “strong” places (erős helyek). This is a general category which includes any habitat, where the soil is not under the influence of water, is not malleable, is not soft, but hard.

Low quality grasslands are typical of steep slopes, after clearing the forest, under accelerated erosion processes, where the bedrock’s outcrop is continuous due to erosion (kopár (bare), köves (stony), törmelékes (with scree), kavicsos (gravelly). The suddenly very steep, often stony hillsides are called “mart, martos”, while steep streambanks are called “leszakadás.
(cliff), süllyedés (sinkage), szakadék (fall), suvadás (slide)

In Gyimes rocky vegetation is found only in a few places. The most characteristic species classified here: Leontopodium alpinum does not live in Hidegség, the closest place it occurs is the Bárány-mountain’s high hills. Gyimes people differentiate more variations of rocky habitats based on the shape of rocks and quantity of soil between the rocks (kőszikládák, kőredek, kőpócek).

**Wet habitats:** An important group is wet habitats. The vegetation of spring-fens and of wet habitats along the streams are well-known, and the characterization of the different habitats shows a detailed and rich knowledge. Spring fens (Caricion davallianae communities; selymékes, sátés, sásos, selykés, mocsaras, surlós, békalábás) are noticed by farmers through mowing and grazing. These places in some cases cover larger areas of meadows, giving a lower quality hay, so the people from Gyimes try to drain the excess water with small ditches, thus decreasing their extent.

Within selymékes places in the loose sense, two types of habitat seem to be distinguished: marshy places (mocsaras hely) and selymékes places in the strict sense. Between them there is a slight difference, that is not recognized by everybody, but even so it seems that there are some differences between the two. Mostly they mention the difference in soil type. Marshy places have deeper soil, selymék in the strict sense is easier to walk through. One species is characteristic of the marshy places, but rarer in the selymékes places: Caltha palustris.

Other wet places are the watercourses (vízfolyások), streams (patakok) and warm-water springs (taplocák). Along the streams there are places with particular trees present (ficfás, cserfás, és csigolyás), near larger streams stream banks (porond) are formed, while along small marshy streams habitats with Petasites and Tussilago grow (keptelános, podbállapis).

**Habitats closely linked to the settlement:** In settlements the following habitats are distinguished. Related to roads, e.g. along the roads (utak mellett), trampled area (tapodott hely); related to ploughland cultivation, e.g. arable land (szántóföld), potato field (pityóka föld), abandoned arable land (felhagyott szántó); at the houses, e.g. around the houses (házak körül), in the garden (udvaron).

**Habitat mosaics as “habitats”:** There are habitat names used by Gyimes people that refer to typical habitat mosaics. These are for example: in the inhabited part of the valleys (lok helyen), in lower regions (alvidéken), in out-bye places (kinnvaló helyeken), high up in the mountains (magas hegyeken).

**Habitats named for a plant species:** We heard a number of habitat names in Gyimes that come from plant names. The names mostly suggest that the species is frequent there [e.g. “Where there is a lot of beech, what is the name for it?” / “Well, beech-forest, beechy.” (F. D.); “What is the name of the place where a lot of hazel grows?” / “Well, possibly it is called mogyorós (hazely), because there is a little valley here called Mogyorós-stream, Mogyorós-valley.” (F. D.)].

The most frequently used names formed of plant names are the spruce forest (fenyveserdő), and the beech forest (bükkös, bükkfás), and out of grasslands the bartacines (Onobrychis) and the szörcsés, szőrfüves (Nardus). The reason is clearly the economic relevance (e.g. the characteristic forest types, and the deliberately oversown good-quality meadows, or which belong to the worst pastures and meadows).

Further, but less frequently used names, e. g. the szanikás (Alchemilla spp.), which refers to quality of grasslands, where the dew-drops that appear on the leaf in the morning ensure the sheep’s drinking-water needs (“they get water from the chalice of Alchemilla”); the following names indicate weedy places: ördögbordás (Pteridium), borsikás (Juniperus), zableveles (Brachypodium), (kecske) kapros (Laserpitium), (szamár) csípkés (Cirsium-
Carduus), and better quality grass is the vadlóherés (Trifolium), and worst the sátés, sásos (Carex spp). Planted forest is the lúcsos, lúcsfás (Pinus sylvestris), a characteristic version of the stream bank is the csigolyás (bushy Salix spp.), a fruity place is the kokojzás (Vaccinium).

Rarely used names are the following: surlós, békalábas, keptelános, menisorás, rakottyás, nyírfás, nyírfaerdő, nyires, nyárfás, cserfás, cserés, fűzes, fícás, magyarós, körüsos, körusfás, fehérkokojzás, takonykokojzás, hecsellis, vadlóherés kaszáló, imolás kaszáló, ászpás, lósósdis, podbállapis, csihányos.

In the case of habitat names it is not rare that they are known as toponyms, but it is important to emphasize that these exist in the Gyimes dialect as habitat names, too. However, the names Tiszás, Jähoros, Kőrössös, Fügés, Bojzsí, Szalamás, Hagymás, Danciás and Nádas (which refer to the presence of a particular plant) live only as geographical names – or at least we did not find them as a living habitat name. Perhaps we did not find more names as geographical names (Molnár and Babai 2008). The classification of wetlands and rocky habitats in Gyimes is less detailed than the scientific, while that of other habitats is of similar resolution or even finer.

The habitat names in Gyimes in the light of vegetation-based toponyms in Gyergyó

The detailed work of Rab (2001) gives us the opportunity to compare habitat names in the two landscapes (Gyergyó in 20 km west of Gyimes). The names of the main types are very similar (e.g. forest, meadow, pasture, spruce forest, beech forest, grassland). The names related to forest clearing show a lot of similarities, too, because of the similar landscape and land use (e.g. málnás, írtás). The geographical names formed from arboreal species’ names are very similar, too (but from Gyergyó the csigolyás, borsikás are missing), while the herbaceous plant names are less similar (in Gyergyó there is no bartacines, ördögbordás, szőrcsés, but there is no name in Gyergyó, that does not occur in Gyimes). There are habitat names that because of their variable and uncharacteristic appearance were not preserved as geographical names, so they are missing from the collection of Gyergyó (e.g. tömör erdő, apróbojtos). Other habitats are too restricted to form toponyms (e.g. on road verges, a trampled area, on ant hills), others refer to landscape mosaics whose scale is too large (high in the mountains). There are habitats which occur in only one of the two landscapes, so obviously their name, too, is restricted. Sometimes, the same name has different meanings in the two landscapes, e.g. the cserés in Gyergyó is the oak-forest, in Gyimes it is the alder-forest; the selymék in Gyergyó is hydrophytic vegetation, in Gyimes it is the spring fen; the csetenes in Gyergyó is an unmown area, in Gyimes it is the young spruce-forest. We did not find in Gyimes some names from Gyergyó (e.g. tanorok, rét, rez, láz). In Gyimes the silver fir does not feature in a habitat name (in Gyergyó it does: fejér fenyés). Names related to the characteristics of the soil are not included in Rab (2001), so their comparison is not possible. Overall we can say, that although a lot of habitat names are fixed as toponyms, many are missing, so we
can only get a distorted picture of folk vegetation knowledge through toponyms.

**Folk association names**

As we have seen, the Csángó people know the habitat requirements of plants very well. However, when the reverse situation arises in the course of a conversation, and they have to characterize a habitat type by listing its species, they rarely enumerate more species, moreover they often give evasive answers (“Everything grows there”). The following example is instructive: “What kind of herbs grow in stream banks?”/“In stream banks? God knows. In the stream bank, I don’t know. Grass crawls there too.”/“Where does the bushy Salix spp. like?”/“The stream bank places. The bushy Salix spp. (c cigolya) grows there.” (A. B.). So, the knowledge becomes conscious much better in one direction.

In a total of 68 cases we asked about a particular habitat’s list of characteristic species. The answers contained only 2.0 species names on average (even though we interviewed knowledgeable people!). 22% of the answers did not contain specific species name (“all kinds” or “I don’t know”), 22% contained just a single species, and in just 36% cases contained at least three (but not more than seven species). 6-7 species were listed by people with the highest knowledge. The largest number of species were mentioned on arable lands (3.7 species, excluding the cultivated ones), and on the pastures and meadows (3.0 species), less on stream banks (2.1 species), in fens (2.1 species), in the forests (1.9 species), in forest edges, along the fences, in bushy places (1.6 species), even less in the clearcuts (1.2 species) and in the mossy places (0.8 species).

In the case of toponyms containing plant names Rab (2001) considers that the Gyergyó people recognize plant associations in the landscape, and they name these generally based on the dominant species. He writes: “We clearly consider folk association names the “kokojzás” (vegetation with Vaccinium), at least on and above the tree line. A specific situation evolved: for the naming of the association people and scientific literature considered the same species the most suitable, independently from each other and using different names.” In the case of clearcuts denominated from Chamaenerion angustifolia he notes: “We observe here, too, that the approach of traditional and scientific naming totally overlap, although they developed independently.” Péntek and Szabó (1985) indicate likewise: “the geographical names marking the plant associations, association groups and ecological units deserve absolute attention.” Later: “folk denomination – though it is not precisely defined – preceded by centuries the scientific delimitation.”

While indeed, there are geographical names and habitat names that might indicate recognition of plant associations (e.g. bükkös (Fagus), sátés (Carex), kokojzás (Vaccinium)), our opinion is that in fact only the dominant species name resides behind the name, and no knowledge about further species associated with the dominant species or the habitat is implied, even though in the reverse logical direction the knowledge contains a significant proportion of the co-occurring species. In our opinion Gyimes people (like the shepherds of the Hortobágy salt steppe in Hungary, Molnár and Hoffmann unpublished) do not understand vegetation as a mosaic of habitats where one habitat type has a repetitive (thus stable) species composition. In the case of a few species we can observe the recognition about coexistence, but this is not enough to be considered as a recognition of associations.

During the questions referring to the species list above, it was obvious that the questions asked by us required a completely new synthesis from Gyimes people. The answer was not ready in their heads. We note, that as botanists, when we have to find a plant species in the landscape (e.g. for a stick or medicinal use), we usually think: what kind of habitat does that species like, we look for locations of this habitat, assuming that the species certainly occurs there. But we are very often wrong. Gyimes
people do not look for species with this algorithm, but they remember geographical locations.

In the following we list a few characteristic examples of the answers given to our questions about species lists. Stream banks: “Everything whose seeds the wind brings grows there... Mentha longifolia, rather like that.” (Cs. P.); “Well, God knows. Well, there grows a lot, but often my mind isn’t in its place.(...) There is this bushy Salix spp., and then there is this other, this... Myricaria germanica on the stream banks.” (T. E.); “Tussilago farfara.” (J. P.). In fens: “Well, Carex spp. grows there, and some more grasses. Such wild grasses.” (J. Gy.); “Equisetum, and then Carex. There is in the water that Callitriche.” (J. Gy.). In clearcuts: “There doesn’t grow anything else. Fragaria and a few pieces of grass” (J. Gy.); “Well let’s say that it’s mixed, but of use there is the Vaccinium...” (T. A); “Well, there grow all kinds of plant, understand?” (K. B.). In forest: “Oxalis, that grows in the forest, Campanula, Campanula, others not much.” (T. I.). On pastures: “Now, so starting from Fragaria flowers, there is the Fragaria viridis, the other strawberry (Fragaria vesca), then you have this Pteridium aquilinum, the Čírsum, there is this Crataegus monogyne, there is this other, this Rosa canina, and this small spruce hugely likes it too.” (T. E.); “In Nardus places grow the Vaccinium myrtillus, and the Vaccinium vitis-idaea. Red... minisora, or how do they say” (T. I.). For other examples in Hungarian see Babai and Molnár (2009).

CONCLUDING THOUGHTS

As we have seen, the Gyimes people see the habitat requirements of wild plants very precisely and in detail, and distinguish a wide variety of habitats in the surrounding landscape. However, further research is needed to find out, how much they know about the dynamic changes of the vegetation, the historical changes of the landscape, and how they use this knowledge in a conscious transformation of the vegetation. This knowledge will be crucial in planning nature conservation management in this area (cf. Molnár et al. 2008, Berkes et al. 2000, Huntingdon 2000, Munkhdalai et al. 2007).

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APPENDIX

Habitat names (and their synonyms) used in Gyimes by Csángó people
(many more synonyms in Babai and Molnár 2009)
Csángó terms - word-for-word translation / approximate English equivalent
(?! means: no literal translation of the word can be given)

Forests and related habitat types
Erdő - Forest/ Forest
Erdőközt – Among forest / In the forest
Fenyőerdő, fenyveserdő – Coniferous forest / Spruce forest
Bükkö, bükkfás, bikkfás, bükkerdő, bükkfaerdő – Beechy, With beech trees, Beech forest / Beech forest
Leveles erdő – Leafy forest / Broad-leaved forest
### Erdőszél - Forest edge / Forest edge
- Bojtos - Tassels / **Very sparse spruce stand**
- Fiatal erdő - Young forest / **Young spruce forest (ca. 10 year old)**
- Karós erdő - Staked forest / **Forest with stake sized trees**
- Boronaerdő – Beam forest / **Forest with trees good for house building**
- Szelhás (szerhás) erdő, szálás erdő - ? / **Forest with straight (and older) trees**
- Kinőtt erdő - Adult forest / **Old forest (above 70-100 years)**
- Nagy erdő - Large forest / **Old and large forest**
- Gyéres erdő - Sparse forest / **Thinly-grown or partly cleared forest**
- Tömör (gyakor) erdő - Dense forest / **Dense forest**
- Lücsos, lücsfás - Having pines / **An area with Pinus sylvestris**
- Tiszás - Having yew / **An area with Taxus**
- Nyírfás, nyírfaerdő, nyíres - Having birch, Birch forest, Birchy / **An area with Betula**
- Nyírfás - Having poplar / **An area with Populus**
- Jáhoro - Having maple / **An area with Acer**
- Körösös - Having ash / **An area with Fraxinus**
- Borsikás - Having juniper / **An area with Juniperus**
- Magyaros - Having hazel / **An area with Corylus**
- Kórusos, kórusfás - Having rowan / **An area having Sorbus aucuparia**
- Fügés - Having currants / **An area with Ribes**
- Bojzás - Having elder / **An area with Sambucus**
- Hescellis - Having roses / **An area with Rosa**
- Ficfák tövénél – At base of willow / **At the base of Salix trees**
- Árnyékos hely – Shaded area / **Shaded area**
- Cserkés hely - ?? / **Area with thick layer of spruce leaves**

### Clear-cut areas and related habitats
- Aszalás - Desiccated / **An area where spruce tress were ring-barked**
- Irtás - Clearing / **Cleared area, often turned into a grassland**
- Égés, égetés - Burning / **A burnt area, usually recovered forest**
- Vágór - Cut area / **Clear-cut area**
- Vész, veszes - Dangerous / **Clear-cut area (usually with twigs all over)**
- Mánás, málnás, mánavész, málnavész - Having *raspberries*, Dangerous with raspberries / **An area with Rubus idaeus on clear-cuts**
- Epervész, eper-vágór – Dangerous with Fragaria, **Fragaria cut area / An area with Fragaria on clear-cuts**
- Rakottyás - Having *Salix caprea* / **An area with Salix caprea**
- Apróbojtos - Young tassels / **Young spruce forest (height less than 1 m)**
- Bezsény, bezsényes erdő - ? / **Dense, young spruce forest**
- Cseplesz – Something small? / **Less dense, a bit older (?) spruce forest than 'bezseny'**
- Bokros - Bushy / **An area covered with bushes, often only by one species**
- Bozót - Thicket, scrub / **Bushy area, but more diverse, often also small trees**
- Csapos – With twigs / **Area where twigs are humped on a clear-cut**
- Csusakos, csukak - With stumps / **A cleared area with stumps**
- Gyütés – Collection / **Area where twigs were collected and often burnt**
- Fák mellett (alatt) – At (under) trees / **Under a tree**

### Grasslands and related habitat types
- Mező - ? / **Grassland in open, relatively flat landscape**
- Füvek közt – Among grasses / **In grasslands**
- Pusztá - Bare / **Mountain top without forests, often not inhabited or large opening in a forest**
Lik - Hole / A smaller opening in a forest
Pázsit, pázsint, pást, pástos hely - Lawn / Area covered with grasses, often on a layer of gravel
Kaszlóló - Hay meadow / Hay meadow
Bennvaló kaszlóló – In-bye hay meadow / Meadow close to settlement, regularly fertilized, mown
Kűnvaló kaszlóló – Out-bye hay meadow / Meadow far from settlements, not fertilized, mown
Hegyi kaszlóló – Hay meadow in the mountains / Meadow in the mountains, not fertilized, mown
Erdőközeli, erdőközötti kaszlóló – Hay meadow among forests / Meadows among forests
Imolás kaszlóló - Hay meadow with tall grasses / Fertilized hay meadow with the dominance of
Trisetum and other tall grasses
Vadlóherés (kaszlóló) - Hay meadow with Trifolium / Hay meadow with wild Trifolium at higher
elevation
Báránylábas kaszlóló – Hay meadow with Salvia pratensis / Hay meadow with a dominance of
Salvia pratensis at low elevation
Bartacines - Having Onobrychis / An area with oversown Onobrychis
Zableveles - Having oat-leaved species / An area with grasses like Brachypodium, Dactylis,
Festuca pratensis
Kecskekapos, kapros - Having Laserpitium / An area with Laserpitium
Reglő, leglő - Pasture / Pasture
Nyáraló - To spend the summer / Pasture used in summer
Őszlő - To spend the autumn / Meadow where the aftermath is grazed in the autumn
Csípkés, szamárcsipkés - Having thistles / An area with Carduus/Cirsium
Szőrűs, szőrtűves - Having Nardus / Nardus grassland
Perzselés - Singeing / A singed area, usually Nardus or Juniperus is singed
Zsanikás - Having Alchemilla / An area with Alchemilla
Ördögbordás - Having bracken / An area with Pteridium
Ászpás - Having Veratrum / An area with Veratrum
Podbállapis - Having Tussilago / An area with Tussilago
Eszenási hely - Place with a mountain farm / A nutrient rich area around the mountain farms, on
the site of sheep pens
Lősösdis - Having Rumex / An area with Rumex
Kokojzás - Having Vaccinium / An area with Vaccinium spp.
Menisorás - Having cowberries / An area with Vaccinium vitis-idaea
Fehérkokojzás, takonykokojzás - Having bogberries / An area with Vaccinium uliginosum
Bundzsákos - ? / Mossy
Mohos, muhos - Having Sphagnum / Area covered with Sphagnum
Szalamás - Having wild garlic / An area with Allium ursinum
Hagymás - Having Allium / An area with Allium
Danciás - Having Gentiana lutea / An area with Gentiana lutea
Hangyaboly – Ant hill / Ant hills often with Thymus

Habitats in areas not used for grazing, mowing etc.
Kert mellett - Along a fence / Along a fence
Vad hely - Wild place / Where vegetation is not controlled by humans (usually a forest in narrow
valleys)
Gyöngyemény(és) - Having Spiraea / An area with Spiraea
Csúf hely - Ugly place / Area not mown or grazed, stony or with twigs, or steep, difficult to walk
through
**Habitats with extreme soil conditions**

- Mocskos hely - Dirty place / Area full of rubbish (communal and/or twigs), e.g. along fences, on stream banks
- Nem tapodott hely – Area not trampled / Area not trampled

**Wetlands and other related types**

- Nagy víz, porond vize - Big water, water of the stream banks / Larger streams
- Patak - Creek / Smaller stream
- Patak mente (vizek mellett) - Along creeks (At the waters) / Along streams
- Porond – Stream banks / Young and old stream banks with gravel
- Cserfás, cserés – Having alder / An area with Alnus
- Füzes, ficfás - Having willow / An area with Salix trees
- Csíglyás - Having willow / An area with bushy Salix species
- Forró - Spring / Spring
- Taploca – Warm spring water / Spring and its creek, that never freezes
- Tó, állóvíz – Lake, standing water / Lakes
- Forráskos - Springs / Springs
- Sátés, sásos - Having sedges / Fens with sedge
- Selymék, selymékés hely, selyke hely - A sinking area / Fens around springs
- Mocsaras hely – Marshy place / Muddy areas around springs or along streams
- Surlós, békalábas – Having Equisetum / A wet area with Equisetum
- Keptelános - Having Petasites / An area with Petasites
- Nádas - Having reed / A marshy area with Typha(!)

**Habitat types of settlements**

- Épületek mellett - Close to houses / Close to houses
- Udvar - Garden / Garden
- Szántóföld, pityőkaföld - Arable field, potato field / Arable field, potato field
- Utak mellett – Along roads / On road verges
- Árkok mellett – Along ditches / Along ditches
- Muzsda - ? / Arable terrace front

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Felhagyott szántó – Abandoned arable field / Abandoned arable field
Csihányos - Having nettles / An area with Urtica

**Habitat mosaic as habitats**
Lok helyen – ? / Inhabited areas in the valleys
Alvidéken – In low regions / Areas in the valleys, at lower elevation
Kinnvaló hely – Out-bye place / High mountain grasslands and forests
Magasan, fenn a hegycen – High up in the mountains / High mountain grasslands and forests
Hegyi gödrök – Mountain depressions / Large depressions in the mountains covered with grasslands and surrounded by forests