

EFFECTS OF TRANSHUMANCE ON THE SOUTHERN SLOPE OF THE FAGARAS MOUNTAINS

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Abstract: Shepherding has been one of the main occupations of the Romanian people, which played an important part in its economic, social and historical life. This activity has been carried on since long ago throughout the Fagaras Mts., in as much as they offer in summertime favorable conditions, which are mirrored by the presence of many sheep herds on the alpine and sub-alpine meadows. Every year, in spring, the sheep leave the settlements that border the mountains or those lying in the depressions and climb up to the mountain meadows. This transhumance (seasonal migration of herds from lower to upper areas and vice versa) is caused by the lack of enough pastures to support large numbers of sheep. The yearly travel of herds has encouraged the intensification of land degradation processes (rain-wash, gully erosion and torrentiality), while overgrazing led to a lessening of vegetal biodiversity.

Key words: transhumance, shepherding, sheepfold, Fagaras Mts.

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1. General features

The southern slope of the Fagaras Massif falls into the category of the *summery* mountains (fig.1) (Popp, 1933), due to its southern aspect, sunny surfaces and the presence of long and gently inclined summits, rounded or even flat, covered by rich and nourishing grasslands. Toponymy certifies the human presence in this area ever since the Middle Ages, as well as its continuity up to the present times (Constantinescu-Mircesti, 1976; Alexandrescu et al, 1994). The arrival of the *ungureni*¹ from the Marginimea Sibiului (the surrounding area of the Sibiu City) after 1700 – 1750 marked the acme of shepherding, which lasted until 1900, when wood harvesting in the Arges catchment intensified. The landscape of the study area shows the following features:

- Great extension of the leveled surfaces covered by alpine and sub-alpine meadows, and especially of the levels Rau Ses I and II.

¹ So were called the Romanians living in Transsylvania at the time when this Romanian historical province was part of the Austro-Hungarian Empire

- High density of springs on the edge of the huge talus slopes (20-25 springs/km²).
- High density of paths and cart roads on the gently inclined slopes (3-4/km²).
- An upper tree line of spruce fir forest ranging from 1400 m, in the vicinity of the sheepfolds (anthropogenic limit), to 1800-1850 m (climatic limit).
- A high density of sheepfolds (2-3/km²) with optimal development at 1700 m, which is 300 m higher than on the northern, shady slope. According to Mara Popp (1933), these sheepfolds lie at various elevations, between 1000 and 1900 m, with the highest concentration near the timberline (fig 2).

2. Sheepfold typology

Typologically, the southern slope of the Fagaras Mts. falls into the type of agricultural shepherding with the sheepfold in the mountains (Vuia, 1980).

As a traditional activity, shepherding continued to exist in the area of the Fagaras Mts. even after 1900, although the number of animals had dropped sharply. Settlements such as Arefu, Capataneni, Turburea, Corbeni, Poienari, Bradet and Gales, which acted as traditional pastoral centers, have managed to keep this profile up to the present despite the fact that they have been strongly affected by the more recent activities: wood harvesting, hydropower constructions, transportation and tourism.

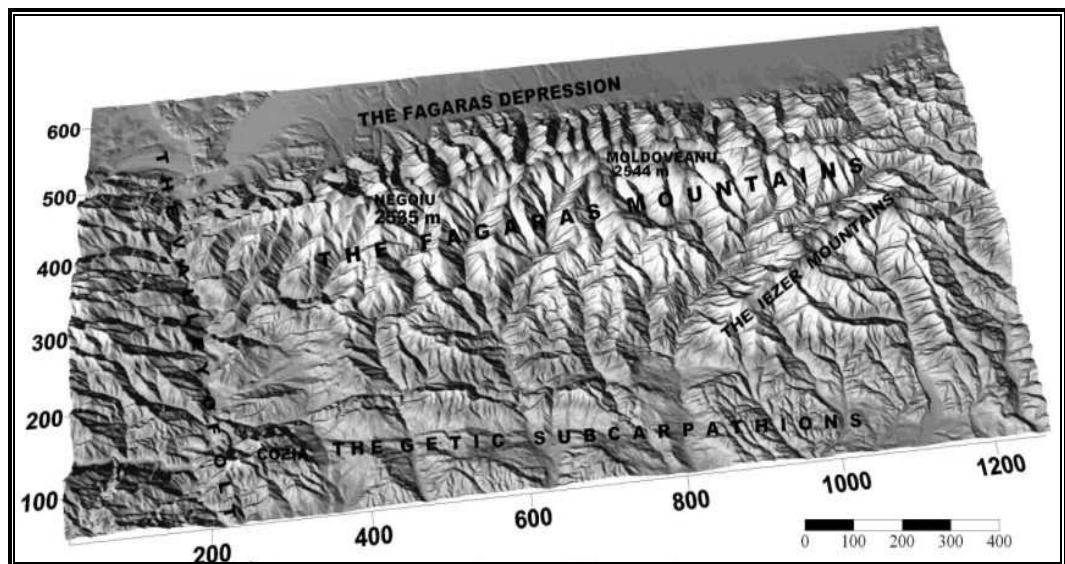


Figure 1. The geographic position of Fagaras Mts

The decrease of livestock has eventually had a positive effect on the mountain landscape, inasmuch as abusive practices have been largely eliminated.

Today, from multiple reasons, shepherding is in regress. The expropriation of big estates and the appropriation of land to the peasants in villages situated far from their native lands, which happened between 1950 and 1960, seriously impacted the shepherding. Transhumance was the most affected because following the collectivization undertaken after 1950, the pastures shrank and the shepherds began to abandon this activity, which made the old associations divide. The great sheep owners have disappeared, especially after 1990, and those who continue the tradition do not hold more than 50 or 60 sheep. Usually, the shepherds graze their sheep in the mountains in summer (3-4 months/yr) and come back in the lowland villages in winter.

Even though the shepherding has initially appeared on the northern slope of the Fagaras Mts., it extended rapidly on the southern slope, where the summits were gentler and the pastures more extensive. The shepherds in this area were known as *ungureni* and *pamanteni*, a fact certified by the double settlements lying along the Topolog, the Arges and the Valsan (Capatanenii Ungureni and Capatanenii Pamanteni, Oesti Ungureni and Oesti Pamanteni, Albesti Ungureni and Albesti Pamanteni, etc.). The *ungureni* were the shepherds who had come here from the surrounding areas of the Sibiu City and settled down on the southern slope of the Fagaras Massif, while the *pamanteni* represented the local people, who used to drive their herds up to the alpine area. The latter lived in settlements such as Arefu, Corebeni, Turburea, Oesti, Bradet and Albesti and that is why they were called according to their place of origin: *arefani*, *corbenari*, *turbureni*, *oesteni*, *bradeteni* and *albesteni*.

The sheepfolds have always played an important part in the mountain economy. Generally, they have been built near a source of water, but also in the vicinity of the forest, where the wood for fire and construction has been readily available. As mentioned previously, sheepfolds appeared later on the southern slope, and when they did, they nestled predominantly in the catchments of the main streams: the Capra, the Buda, the Valsan, the Raul Doamnei, etc. Other favorable locations were, and still are, the slopes with southerly or southeasterly aspect, where sheepfolds can climb higher. As can be seen from the graph that correlates the number of sheepfolds, the number of pens and the altitude, the highest frequency of sheepfolds (22) is found inside the hypsometric step of 1600 – 1800 m. At the same time, the equation of polynomial regression line has a correlation coefficient of only 30% (that is, very weak), which shows the obvious influence of the relief on the distribution of pastoral settlements (fig. 3).

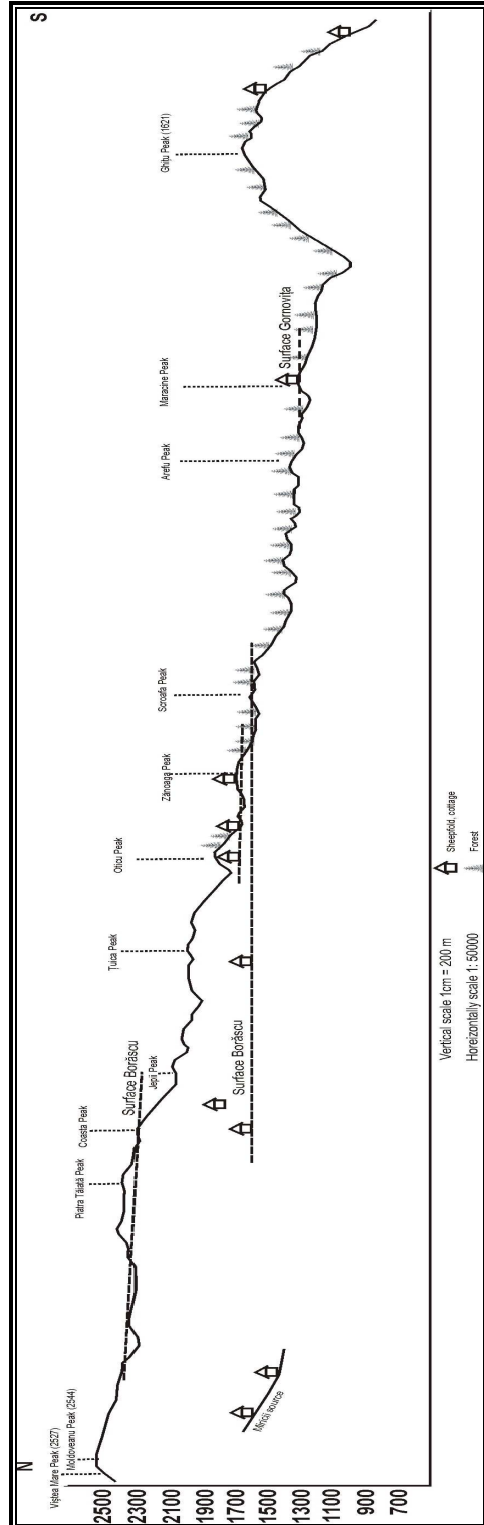


Figure 2. The location of a pastoral settlement on principal interfluvium between the rivers Argeș and Vâlsan

Most of the sheepfolds lie near the timberline (the sheepfolds on the Jorzea, Naneasa, Lespezi, Piscul Negru, Lipitoarea Ciocanului, Ciocanu, Coastele Mari, Raiosu and Tuica Massifs). Sometimes, however, they are placed on the cleared lands or in the mountain glades (*poieni*), as it is the case of the sheepfolds in the Poiana Zanoagei (1680 m), Poiana Sroafa (1580 m), Poiana Lacsor (1420 m), etc. Likewise, there are sheepfolds located in areas formerly occupied by forests, which subsequently have faded away, burned down or have been leveled to the ground by storms. In this category, one can count the sheepfolds in the Limpedeia catchment (Maracinu, Molivis, Pleasa Oii, etc.), those in the Valea lui Stan (Rancurea) and Calugarita catchments, as well as those situated along the valley corridors Capra, Buda, Podu Giurgiuului, etc. On the glacial section, there is only one sheepfold, at present abandoned, which is lying in the Moldoveanu cirque. Beside the sheepfolds, specific for the southern slope of the Fagaras Massif are the huts, representing small shelters for the shepherds who guard the barren sheep, the lambs and the rams that are separated from the rest of the herd. The huts are usually placed along the glacial valleys (Museteica, Capra) and inside the cirques, where pastures have a low nourishing value and climatic conditions are harsher. By contrast, the dairy sheep are grazed around the sheepfolds, where grass is richer, and even in the woods, where they can find shelter. Some sheepfolds on the southern slope (Ciocanu, Jorzea, Robita, Capra, etc.) shelter cattle as well, which is an important aspect that influences the pastoral exploitation of the land (fig 4).

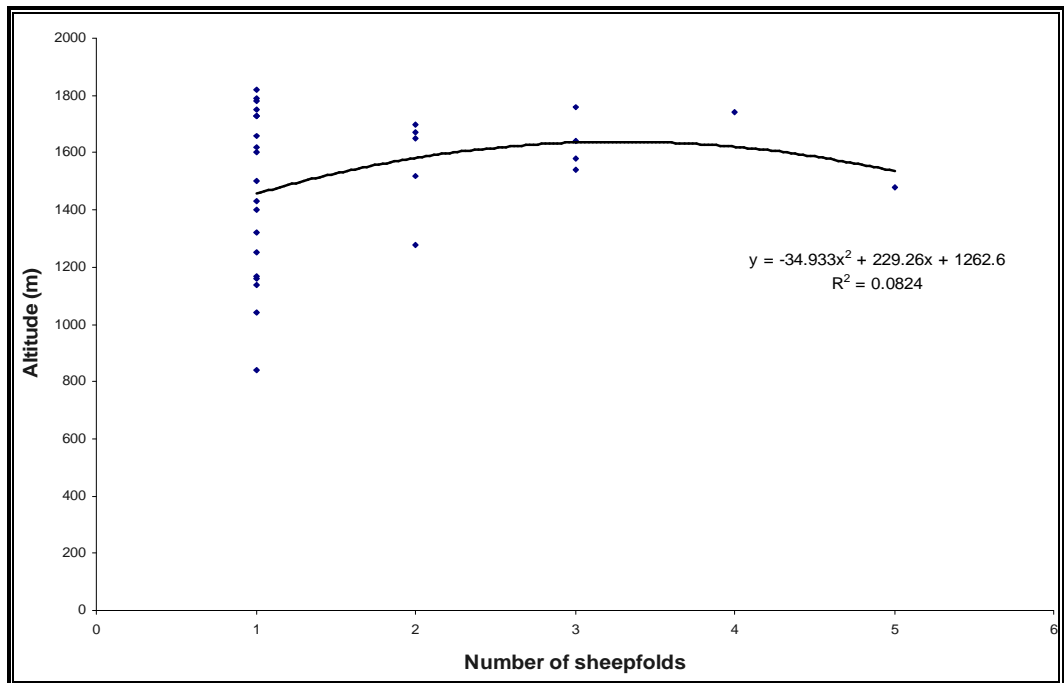


Figure 3. The correlation between number of sheep folds and altitude

Other indicative elements for the pastoral activity on the southern slope of the Fagaras Mts. are the shepherds' pyramid-shaped marks. These are made of slabs and are used to mark both the boundaries between the sheepfolds and the itineraries followed by shepherds and their herds in bad weather conditions (mist, storm, and blizzard). It can be said that these pastoral marks make the connection between the villages and the high mountain areas.

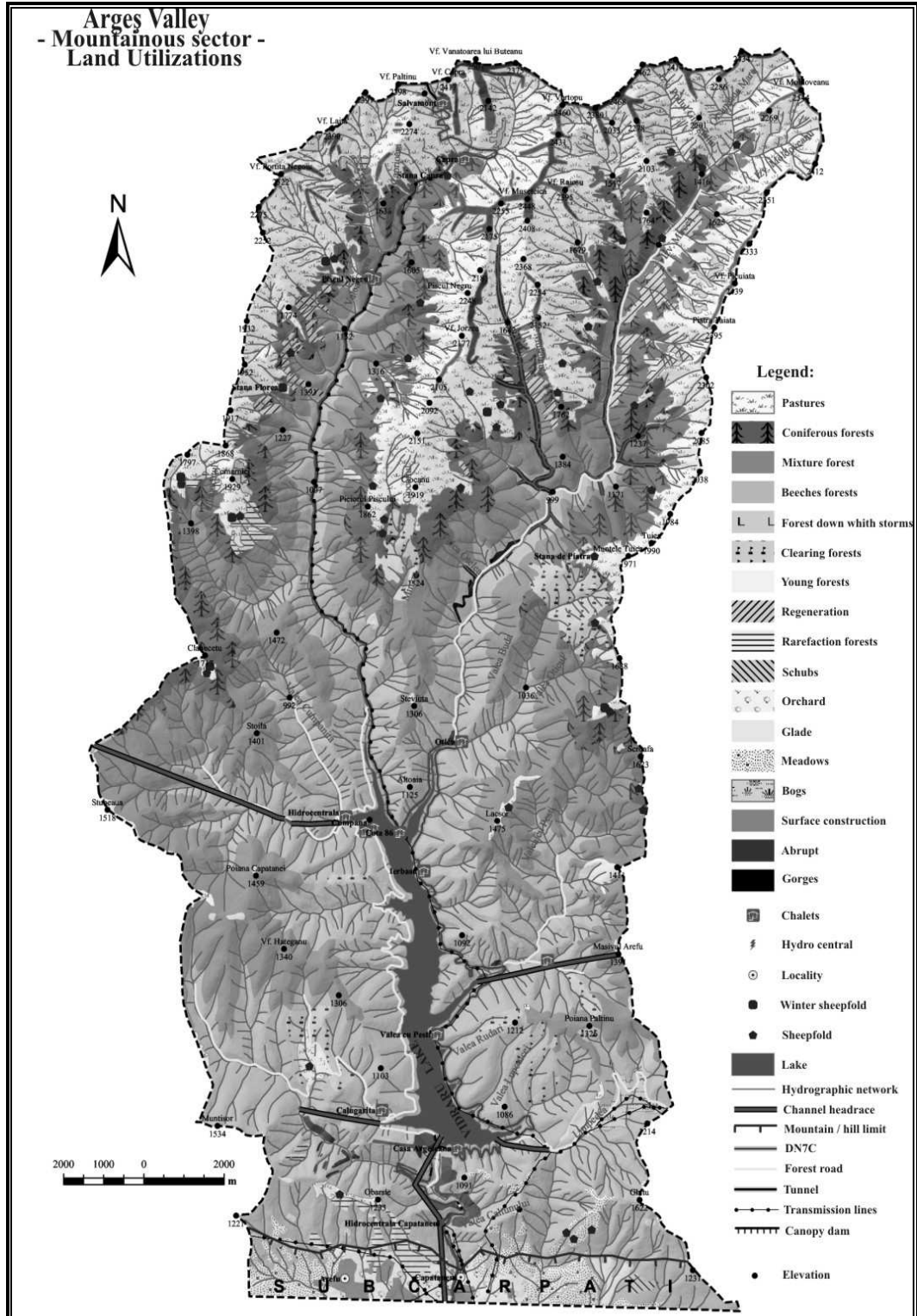


Figure 4. Arges Valley-land utilization

On the other hand, shepherding has preserved a tradition and a specific toponymy of exquisite scientific and touristic value, which are still insufficiently known and popularized. We can include here the old appellatives (*oierit, tarla, tarlit, tarlasi, stauina, baci, cioban, strungar, manzarar, sterpar, stana, saivan, saia, strunga, comarnic, mutatoare, areapa*, etc.) and the toponyms derived from pastoral occupations (summits bearing names such as Pleasa Oii, Tuica, Lipitoarea Ciocanului, Oticu, Comarnic, Florea, Coaste, etc.).

The toponyms appeared as a result of pastoral activities and they have been passed from generation to generation. The term **plai** is present even today on the southern slope in the form of oronyms and appellatives such as Plaiul Plesei, Plaiul Oii, Plaiul Strambei, Plaiul Lacsorului, etc. Another widespread toponym is **poiana**, which refers to the areas cleared with the purpose of creating open lands for building pens and sheepfolds: Poiana Zanoaga, Poiana Lacsor, Poiana Maracine, Poiana Sroafa Mare, Poiana Scroafa Mica, etc. At the same time, the study area preserves oronyms that draw on the activities carried on at the sheepfolds (Piscul Mutatoarei, Comarnic, etc.) or which mirror the main activity in a certain area (Izvorul Mioarelor, Varful Scroafa, Paraul Caprelor, Poiana Scroafa Mare, Valea Porcului, etc.). Some oronyms and hydronyms preserve the names of the shepherds who owned parts of the land, for instance Piscul lui Turcu, Culmea Musetescu, Muntele Florea, Valea Leana, Izvorul lui Anghel, Izvorul lui Radu, etc.

The transhumant herding that has been carried on in the Fagaras Mts. has altered the mountain environment, especially in its upper part (fig.5). Between the 19th and the 20th centuries, the grazing fields were extended by slash and burn in order to ensure food for an increasing number of sheep and goats.

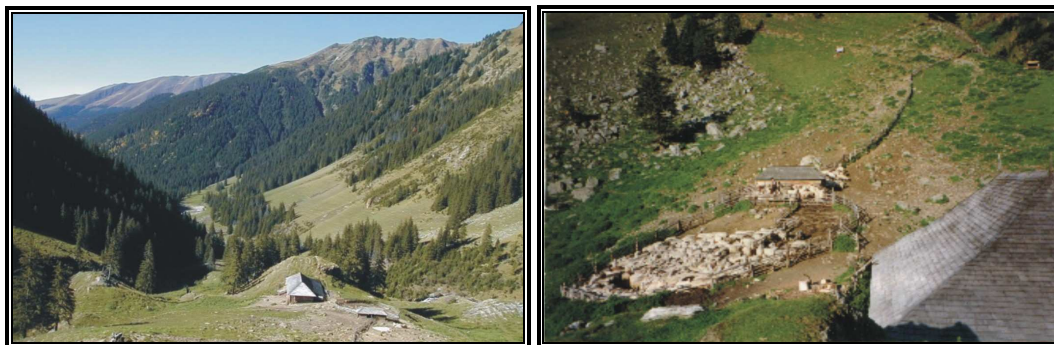


Figure 5. Pastoral arrangements (Izvorul Moldoveanu valley)

The most important alterations of natural vegetation occurred in the upper Carpathian level, particularly at the tree line, and in the sub-alpine level. The deforestations reached a climax in 1948, when, by an order of the former Agricultural Production Cooperatives, the juniper trees on the southern slopes of the Fagaras Mts. were destroyed on large areas. After that, juniper trees were to be found only in isolated or fragmented clusters.

The cleared areas lying near the tree line, which as mentioned previously usually go by the name of *poiana*, are crossed by numerous pastoral mountain roads, which climb along the secondary summits up to the alpine desert zone. Likewise, these meadows are interspersed with many shelters, sheepfolds and pens, which are used for sheep breeding and hay making. Unfortunately, overgrazing destroys the grassy vegetation and leads to soil compaction and degradation, which trigger the erosion processes. At the same time, the paths trodden by animals, especially sheep, have acted as lines that concentrated the flow of water and thus encouraged the formation of many rills, gullies and torrents, all of them

affecting strongly the landscape. The irrational and intensive grazing has reduced the pastures' quality and has triggered soil degradation. After 1990, the human pressure through grazing in the mountain area has declined significantly, as the sheep number dropped.

The transportation routes, and especially forest roads and cart roads, have affected the stability of slopes in their lower parts, where materials have been excavated or removed by the streams. Such works, corroborated with woodcutting, have a negative impact on slope dynamics (landslides, rain-wash and torrentiality) and induce channel alterations (decrease of linear erosion for the benefit of transportation, followed by important accumulations). The cart roads and even the paths created by man and animals represent alignments that speed up slope morphodynamics (rain-wash, torrentiality, mudflows), which leads to the alteration and degradation of landscape.

By the swing accomplished every year (village – mountain – village), alpine and sub-alpine levels suffered the following alterations:

- The nourishing species became extinct through overgrazing and they have been replaced by *Nardus stricta*, a low quality plant (secondary grasslands).
- The steep slopes lying beneath the alpine level have suffered degradations because of the geomorphological processes that settled in easily in the absence of a proper vegetal cover (destroyed by overgrazing).
- In order to extend the grazing fields, the upper tree line has been lowered through massive cuttings of the spruce fir forests, as well as through the burning of the bushy vegetation in the sub-alpine level (fig.6).
- Species of plants and animals have become extinct (Yew tree – *Taxus baccata*) or they have been affected by herding activities (*Rupicapra rupicapra*, *Leontopodium alpinum*, etc.).

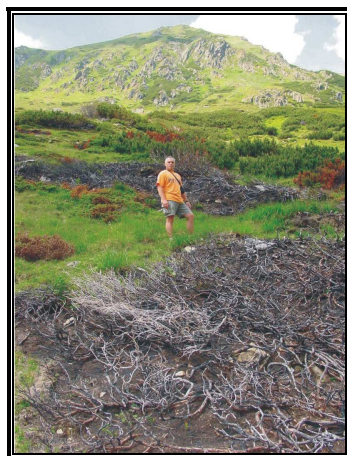


Figure 6. *Pinus mugo* associations burned



Figure 7. Traditional ethnographic holiday-climbing mountain sheep

3. Conclusions

The most important alterations of the natural vegetation occurred at the upper tree line; the level of spruce fir forest has suffered deep changes, as the young forests were cut to a large proportion. Massive deforestations were accomplished after 1950, when the juniper trees on the southern slope of the Fagaras Mts. disappeared almost entirely.

As the herding continues to be an important activity, it is necessary that a correct assessment of the relation between the pastoral potential and its utilization be made. The ecological projects that will be developed within the framework of regional planning should foresee the extension of natural reserves and even the declaration of a national

park. These would imply a reduction of the grazing fields and even the elimination of a big number of sheepfolds. However, a proper and sustainable management of the landscape would require the preserving of nature, of the elements of historical and ethnographical value, which mirror a tradition older than 300 years (fig.7), as well as of the local people's experience with regard to the reasonable use of pastoral potential.

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