

THE INFLUENCE OF CLIMATE ON SHEPHERDING ACTIVITY IN THE MERIDIONAL CARPATHIANS

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ABSTRACT. – **The influence of climate on shepherding activity in the Meridional Carpathians.** Human activities depend largely on climatic factors, which role is defining in many cases. In his activity, the man has been taken into account the evolution of climatic parameters over a known period: daily, weekly, monthly, and yearly. Thus he scheduled his activities after his skills of meteorology, gained from information transmitted by the ancestors, of his own experience and recent information provided by experts in the field through advanced techniques. Activities practiced in the mountain are various, but I will refer to the agricultural sector and in particular to its subramura, shepherding. Old activity of the Romanian people, it has good knowledge required by those who practice, the evolution of climate parameters in a calendar year for deployment in its benefits. So was born a timetable pastoral somewhat lagged the civic as faithfully follow the weather and resist the influence in the growth of animals. The mountain by its characteristics of altitude, relief fragmentation, orientation peaks, and slope's exposure generates a number of peculiarities of climate and microclimate, which marked local organization for the pastoral life and shape of regions with specific attention. In the Carpathians, pastoral phenomenon was most intense in our country, and from these considerations that area deserves a detailed analysis of climatic parameters and their role in the manifestation of this activity.

Key words: Meridional Carpathians, climate, shepherding activity

1. General considerations

Human presence in the Meridional Carpathians since Palaeolithic was confirmed by discoveries in the caves from Cioclovina and Ohaba-Ponor, which indicates that this land was populated from ancient.

Age of living these mountains is attested by the numerous evidence of the existence of traces Dacian fortresses "Sarmizegetusa Regia", in Oraștie Mountains, Blicaru-Costești, vestiges of the Dacian-Roman period, the fortress "Sarmizegetusa Ulpia Traiana", next to Oraștie, many vestiges of the Roman legion from Olt Valley, and in medieval documents the existence of state formations of "Lands": Loviștei Land, Terra Blanchorum (in the north of the Făgăraș mountains).

Initial settlements were founded in the mountains, then dropped in depression areas in corridors and mountain valleys. Mountain boarding is for

*Riscuri și catastrofe**Victor Sorocovschi*

operation and use of pasture and meadows and times of tribulation marked by invasions of peoples migrating.

The old of Carpathians population is relieved by Florus, which says that in mountain lived the free Dacians, "dacimontibus iaharent" and "on the plain roamed the Sarmatian's horses" (quoted by Conea, Badea, 2004).

Settlements permanent arrival in the past to 1400m height, number of dwellings located in the mountains, being raised: "In old times when life is held more on the huts which were so often true that formed villages (Dragomir, quoted by Conea, Badea, 2004).

Climate is one of the physico-geographical factors that have contributed to the development of pastoral settlements with temporary or permanent use, in the Carpathian. Climatic parameters influencing positive development in the Meridional Carpathians, a pasture and meadows richest and best in terms of quality, which has contributed fully to increase the number of sheep, and other animals for meat, milk, traction, but this categories in a lower number.

The meadows are association composed of *Festuca ovina* (fescue), *Festuca rubra* (red fescue), *Agrostis rupestris* (grass of rocks), *Trisetum flavescens* (yellow oats) have provided the necessary food during summer and deposits for the winter.

Weather during the year influenced the activities in the mountain area and created a somewhat different timetable pastoral at civic strictly respected by the inhabitants of the mountain.

2. Characteristics of climatic parameters in the Meridional Carpathians.

Romania is crossed around the central parallel 45 degrees north latitude, which represents half the distance between North Pole and Equator, which corresponds to the temperate climate. By the central position which it occupies in the European continent, the climate is continental type and the distances from baric centre gives a characters of transition.

Beyond this type of climate, the Meridional Carpathians manifest mountain climate, in which climatic parameters are influenced by altitude.

Thus the temperature decreases with altitude, and rainfall increases with it up to a certain limit. Next, we make an analysis of climatic parameters of the Meridional Carpathians to emphasize their influence over the pastoral phenomenon.

The average annual temperature has values from 0° to 6°, but on the peaks with heights over 2000 meters, can reach negative values. The average temperature of January in the Meridional Carpathians are negative, with values between -6° and -10° C, and at an altitude above 2000 meters with considerable lower values and under -10° C. The average temperature of July is between 8° and 16° C, with lower values on the peaks higher (8° C).

Clima și activitățile economice

Regarding the average frequency of tropical days, the Carpathians are included in the general area of days without tropical days, except the intramontane depression, stream corridors and the areas near them, where summers are cool, with a reduced number of rain days (below 10).

An exception in the Carpathians is the Olt River corridor, along which the North-South penetrates hot air, the summers are moderate and the average annual frequency of tropical days is 10-30 days. The isotherm of 10° pursuing faithfully the Olt River in the Carpathians.

The annual average of days of winter increasing with the altitude. Thus, at altitudes between 1000-1600 meters, winters are cold and the number of winter days is between 41-50 days. At altitudes of 1600-2000 meters, the number of days of winter is higher, 51-100 days, winter being frosty, and over 2000 meters the number of days of winter turnover exceeds 100, and the winter is very frosty.

In the depression from mountains and valley corridors frequency of cold days is lower, 31-40 days, winters are cold, except for intervals where temperature inversions occur that cause a more intense cooling of the weather.

Rainfall, regardless of their liquid and solid form, is abundant in the Meridional Carpathians. From bottom to peak, values of the quantities of precipitation increases as follows: 800-1200 mm / year at altitudes between 1000-1600 meters, 1201-1400 mm/year at altitudes of 1600-2000 meters, and over 2000 meters rainfall exceeding 1400 mm / year. Across our country, because of the general movement of air masses at these latitudes, the western winds, the amount of precipitation decreases from west to east, as shown in the area of the Meridional Carpathians. In depressions and corridors in the summer rainfall have a value lower, between 800 - 1000 mm/year.

Winds are classified in the general movement of air masses at these latitudes, namely the existence of the western winds. In the south-west of Meridional entering hot winds that blow the direction south and south west, which lead to more pronounced heating elements and occurrence of Mediterranean flora and fauna.

Along corridors are deviations of wind direction due to the relief, so the winds beat along corridors. Also, in mountainous area occur the winds and the local breeze or mountain-valley winds in mountain and the foehn with intense events on the northern of Făgăraș. Foehn gathers way on the beginning of the spring and is a hot wind katabatik contributing to the rapid melting of snow, great for shepherding. The climate temperate continental is represented in our country by more climate provinces, and in the Meridional Carpathians we meet these sectoral climate provinces.

The south-west of the mountains consists of Mehedinți and Cerna are included in the province of sub-Mediterranean climate with its characteristics.

Southern half of the Carpathians, from Valley of Motru River to Valley of Dambovița River are included in the temperate climate of transition. Meridional

*Riscuri și catastrofe**Victor Sorocovschi*

northern half of the province is under the influence of oceanic climate, here being western influences characterized by excessive rainfall.

Climatic regions from Meridional are the type of climate that includes mountain alpine climate over 1800 meters (winds from the west direction very strong), mountain climate, 1000-1800 meters, climate depressions (thermal inversions).

Topoclimate is specific to these regions that have a layout according to the form of relief. Topoclimate of alley and narrow: Dâmbovița, Olt, Jiu, characterized by the movement of air currents along valleys and common fogs. Topoclimate of depressions characterized by temperature inversions and met in depressions: Lovișteea, Petroșani, Hațeg, and in the corridor of Western Jiu and the Lotru. Topoclimate exposed side of the movement west, met in north half of Meridional, in the mountains Șureanu and Retezat. Topoclimate sheltered side of the movement towards the west, met throughout the southern half of Meridional.

Another topoclimat is one of the mountain peaks, met up along mountain peaks and characterized by excessive summer heat that causes sunburn even on the ground and high intensity of winds with blizzards in winter.

Following events in the state weather in Meridional Carpathians, we find that the effects arising from this have an impact on their activities.

The pastoral spring does not meet calendar, in the mountain being delayed, due to low temperatures that do not allow melting snow rather than later. On the versant with north exposure and in cooler valleys, snow remains until late May, and sometimes also during the month of June.

Of course, in the the basin and in valley's corridors, people start earlier activities related to land cultivation, and pastoral activities are carried out in the border town and the plain areas where the sheep were moved to winter (Bărăgan, Western Plain, Plain of Transylvania). In the past, when the number of sheep was much higher than currently, wintering sheep by our pastors was done in reaching remote areas by Plain Jijia and even crossing the Prut, and from there to the foot of Ural Mountains.

Transhumance phenomenon decreased in intensity than the last centuries by decreasing interest from the development work of sheperding society and reorient human labor to areas of actual and implied interest deduction with a decreased number of livestock.

In the areas where this activity is still roots, the shepherding is in compliance with the ancients customs, the innovation coming in some locations, where it use one new processing equipment milk.

Calendar pastoral established by their ancestors kept the honour in activities and take account of the evolution of weather in one year. In compliance with the order of events carrying along a pastoral year and taking into account climatic conditions, as a religious holiday Saint George (April 23 - time fixed in the Orthodox calendar), the shepherds start preparing their sheep and

Clima și activitățile economice

the animals gathered from the locals for climbed the mountain. This is the scale and significance of sheep and their lamb's separation, grazing being made outside border towns or farm shepherds of feeding stuffs ready a year before. In this time of year temperatures increased causing melting of snow in the mountains, and rainfall are the kind of liquid.

The second point is that of climbed the sheep in the mountains, running all around a religious holiday, the Saints Constantine and Helen (May 21 - time fixed in the Orthodox calendar). Increasing temperature leads to crude vegetation, now having the highest quality.

If you follow the course of events in pastoral activity, the summer is the season that creates the most favourable conditions for humans and animals through optimal thermal comfort, and when it is carried out or shepherd's parties marked all religious holidays Saint Elijah (20 July - time fixed the Orthodox calendar). Today, less customary in the past, shepherd parties called "nedei or two land" are holding up in the mountains. Thanks to this opportunity the shepherd review their families left in the villages, but also from neighbouring villages confrere, exchange of products, prepare marriages.

Summer also has its disadvantages, because we know the weather in the mountains can change very quickly during the day, and rainfall occurs very quickly. Rainfalls have not created serious problems to the shepherds, but phenomena which accompanying them (lightning and thunder) often caused damage among animals and sometimes loss of life.

Sheep off the mountain is in a period of between two religious holidays Assumption of Mary (August 15) and the Virgin Mary's Birth (September 8), when the transformation takes place and the climate of our country marked by increasing days with precipitation and a slow decrease in temperatures.

From September 8 to October 27 (St. Demetrius) grazing sheep is outside and in the border village. During this period the sheep are returned to owners who were at pasture during the summer.

After October 27, the shepherds lead the sheep to winter in the plain areas of the country because the quantity of fodder collected during the summer was not enough to feed a large number of animals. Since October begin the penetration of the masses of cold air caused by the intensified Siberian anti-cyclone which cause a significant cooling of the weather. Mountain could not be used because of the cooling period characterized by low temperatures, plenty of liquid and solid precipitation, wind intensified, and the high level of snow.

Thus, the winter is the season which the life and pastoral activities are carried out in the plain areas, where climate conditions are more favourable than in the mountain and return to the mountains is at the end of winter.

During the summer, the sheep were not grazing on the plain that were dedicated to cultivate the land and the plants were sometimes frequent droughts that cause dryness herbs.

*Riscuri și catastrofe**Victor Sorocovschi*

By this analysis we've once again evident the efforts that people have made to adapt to environmental conditions and methods by which he knew how to exploit these conditions.

Shepherding is one of the activities in which the man kept the conditions imposed by nature without an underestimate. Instead, communion between man and nature is best placed in evidence.

The joy of spring renaissance nature was sung in shepherd's songs like sadness that manifested shepherds for the arrival of autumn as part for a period of their loved mountains and take the long road towards plains sometimes full of danger and away from the dear.

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