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## LITTLE ICE AGE IN ROMANIA IN THE VISION OF A SYRIAN TRAVELER

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**Key words:** Little Ice Age, Paul of Aleppo, climate information, Romania

**Abstract.** Archdeacon Paul of Aleppo of Damascus accompanied the Patriarch Macarios of Antioch, in Moldavia, Wallachia, Dobrogea for nearly seven years (1652-1659), just in time considered one of the coldest during the Little Ice Age, Maunder Minimum namely (1645-1715). His journey is recorded in his travel diary, written in Arabic and translated into Romanian in 1900. Romanian historians were particularly concerned with the information provided by the passenger about the towns, monasteries, and farmhouses, aspects of daily life, customs, habits and Romanian economy countries. But Paul of Aleppo describe and climate issues, particularly cold winters with frost Danube, snowy, storm at sea, rain, floods, etc. It is a very rich source of information in this area, so far little taken into consideration, showing that the Little Ice Age was also evident in Eastern Europe.

### Introduction

During the Middle Ages, cold period called the Little Ice Age (ca. 1200 or 1300 to 1850) has been studied by specialists in western Europe based on data from "natural archives" (terrestrial and marine sediments, tree rings, pollen analysis), and the data in "archive society" (archaeological data, or notations in parish registers, monastic, chronicles, letters, travel journals and so on, about the phases of vegetation, flood or drought, frost river or sea layer snow, etc.). (Pfister, 1999)

On the territory of Romania, historical conditions were unfavorable for a normal life: invasions of migratory populations, wars between neighboring countries often went on these lands, attempts Ottoman Empire, Russian, Austro-Hungarian Empire to seize our lands. Because of these conditions, we have enough little information and studies about the climate of the period.

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The voyage of Archdeacon Paul of Aleppo<sup>2</sup> that accompanied the Patriarch Macarius of Antioch, in Moldavia, Wallachia, Dobrogea (and in Russia) for nearly seven years (July 9, 1652 - April 21, 1659) is recorded in his travel diary, writing in Arabic and translated into English, French, Russian and Romanian then in 1900.

In his diary the traveler describes settlements, towns and palaces of the princes and especially churches and monasteries, tell legends and myths, shows the many aspects of everyday life of Romanians, exterior and interior of peasant houses, Romanian economy countries, collecting information about customs and habits from weddings, funerals or celebrations of Christmas, Epiphany and Easter. He also gives data about extraction techniques copper mines at Baia de Arama or Romanian salt mines and deplors the loss of wealth by the Tatar invasion which ravaged settlements and taking thousands of slaves. Paul of Aleppo recounts numerous historical facts (e.g. end of the reign of Vasile Lupu and Matei Basarab's death). His diary has aroused interest Romanian and foreign historians and ethnographers.

Instead, climate issues were never considered by the researchers, although we consider that are very important, especially since this trip took place for several years, just at the beginning of the period considered one of coldest during the Little Ice Age, i.e. the Maunder minimum. The descriptions are rich, picturesque, typical oriental style, especially in the harsh winters of the Danube countries. Of course we could interpret these reports and the fact that these travelers came from a Mediterranean country where, even in this cold period, we can assume that the winters were milder and less snow. However the details (freezing rivers and especially freezing food, suffering travelers) are particularly credible reports may encounter other travelers in the seventeenth century.

### **1. How were the winters during his travel.**

The travelers have left Aleppo, crossed the Anatolian Plateau, and then entered the Black Sea through the Bosphorus and reach Dobrogea in early 1652. One of the first impressions is storm at sea: *“January 7 to 9, 1652 - We started Friday night with outstretched sails, floating led by favorable wind from the south. But the wind has escalated so much that was to sink, but with God's help we*

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<sup>2</sup> Paul of Aleppo (1627 - 1669, Tiflis) clergyman, traveler and chronicler, son of the Syrian Orthodox priest Macarius Zaim (patriarch of Antioch in the years 1648-1672), author of historical works and translations of Greek Oriental (Orthodox) Church History, accompanied his father as secretary of the patriarch, several times in his travels from Damascus, through Anatolia, Istanbul, Wallachia, Moldavia, Ukraine and Moscow, trying to raise funds and support for their church.

*arrived midday Sunday after Epiphany, the port named in the Greek Konstanz and in the Turkish Kostendju ... We stayed there two days, dizzy by the great waves witch penetrate even into the ship, and we descended like a valley, and even as we ascended a mountain top. "*

On the way to Moscow, travelers stopped longer in Moldova: *"On Tuesday morning February 8, Feast of St. Theodore Stratilat, the governor came to him with a carriage without wheels, called in their language" sanie" (sledge), as much snow had fallen and frozen. While wheeled carriages could not go, it took us quickly, without shaking... On the eve of Sunday Carnival, the abbot of Galata, famous monastery, came invited there the Lord Patriarch went up in a sleigh pulled by four black horses, as much snow had fallen and it was very cold, that it seemed that we fall nails."*

Next winter is not milder, but travelers are acquainted with a fast heat wave that turns winter into an early spring, full of unexpected inconvenience of climate: *"January 22, 1653 - "From this place (Vaslui to Skentai-Sparks) we left Tuesday morning. The previous night the wind blowing violently, with exceedingly cold, frozen mud, earth was hard, swamps in our way were now compact. At the same time it snowed a lot... In the afternoon, just leaving the snow perspiration, suddenly the atmosphere has warmed, snow melt and we sunk in the mud up to the horse's belly, on a yellow earth and glue... After unimaginable fatigue, we arrived at nightfall the proximity of a large lake, which they call pond (khalistao) digging by the ruler for fishing...at Bârnova (Bonoska) "*

Next winter travelers are in Wallachia, where attending Epiphany ritual and they are amazed by the fact that it takes place in a frozen river. Paul of Aleppo notes (and other passengers later) that people rubbed their children with snow, to empower them: *"January 6, 1654 - Targoviste, Abbey Stelea. When our Lord patriarch came to the river bank, with cross in hand, the water was still frozen, because that day had been a hard frost ... priests baptized many children in the river, they broke some ice... Heads were discovered. We stayed for days with pain ..."This year, the early Canon II (January) until the end of Adar (March) very much snow fell, covering the ground constantly, until Easter. As blizzards and frost, wet and cold I've never seen before, even oil and wine butter froze in pots... To be seen hanging from rooftops around some long sticks ice crystal. This happens when the heat inside the house, the snow melted and then every drop that fell by the action of cold, frost and ice turned into long sticks, unusual thing for the people of our country. ... "*

On his return from Russia inconveniences of climate continues and Paul of Aleppo notes something about human suffering related to the rigors of winter: 1656-1657 - *"... the evening we arrived at Targoviste. This winter was terrible and hard for farmers and livestock. Snow has continued to fall until the first day of Lent*

*which was on 9 February and many cattle perished for lack of fodder, and the Danube River froze three times, the first time the ice with a thickness of three inches. (about 75 cm) then follow a thaw and melt some of it, then froze and then a second time because of snow, the third time, until the ice reached a thickness of nine hands (2, 25 m). That can take water from the river; its inhabitants had to dig a way through the ice layer. It is said that no such thing had happened thirty years. "*

*January 1657 - "With the army he (Gheorghe Rakoczy) started in the middle of winter, the weather is great snowstorm and frost; therefore many people have drowned or died of cold waves ..."*

*November 8, Arges Monastery - Campulung - "On Saturday morning when we got up to leave, he was a terrible cold, almost unbearable. How rivers here are very fast, the middle remained unfrozen so that when the carriage passed over them, water gets inside. God knows how cold it was! The Carpets were stuck to each other sleds and sled, ice forming a compact mass. Horses become unable really to walk due to frost..."*

Finally, the following year, 1658 begins early winter, with frost and heavy snow, killing the animals, followed by a heat wave, knew the people who called the late autumn "old woman Summer ":

*"By the end of Teshrin Alarval (October), about ten days, a lot of snow fell with a severe cold, then changed and followed a second spring, sun, warmth, flowers and greenery, after it was destroyed by harsh cold ..... shepherds returned immediately with horses and cattle to pasture for the second time after before they put in their pens at the shelter. For this frost large numbers of sheep and oxen and other beasts of burden perished, so fierce was unexpected cold, and now after the fire burned day and night, I felt again a muggy oppressive heat ..."*

#### **Remarks about the warm seasons.**

During the Little Ice Age, travelers found that summers were pretty cold, rainy and many storms, accompanied by thunderstorms and hail events, followed by increased water flow, producing disasters. Paul of Aleppo writes: July 1653 - *"Nights latter were all thunder and lightning, torrents of rain and stone with such great force, that we say, 'Of course arrived last hour!' Lightning fell on the huge wooden dome of the church of the Monastery of St. Panteleimon, which is in the possession of the monks of Sinai, and throws down the top cross, and put deep into the ground. Another lightning fell on the famous stables of the palace. They burned a lot of houses. Lightning flashed like swords in the sky and saw clouds shaped fortresses and battles. All this foretold the second conquest of Basil (battle of Vasile Lupu from Dry Valley, near Bacau) "*

May 22, 1654 - *"On the same day at noon we left Targoviste ... we came to a mountain and a forest which passed with difficulty because of the many and powerful rain that had fallen in those days and had many rivers to rise ..."*

July 1658 - *"On the night of 27 Tammuz (July) and the next was a terrible storm, with thunder and lightning that shook the earth, that I thought it was time Resurrection ..."*

September Slobozia monastery - *"We stayed here until the day of the Cross, because the emergencies rain that had fallen in the month of September, accompanied by violent storms, thunder, lightning and hail. Then we left forward through a vast plain in the middle of all the pleasures and beauty of the season. "*

After such harsh winters and storms descriptions of the Romanian countries, here are finally some notations about the beauty of the landscape. Then we find that Paul of Aleppo is impressed by the wealth of fruit in the Prince orchards:

June 5, 1653. *"Feast of Pentecost in Iasi. - Let it be known that in this country the first cucumbers ripen the feast of the Holy Apostles (June 29), are small and without gravy. And plum called "pigeon heart" is so much that resembles a large flows; plums are different varieties and colors white, yellow, red, rust and very tasty cherry (with fruit) are both red many that look like forests, they are and wonderful varieties of pears. "*

He also notes that there are local exotic fruits grown in pots: *"In the garden of the Prince I saw many mulberry and apricot sweet fruit, almonds, I saw a small pomegranate tree, planted in a barrel and sweet lemons, grown on the bucket ..."*

About Moldovan wheat he notes, in an imaginative oriental style that is characterized by a long wire that exceeds the human height: *"Merchants and other Greek and Cossack soldiers had fled ... is thrown into a wheat field, which in this country usually surpasses the height stature of a man. "*

The traveler is struck by the multitude of domestic animals grown on estates Preda Brâncoveanu and then gives unique details about the sturgeon fishing of the Danube. Is interested how to preserve vegetables the winter in monasteries and homes noblemen: *"As for vegetables, such as beets, parsley, onion and garlic, they do not grow until Easter, because during fasting always snowing day and night and in the morning the ground is rock hard, and especially rivers are frozen. When the sun warms and the days is longer, the snow melts and changes into a thick mud up to his knees. In monasteries and in the rich peoples' homes they are deep vaulted stone cellars "pivnițe" called in their language, which make wine barrels, there are and places for keeping vegetables. Before winter and snow fall they pluck from the ground parsley and onion to put them in the cellar. Leek is found in abundance and is very sweet. They keep vegetables in the holes we spoke to, thanks to the coolness that reigns there, they are kept. When needed, take them there and*

*eat them, especially during fasting. In monasteries, after dinner Wednesday evening is fasting until Friday night "*

## **2. Weather Forecast for Romanians**

With curiosity and interest in all the news that he finds in a country so different from his own, Paul of Aleppo noted concern of inhabitant for the weather forecast, a natural thing, if we consider the fact that food and their welfare depended largely (except historical events), of the weather in future:

*"I noticed the Romanian excellent method to predict by certain signs, weather will be good or not. In August Teshrin Essani (November) is a commemoration of St. Plato, the festivity is celebrated by all with great sacrifices, gifts and services. For them this day shows the time that has to be the year, what happens when it's safe and clear indication. If it's snowy and cold, they say that the coming year will be great frost. But if rain and sun, they predict that next winter will be not an intense cold, but slowly. Such was the case this year: rain, alternating with beautiful sunshine, until 9 December when starting cold and snow. "*

### **Conclusions.**

Journal Archdeacon Paul of Aleppo shows that in the Roman countries in this period winters were harsh, snowy and cold, and the summers were cool, rainy storms and floods. Travelers have borne with difficulty in these conditions, and inhabitants have endured famines, diseases and deaths.

Some of these weather events were noted by Romanian chroniclers Miron Costin and Radu Popescu (1653), by the Swedish baron Clas Brorsson Ralamb, apostolic administrator in Moldova (1657) and by the Turkish chroniclers Mehmed Halifa and Evlia Celebi (1658).

If we look at Western and Central Europe, we find similarities in climate over the period. Thus in 1653, 1654, 1655, were harsh winters with frost river, followed by large floods in central Europe. In 1656 in France and Germany froze rivers, in Scotland fell very much snow, and froze people on the roads. In 1658 was one of the harshest winter in that period, from Denmark to Italy, where Rome fell very much snow, perished olive trees in Provence and died many travelers.

Besides the climate data, we find notes about the life of the inhabitants in these weather conditions: travel by "carriage without wheels" infant baptism in rivers frozen, summer storms, and the richness and variety of the fruits of the earth, and the interest of inhabitants for next weather.

It is a very rich and interesting source of climate information, which added to the information collected from other sources to the surrounding Carpathian

territories or neighboring countries, we will enable a better understanding of the climate over the centuries in the Romanian countries.

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