Mountains of the Mediterranean Sea and the Snow

One of the stories of the Mediterranean mountains was written on the snow, but was not ephemeral for centuries. The great lesson of Fernand Braudel indicates also how to face the history of the Mediterranean snow, but with a gap concerning Sicily, which this paper simply tries to state.

Keywords: *Mediterranean, mountains, Braudel, snow, Sicily*

The Mediterranean sea - as Fernand Braudel taught - is a sea that lies between the lands. These lands are not all flat, but they are rather mountainous lands. If we look at this environment we can say that it is a sea in the middle of the mountains; this observation puts out of use the idea concerning the Mediterranean climate resting on current opinions, on the glossy image of tourist excursions, on a climatic reality brought to the extreme of mythologisation.

So, we have an excessive tendency to believe in sweetness, in the spontaneous ease of life in the Mediterranean. We let ourselves be deceived by the charm of the landscape. The arable land is rare, the arid or less fertile mountains are omnipresent ("Too much bone, not enough pulp", said the Italian scholar Manlio Rossi Doria); rainwater is poorly distributed: it abounds when the vegetation rests, in winter, and disappears when the sprouting of the plants would require it.

The Mediterranean space is consumed by the mountains. They come up to the coasts, abusive, piled up against each other, skeleton and inevitable backcloth of each landscape. They disturb the circulation, torture the roads, limit the space reserved for happy countryside, to the cities[1].

Braudel wrote that the Mediterranean is a sea of mountains and the mountains are mountains of the sea, and there is nothing more true, because along the Mediterranean coast we meet mountains hanging over to the sea.

There is a mountain on the Strait of Messina that the Latins called Bimaris, mountain of the two seas. From its highest point the mountain, today called Dinnamari, dominates the two seas, the Tyrrhenian and the Ionian. The Sicilian historian Fazello in the 16th century calls it Dimmari, because for him too it is a mountain of the sea.

He recalls that in the Greek-Latin era it was also called Nettunio; somehow it had already been inscribed among the "sea mountains" of the Mediterranean.

If we turn on the coasts of the Mediterranean, this situation reappears everywhere; for example, navigating with the Palermo-Genoa ferry and flanking Sardinia, you can see mountains constantly; so also Corsica presents itself as a great mountain on the sea.

The mountains become marginal at a certain point of the history of the Mediterranean and remain marginal[2].

[1] F. Braudel, *Memorie del Mediterraneo*, digital edition, Bompiani, Milan 2018, pp. 22 and 33.
[2] M. Armiero, *La ricchezza della montagna. Il bosco dalla sussistenza al superfluo*, in "Meridiana", n. 44, "Montagna", 2002, pp. 65-96.

The Vajont disaster of 1963 in Italy, for example, has been completely erased from the memory of the country and this is a proof of the marginalization of the mountains.

On the contrary, the struggles against the construction of the High Speed Train in Val di Susa have activated stories and memories of the Valley, representing the most interesting example of a sort of re-centralization of mountain areas in the public debate.

Moreover, this reconsideration of the mountain areas allows the resumption of the vision still alive in the eighteenth century, with particular regard to the region of southern Italy. We can refer to the geographical description of the Two Sicilies left by Giuseppe Maria Galanti; for Galanti, southern Italy is the world of the Apennines.

These mountains stretch across the entire length of the country, appearing massive in the Abruzzo region and then relaxing on the two sides of the Tyrrhenian and the Ionian Sea up to the Strait of Messina. The land of southern Italy is predominantly high and made up of mountains, with limestones on granite bases, with the peaks that begin to be covered with snow at the end of October. "To the author's eyes, however, mountain lands are not waste. Rather, they are an intensely inhabited and naturally diverse environment… where different climate patterns create a diversity of soils and wildlife"[3].

George Perkins Marsh bears a completely different vision, who publishes his *Man and Nature* in 1864, giving a decisive influence to the interpretation of the environmental history of the Mediterranean mountains. A stable natural order is disturbed by humans; therefore, a history of degradation caused by human interference, aggravated by ignorance and bad politics. So, according to Marsh, "in mountainous areas, rain and snow fall in greater quantity, 'and with much inequality of distribution'; the snow is then often 'almost wholly dissolved in a single thaw, so that the entire precipitation of months is in a few hours hurried down the flanks of the mountains, and through the ravines that furrow them'; due to the natural inclination of the surface, the gathering currents of rain and of melting snow acquire 'an almost irresistible force, and power of removal and transportation'; mountain soil itself is 'less compact and tenacious' than that of the plains, and if the forest has been destroyed, 'it is confined by few of the threads and ligaments by which nature had bound it together'"[4].

Had it really been so, even at the time Marsh writes, this very own paper would not have existed. The single thaw that suddenly melts the snowfall of months would have canceled any history of the "production" and trade of snow between the mountains and the cities of the Mediterranean. Then the strangeness of a look bred in the Vermont region emerges, methodologically based on environmental catastrophism, not very curious about the real history

[3] S. Barca, *Enclosing Water. Nature and Political Economy in a Mediterranean Valley, 1796-1916*, The White Horse Press, Cambridge 2010, p. 22; the scholar resumes G.M. Galanti, *Della descrizione fisica e politica delle Sicilie*, F. Assante – D. Demarco (eds.), Edizioni Scientifiche Italiane, Naples 1969 (first edition, Naples 1794).

[4] S. Barca, *Nature, politics and the 'disorder of water'. Theories of environmental vulnerability in the Mediterranean (1750-1865)*, in "Clico Working Papers", 2010, pp. 2-4. The reference is to G.P. Marsh, *Man and nature, or Physical geography as modified by human action*, Sampson Low, Son and Marston, London 1864.

of the Mediterranean mountains, that even at the time of Marsh had not entered decisively in the process of marginalization that characterizes the twentieth century.

The historian can now try to describe the historical moments and the passages in which the mountains have emerged from their marginality. Perhaps the first way to build a new mountain identity is to tell its stories.

One of those stories springs from the simple meteorological fact that on the highest mountains of the Mediterranean in winter it snows and that, in the summers of the Modern Age, we find snow and ice in the most important cities of the Mediterranean itself.

Figure 1. *Antonino Mancuso Fuoco, Snowbound Capizzi*

Since ancient times the populations living in most of the Mediterranean and Middle East countries used different systems to refresh and mitigate the strong summer heats, mainly using snow and ice. Preserving the ice obtained from freezing induced or collected from frozen lakes or, even, obtained from the pressure and consequent solidification of the snow inside specially constructed places, has been for a long time the only method to be able to use it even in summer[5].

In this process the populations were favoured by the proximity of the mountains, as Fernand Braudel once again suggests: "The peak of the Mulhacen is white with snow while down below, Granada swelters in the heat; snow clings to the slopes of the Taygetus overlooking the tropical plain of Sparta; it is preserved in the crevasses of the mountains of Lebanon, or in the 'ice boxes' of Chrea", in the mountains of Algeria. The explanation of the long

[5] M. Fracasso, *Neve e neviere, ghiacciaie e ghiaccio: approvvigionamento e distribuzione della neve e del ghiaccio nel Salento leccese*, in "Archeologia postmedievale", 12, 2008, p. 27.

history of the 'snow water' comes from the presence and use of the snow of the Mediterranean mountains. Snow water is offered by Saladin to Richard the Lionheart; snow water is drunk until the fatal excess by Don Carlos in the hot month of July 1568, when he was imprisoned in the Palace at Madrid.

But the snow water is not only the privilege of the princes and the rich; in the sixteenth century, in Turkey, in Constantinople, but elsewhere as well, Tripoli in Syria, for instance, "travellers remarked on merchants selling snow water, pieces of ice, and water-ices which could be bought for a few small coins".

The snow trade was so important that the pashas took an interest in the exploitation of the "ice mines". In 1578 Muhammad Pasha had an income of up to 80,000 sequins a year with the exploitation of that resource. The snow trade was present, in Egypt, for example, where it arrived "from Syria by relays of fast horses; in Lisbon which imported it from great distances; in Oran, the Spanish *presidio,* where snow arrived from Spain in the brigantines of the Intendance".

In Malta the Knights said that they would die if snow did not arrive from Naples, their illnesses apparently requiring "this sovereign remedy". Snow was, in this case, the height of luxury. Actually the snow came rather from Sicily, as will be seen later.

"In Italy as in Spain, however, snow water seems to have been used widely. It explains the early development of the art of ice cream and water-ice in Italy. Its sale was so profitable in Rome that it became the subject of a monopoly. In Spain snow was piled up in wells and kept until summer. Western pilgrims travelling to the Holy Land in 1494 were none the less astonished to see the owner of the boat presented, on the Syrian coast, with 'a sack full of snow, the sight of which in this country and in the month of July, filled all on board with the greatest amazement'. On the same Syrian coast, a Venetian noted with surprise in 1553 that the 'Mores', 'ut nos utimur saccharo, item spargunt nivem super cibos et sua edulia', 'sprinkle snow on their food and dishes as we would sugar'"[6].

Snow and freezing conditions are rare in Mediterranean low-lying areas, but in mountainous regions such as the Apennines of Italy and Pindus of Greece winters can be severe, and thick snow is common. Snowfall is heavy in many of the Mediterranean mountains with most falling during the winter months between November and March. However, permanent ice has been reported in Sicily from the Grotta del Gelo (Cave of Frost) at *c*. 2,030 m a.s.l. on Mount Etna. The cave is situated well below the regional snowline and again the presence of ice is likely to be controlled by local conditions[7].

Since the winters were long with abundant snowfall on the highest peaks, it was normal for snow to be preserved in mountain environments, with particular adaptations, even in the summer months. Considering the distance of the accumulation and conservation sites from the coasts, where the product was

[6] F. Braudel, *The Mediterranean and the Mediterranean World in the Age of Philip II*, volume one, University of California Press, Oakland 1995, pp. 27-29.

[7] A. Harding – J. Palutikof – T. Holt, *The Climate System*, and P. Hughes – J. Woodward, *Glacial and Periglacial Environments*, in J. Woodward (ed.), *The physical geography of the Mediterranean*, Oxford University Press, Oxford 2009, pp. 69-70 and 354-357.

sold, and the need to sell it quickly, this activity led to the development of transports and commerce.

This partially contradicts what McNeill claimed; for him the specialization of conservation and marketing of snow can take place under certain conditions: "Where mountains are tall enough, snow deep enough, and cities close enough, mountain people could turn a profit carrying mule-loads of snow down from the heights to people who needed it for food preservation or wanted it for sherbet and other luxury concoctions"[8].

Actually, snow could also be taken over long distances such as those that separate Etna from Malta by land and sea. Much depended on how it was "treated" at the origin.

The snow was initially accumulated in ravines or natural caves; later cavities were dug or covered structures were built, which in Italy and in Sicily were called "neviere"[9]. They can even be found in the "Sassi" of Matera, dug into the porous rock of the place; there cisterns, called "neviere", collected snow that was turned into ice and sold to residents for food preservation[10].

[8] J.R. McNeill, *The Mountains of the Mediterranean World. An Environmental History*, Cambridge University Press, Cambridge 2002, p. 124.

[9] A. Patané, *I viaggi della neve. Raccolta, commercio e consumo della neve dell'Etna nei secoli XVII-XX*, Mediterranea, Palermo 2014, p. 11.

[10] V. Ramseyer, *Cave Dwelling*, in P. Horden – S. Kinoshita (eds), *A Companion to Mediterranean History*, Wiley, Chichester 2014, p. 226.

Figure 2. *Antonino Mancuso Fuoco, The Capitini in the 1920s accumulated snow to trade it in warmer months*

There is a toponym on the Etna volcano that recalls this activity. The woodland belt, which arrives at height of about 2000 meters, reaches the caves or Fosse della Neve.

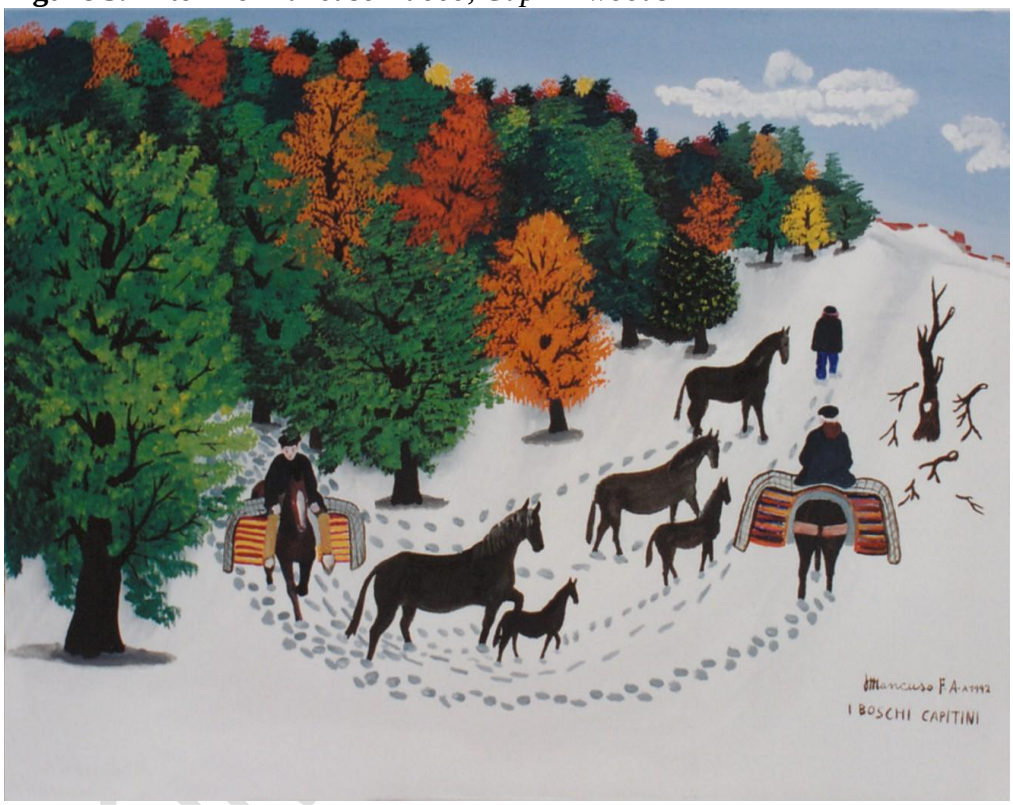
After all, in winter the volcano is completely covered with white snow, that the volcanic ashes sometimes cover with a gray tint; but even in the greatest heats the mountain guards snows in its caves[11].

[11] *Guida generale di Sicilia e Malta*, Giannotta, Catania 1889, pp. 4 e 108

When in 1769 sir William Hamilton, English ambassador who already knows Vesuvius, makes his ascent on the Sicilian volcano, he notices that there are many "subterraneous cavities known, on other parts of Etna".

Of course some of these could be exposed to the risks of volcanic eruptions; indeed in 1776 the lava erupted from Etna "buried the caves, snow warehouse belonging to the Bishop of Catania". However, many cavities remained on the slopes of the volcano and "some of them are made use of as magazines for snow; the whole island of Sicily and Malta being supplied with this essential article (in a hot climate) from mount Etna"[12].

Figure 3. *Antonino Mancuso Fuoco, Capizzi woods*



On Mount Scuderi, in north-eastern Sicily, as on the other Sicilian mountains, there are many paths leading into the woods; the multiplicity of activities related to forest resources always stands out: blacksmiths, tanners, wood artisans, pig farmers crowd the woods of medieval and modern Sicily. The interpretative key in explaining the events of the Sicilian forest is entirely internal to the economic and social system: the proprietary regime and the social system cause the intense use of the forest and sometimes lead from orderly exploitation to forms of waste. In the specific case of Mount Scuderi in the Modern Age, medicinal herbs abound; it shows a deep fissure caused perhaps by a vigorous earthquake; but above all on the summit there are great

[12] W. Hamilton, *An Account of a Journey to Mount Etna*, in "Philosophical Transactions", 60, 1771, p. 8; V. Amico, *Dizionario topografico della Sicilia*, second edition, volume I, Di Marzo-Lao, Palermo 1858, p. 430.

pits for the snow, which in summer was transported to Messina and in the contours[13].

Nevertheless, the city was not equipped for snow conservation, as shown by an episode reported by a local chronicler. New Year's Eve in the 1700 was stiff due to the cold caused by the snow flocked in large quantities over the city and the countryside. The snow reached 25 centimeters in height and in the streets barely one could walk; it lasted several days. Many people and entire religious houses wanted to make provisions for the summer, but they lost the expenses and the labors, because for lack of suitable pits, they did not even find the water[14].

Figure 4. *Antonino Mancuso Fuoco, How the Capitini stored the snow in the 1930s*

The snow, in the Early Modern Age, arrived all over the island on the tables of Sicilian monks and nobles from a network of "neviere" placed at an altitude varying from 1100 to over 2800 metres, in sites today unreasonable. This is the case of the "neviere" precisely of Mount Scuderi, at 1253 metres, and of Mount Cavallo (1216 metres) in the Peloritani Mountains, which supplied the maritime cities of Val Demone. A real ice factory was active for centuries in Alì, on the slopes of the Peloritani mountains. There the "nivaroli"

[13] V. Amico, *Dizionario*, cit., p. 84; M. Armiero, *Ambiente e storia: indagine su alcune riviste storiche*, in "Società e storia", n. 83, 1999, p. 155.
[14] G. Cuneo, *Avvenimenti della nobile Città di Messina*, vol. I, Regione siciliana, Palermo-Messina 2001, pp. 419-420.

were active, who dug pits several meters deep, covering them with dry-stone walls and stepladders. In these pits they accumulated the snow to the brim, well massed; then they covered the snow with branches of ferns and with a layer of earth. In summer season the pits were reopened and ice was taken in squared blocks, which was used for domestic and business purposes[15].

The productive and commercial cycle of ice, in a Sicily characterized by the feudal system, could archetypically be described as follows: a "gabbelloto", who rented an area on which "neviere" insisted, subcontracted the "production" of snow to another "gabbelloto". The latter provided for the recruitment of a team of workers who, after the snowfalls, reached the highest peaks of the mountains to fill with snow natural or specially dug pits. The team of "nevaioli", assisted by other workers, who provided food supplies and the construction of temporary dwellings for the night, was divided into various groups, according to the different tasks to be performed: some workers gathered snow (with the help of hoes, shovels and wicker baskets) bringing it to the "neviere"; another group of workers provided for it to be dug into the ditches, pressing it with the feet, or making it trample the surface to one or two pairs of mules or, again, beating it with "mazzeranghe" (mallets) of wood. When the pits had been completely filled, they were covered: the surface of the compressed snow in the neviera was covered with straw, ampelodesm and twigs so that it would not be reached by the rays of the sun that would cause liquefaction. At this point, the workers' team was dismissed, while an employee remained near the pits for their custody and for the sale of the ice.

From the high mountains to the inhabited centers, the nocturnal transport on mule-back of the lots of sold snow was carried out by the same "nevaioli" and/or by the muleteers and was carried out by the same system used by the farmers to transport the straw: a large mesh rope served as a container for the straw which, in turn, wrapped the ice block, cut in standard format with special swords and placed inside a bag[16].

On the Tyrrhenian side of north-eastern Sicily the "snow pits" were placed in the municipalities of Longi and Galati Mamertino[17].

The Messina elevations are in line with the typical snow limit of the Mediterranean, which was at 1200m in Galicia, north-western Spain, and in Liguria, western Italy, while the 2000m limit in the Atlas Mountains of Morocco is an exception. because of its geographical latitude[18].

In Liguria, in addition to traditional businesses, it is worth mentioning an activity that seems to take place with particular intensity along mountain routes, as evidenced by the findings of "neviere" near the Bocchetta pass: more than five meters deep wells in which the snow was accumulated, which in summer was sold on the Riviera. In the highest and most ventilated points on

[15] C. Gregorio, *Antichi mestieri e tradizioni popolari della Valle del Nisi*, in https://www.academia.edu/35096941/ANTICHI_MESTIERI_E_TRADIZIONI_POPOLARI_DELLA_VALLE_DEL_NISI (access 30.2.2019).

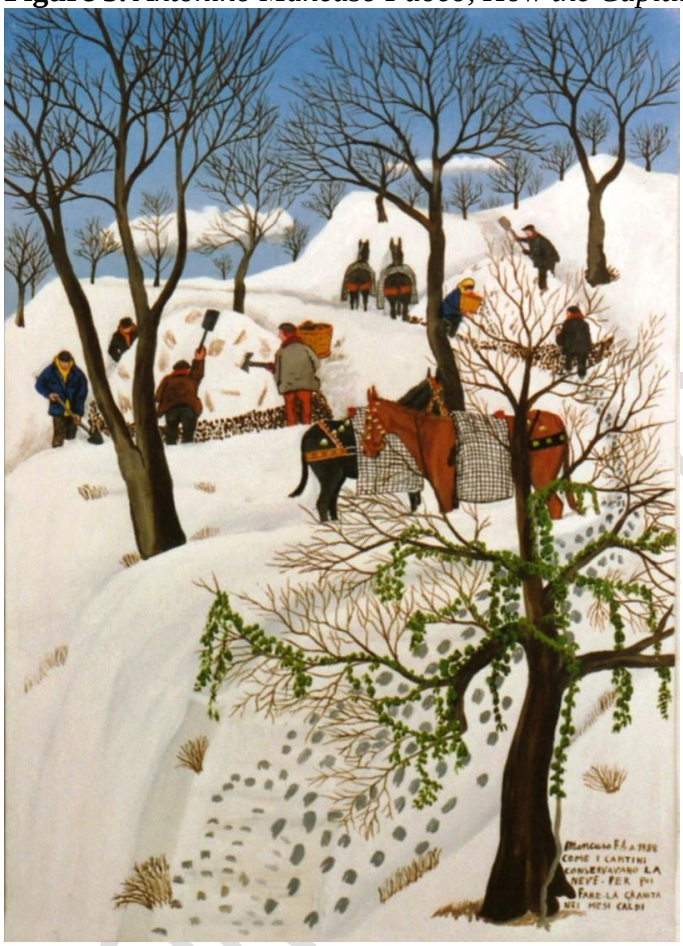
[16] R. Sottile, *Neviere e "nevaioli" in Sicilia. Osservazioni (a posteriori) su un interessante settore della cultura dialettale*, in G. Marcato (ed.), *Tra lingua e dialetto*, Unipress, Padova, 2010, pp. 215-216.

[17] A. Patané, *I viaggi*, cit., p. 18.

[18] J. Blondel et al., *The Mediterranean Region. Biological Diversity in Space and Time*, second edition, Oxford University Press, Oxford 2010, p. 27.

the shaded side of the Apennines, pits were dug and lined with stone. Every time it snowed the woodsmen threw snow in abundance then pouring it at night with ice water. The "neviera" covered with earth and branches could keep the frozen snow until summer, when it was taken to Genoa for the banquets of the rich Genoese gentlemen[19].

Figure 5. *Antonino Mancuso Fuoco, How the Capitini stored the snow*



If we consider the history of the white snow intertwined with the green environmental history and the red social history, we can write a sort of white, red and green story of Italy. A cross-section of social history regarding Italian history opens up on the issue of snow, but we give a special attention to the history of snow in Sicily, that Fernand Braudel was forced to neglect for lack of related historiography in his time.

[19] P.P. Poggio, *Un paesaggio storico: l'Oltregiogo genovese*, in "Altronovecento", n. 39, 2018, p. 20.

Figure 6. *Antonino Mancuso Fuoco, The Nebrodi mountains crossing*

In western Sicily in 1831 an agreement was in force between some contractors of Sambuca, who supplied the shops of Sambuca, Montevago, St. Margherita, Mazara, Marsala, Menfi, and a group of Sciacca with which they

shared the local market, alternating every fifteen days and covering possible shortcomings with reciprocal delivery and good agreement[20].

But in 1842 a dispute breaks out. Baron D. Calogero Oddo claims the exclusive right to collect, store and sell snow in Sambuca. The baron declares that he owns the "niviere" of the territory of Sambuca for purchase made by the princess of Rammacca.

By ancient convention with the Municipality, no one else could collect snow and sell it to the public, whenever there was a lot of snow in the winter, how much it was possible to collect with the shovels and store in the "niviere". But the judge resolves the dispute by saying that the monopoly is an attack on freedom, which every citizen has to collect and keep in their plots without any restrictions the snow, and to sell it with full freedom in the same municipality or elsewhere[21].

The snow fallen on the mountains could be baronial or bishop's property and the management of this flourishing activity was often indirect because the owners assigned through a public auction ("gabella") the right to collect and sell the product to entrepreneurs who could be of aristocratic origin, but also bourgeois or ecclesiastic. Often the contractor relied on a trusted man, the "nevaiolo", who in fact took care of coordinating the work together with the owner of the "neviera", in recruiting the men who had to fill it in the mountains.

One of the main centers of this particular activity was Etna, the mountain *par excellence*. Many are the reasons why the volcano became one of the most active centers in Sicily for the production of ice.

The peculiar aspects of this activity include the property and commercial monopoly held by the bishop of Catania and the economic-financial presence of noble families and bourgeois entrepreneurs as contractors[22].

Precisely on the side of noble families jurisdictional conflicts regarding the snow trade could break out with the bishop of Catania. In the eighteenth century the Di Giovanni family established strong relationships with the Order of the Knights of Malta, for the promotion of the social status of their members. Thus Marianna Di Giovanni was awarded the Order of Malta's Grand Cross of Devotion, due to the various "attentions" shown to the Order, first of all the supply of snow collected on Etna, which she sent "at her own expenses and without compensation through ships to Malta". The gathering and sending of snow to Malta was actually the subject of jurisdictional disputes with the episcopal "Mensa" of Catania, which held the exclusive right "to enclose the snow to trade it, with the prohibition to anyone to store the snow, sell it, put it on the market, and negotiate it in its own land". This is expressed in a memorial sent to the viceroy Fogliani by the bishop of Catania Salvatore Ventimiglia in 1762, which states that it was always customary for Catania, its territory and Malta to have been supplied by the Catania "Mensa". A letter from the viceroy Fogliani to the "secreto" of Acireale follows after the instance of the "gabelloto" of the snow of the episcopal "Mensa" of Catania, "to make

[20] A. Patané, *I viaggi*, cit., p. 21.
[21] *Atti della Gran Corte dei Conti delegata*, 1842, second semester, Virzì, Palermo 1843, pp. 148-151.
[22] A. Patané, *I viaggi*, cit., p. 22.

the provision of the island of Malta, so that the officials of Trecastagne and Pedara would not prevent the natural of those lands to take care of pits". The bishop of Catania maintained this right by virtue of its ancient quality of baron of the city and of the hamlets of his "Bosco", dating back to the Norman domination[23].

Not for the snow, but for political and religious reasons tensions and contrasts could grow between the kingdom of Sicily and the Order of the Knights of Malta, as happens in 1754. In that year the trade between the Sicilian kingdom and the island of Malta was closed, although Pope Benedict XIV and the Christian King of France were deployed in favor of the knights. And yet, for benevolent order of the Bourbon king, the rigour of the block had been moderate, with the permission that snow could be transported in the summer.

This was very necessary, particularly for the sick, nor could it be taken anywhere but from Sicily. Various projects were then made to end this covert war with Malta, but none was accepted. Finally the peace was concluded in the following year thanks to the intervention of Spain, France and the Holy See, and the snow could resume its normal course between Sicily and Malta[24].

The snow exported to the island was a big deal for many people. But there was a problem that made it all more complicated, not to say spasmodic: the snow could only come by sea. It was embarked in powerful brigantines, or in fast feluccas, or in tartans or capacious frigates. Often the Knights made their own galleys available to Maltese snow contractors. Boarding took place in the ports of Catania, and the snow came from the "neviere" of the Prince of Paternò or of the bishop of Catania in partnership with the company of Prince Villafranca; but also from the port of Syracuse, coming from Buccheri or Palazzolo, when the "lords of the snow" of the Iblei mountains were interested[25].

Beyond the question of supplying Malta, attributed by Braudel to its origin from Naples, while the origin was Sicilian, the finished product was easy to find in all Sicilian communities, both inland and on the coast.

This happened through a dense network of marketing and distribution of the product that from the Sicilian mountains, passing through the "trazzere" (routes), arrived in the retail sales counters.

[23] State Archive of Palermo, *Alliata*, vol. 1713, ff. 529rv, 531rv, 536r, in F. D'Avenia, *Nobiltà allo specchio. Ordine di Malta e mobilità sociale nella Sicilia moderna*, Mediterranea, Palermo 2009, p. 153.

[24] G.E. Di Blasi, *Storia cronologica dei viceré luogotenenti e presidenti del Regno di Sicilia*, Oretea, Palermo 1842, pp. 588-589; F. Ciappara, *Malta, Napoli e la Santa Sede nella seconda metà del '700*, in "Mediterranea", a. V, 2008, pp. 178-179.

[25] L. Lombardo, *Il viaggio della neve nel Mediterraneo: dalla Sicilia all'isola di Malta*, in "Dialoghi Mediterranei", n. 8, 2014, p. 1.

Figure 7. *Antonino Mancuso Fuoco, Capitini smugglers cross the Nebrodi mountains*

The snow trade in the Catania area allowed great gains, wealth and luxuries to a small class of contractors, and simple earnings for a normal life for many others. For centuries the roads of the cold were in ferment; the snow, turned into ice in the volcano, was taken to the seaports from where it left for other Sicilian centers and abroad. This flourishing activity continued until the first half of the 20th century, when it had to surrender to the competition of industrial ice, disappearing from the market stalls and from the memory of the people.

Even in Palermo, which was not lucky enough to have a relief high over three thousand metres in the vicinity, a real "white gold" mine, the snow never failed, being regularly consumed in the form of sorbets and ice creams at the tables of the nobility and served to the people during the festivities. Even the people could find delight in tasting sorbets, above all on special occasions, but usually there was no lack of drinking water or wine refreshed with snow.

There is a history of snow in the mountains of south-eastern Sicily too. Mount Lauro, the highest mountain in the Val di Noto is covered "in the winter with dense snow, which the Buccheresi gather in the caves, and then no small trade do in neighboring countries". The snow indeed appears, still in the mid-nineteenth century, among the products exported by Buccheri, along with wheat and oil. Even on the island of Lipari, a very unexpected place, the

highest mountain is used, Mount S. Angelo, and "a large amount of snow is preserved by the inhabitants covering it with grass and earth"[26].

The Scottish traveller Patrick Brydone arrives in Catania from Messina in 1770. Then he leaves for the excursion on Etna, stopping at Nicolosi, where he observes the activity related to the storage of snow and is informed that the volcano provides snow to most of the neighboring countries, even to Malta. In fact in those years a regular shuttle service between the Sicilian ports and Malta provided snow for the tables of the members of high society. The Maltese snow deposit was located for several years inside the port of Valletta, on the site known as "Victoria Gate". The same ships authorized to transport snow and other merchandise were used by their resourceful captains also to ferry girls as new prostitutes in Malta[27].

The construction of pits for the preservation of snow and ice, the work of men, women and children of the mountain countries in gathering and storing snow generated productive activity in all the mountains of Mediterranean Europe.

At the beginning of the Modern Age many Spanish regions were equipped with pits, "nevieras", "elurzulos" where the snow was collected and stored for several months of the year, according to the geographical position, altitude and proximity of the marketing places[28].

"It is from the work of Monardes, entitled *Tratado de la Nieve y del Bever Frio,* that much insight into the use of snow in sixteenth-century Europe is to be gained. We learn of the various ways in which it was preserved, of the different methods adopted for cooling beverages, of the distances it was sometimes transported, of its use by Arab doctors and the last Moorish kings of Granada. In his own time, Monardes writes, 'snow was in common use at the court of Castille by their Majesties, the Princes and Princesses, and all the great Nobles and Gentlemen and the common people who reside there'. Some of the grandees of the court kept private snow stores in the mountains, and in Castile drank their water icy cold even in the winter"[29].

Yet a trade in ice and snow stored in the mountains and arduously later moved downslope to centers of population created an altogether distinctive landscape of structures, labor, travel, economies, and appreciation. In the Sierra Nevada south of the Andalusian city of Granada, famed for its Alhambra, Generalife, Albaycin, and a vast landscape of farms, orchards, and olive groves, the 800-year presence until 1492 of Al-Andalus established a culture sophisticated in its use of mountain snow. That massif, even today often snow-capped in August and September along its northern edge, provided a ready supply of hard-frozen water for a system of snow caves and storage cisterns

[26] V. Amico, *Dizionario*, cit., pp. 583 and 619; A. Busacca, *Dizionario geografico statistico e biografico della Sicilia*, second edition, Nobolo, Messina 1858, p. 23.
[27] A. Patané, *I viaggi*, cit., p. 81.
[28] A. Patané, *I viaggi*, cit., pp. 87-88.
[29] E. David, *Harvest of the Cold Months. The Social History of Ice and Ices*, Faber and Faber, London 2011, p. 42. The reference is to N. Monardes, *Tratado* de la nieve y del bever frío, En casa de Alonso Escrivano, Sevilla 1574. See also I. Dìaz-Delgado Peñas, *Estudio critico. Nicolàs Monardes Alfaro*, Fundaciòn Ignacio Larramendi, Madrid 2015. There is an Italian edition of the *Tratado* of Nicolàs Monardes, *Trattato della neve e del bere fresco*, Raccolto per M. Giovan Batista Scarampo, Stamperia di Bartolomeo Serinartelli, Florence 1574.

where harvested snow and cut blocks of ice could be preserved and then, as demand warranted, moved to the city of Granada by teams of mules and other pack stock[30].

Also in Spain, as in Sicily, as in many other Mediterranean regions, the dialogue is renewed, which is not yet faded, between the snow and the cold of the austere mountains and the low areas, in which orange trees and civilizations flourish[31].

The snow activity permeated the administrative life of cities and kingdoms that saw in it an easy way to fill the municipal coffers or the royal treasury. An example of this comes from Palermo: in 1770, to revive the finances of the city, it was decided to increase the taxation on wine and "to increase the price of snow a grain more per pound"[32]. The same operation was repeated in Palermo in 1772, always aiming at wine and snow, demonstrating the essential nature of those consumer goods[33].

Today it appears evident that, besides having influenced the taste or the gastronomic fashion, the snow was also a gigantic affair, which conditioned the life of entire generations of mountain populations, contributing to the survival of the poorer classes in parallel with the enrichment of the great contractors nobles or bourgeois.

In the largest island of the Mediterranean the snow supply was widespread everywhere: almost all the Sicilian mountains, Etna, Peloritani, Madonie, the mountains around Palermo, Agrigento and Enna, were equipped with a large number of "neviere", caves, shelters and ravines where the snow was collected and preserved in the winter months, to be treated and used throughout the year for medicinal purposes, for preserving food, for refreshing water and wine during the torrid summer months, for the manufacture of sorbets or cold syrups[34].

The white snow is an expressive colour of the Mediterranean also turning our gaze to the East indicated by the French geographer Xavier de Planhol, who in the dusty days of summer in Anatolia saw Turkish peasants selling snow in the markets, snow used to chill beverages at a time when artificial refrigeration had yet to conquer the world.

He realized that the snow came, on horseback, from the nearby mountains. But a large part of the Mediterranean and Middle Eastern world moved around the snow, from the muleteers to the sailors, all engaged in an incessant movement to bring freshness to the populous cities. Those men are also the creators of a complex network of routes on land and sea: the Mediterranean routes of the "fresco", of the freshness[35].

[30] P.F. Starrs, *Review* of M.T. Martìnez, *Los neveros de Sierra Nevada. Historia, Industria y Tradiciòn*, in "The AAG Review of Books", 4, 4, 2016, p. 217.
[31] F. Braudel, *Memorie del Mediterraneo*, cit., p. 24.
[32] G.E. Di Blasi, *Storia cronologica*, cit., pp. 622-623 and note 2.
[33] L. Bianchini, *Della storia economico-civile di Sicilia*, vol. 1, Stamperia reale, Napoli 1841, libro II parte prima, p. 11; a p. 193 si ricorda come ancora nel 1840 la vendita della neve sia prerogativa esclusiva della città di Palermo.
[34] A. Patané, *I viaggi*, cit., p. 101.
[35] X. De Planhol, *A story of snow: towards an historical geography of chilled beverages*, in "Journal of Historical Geography", 20, 2, 1994, p. 117.

Thus, telling the story of snow, we return to the Mediterranean of Braudel, highlighting not only the role of the environment, but also how humans interact with their environment over time, long term in this case. Time is not linear, but plural, as it is space, which must also be thought of and analyzed in its complexity. Braudel's lesson applies also to Sicily, which can thus reconcile an exquisitely local history and a story open on all the horizons of the sea and on all those paths that have not left isolated the mountains[36].

Indeed, even the snow in the Mediterranean, and in particular in Sicily, tells a story of partial isolation of the mountains from the urban centers, in relation to the animated and visible movement on the coasts, starting from the ports and port cities. The networks of work on what was considered a precious resource are vast, as are the networks of exchange, which in the case of snow in the Modern Age can only be limited by the perishability of the goods transported by land and especially by sea. The climatic rhythms, both "long" and "evénementiel" ones, influence also transports, as it happens more evidently for snowfall. At this point the conflicting process that gives rise to the capitalism of the contemporary age, with its poor consideration of the climate, of the earth, of the atmospheric variations, of the geographical conditions and social arrangements that had developed in co-evolution with the environment, even the mountainous Mediterranean can appear more clearly[37].

This process of the contemporary age presents new questions for those who want to face the history of the Mediterranean mountains again: does the mountain landscape evolve through cyclical phases around an "average" situation axis or does it pass through states of equilibrium relentlessly called into question up to a definitive phase decided by the more or less intentional anthropic actions, especially of the last century[38]?

Once again – taking care not to slip on the snow – the attempt is to explain how climate and seasonal rhythms create a physical unit and how communications across and around it create a human unit[39].

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[36] M. Aymard, *La Sicilia nel* Mediterraneo *di Fernand Braudel*, in A. Accardi (ed.), *Ricordando Braudel. Mediterraneo, un mare condiviso*, Regione Siciliana, Palermo 2014, p. 24.

[37] Points for reflection, even if fairly dated and ideological, are on this subject in W.A. Dunaway, *The Incorporation of Mountain Ecosystems into the Capitalist World-System*, in "Review", vol. 19, n. 4, 1996, pp. 357-359.

[38] B. Debarbieux, *Review* of J.R. Mc Neill, *The Mountains of the Mediterranean World, an environmental history*, in "Revue de géographie alpine", tome 81, n. 3, 1993. p. 104.

[39] J.A. Marino, *Braudel's* Mediterranean *and Italy*, in "California Italian Studies", 1, 1, 2010, p. 3. See also J.R. Hudson, *Braudel's ecological perspective*, in "Sociological Forum", vol. 2, n. 1, 1987, pp. 146-165.

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