
SEVERAL ASPECTS RELATED TO THE SPRING WATER FOUNTAINS PRESENCE IN DOBRUJA

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Abstract: In a region constantly affected by drought and with very few permanent rivers, human settlements in Dobruja are strongly dependent on local underground water resources. Dependent on local geology and geomorphology, two main techniques were used in the water harvest process: by fountains and wells where the phreatic water is at great depths, and with spring fountains in the places where springs are present. Due mainly to this reason, most part of the spring fountains are located in the southwestern part of Dobruja, area formerly inhabited by Turks and Bulgarians.

The present study resumes the (still ongoing) work made in the last three years concerning data gathering related not only to the presence of spring fountains in the Romanian part of Dobrogea, but also to their actual state, in order to identify those with historical and cultural value, for a later requirement for official protection.

Rezumat: Într-o regiune constant afectată de secetă și cu puține ape curgătoare permanente, așezările umane din Dobrogea sunt dependente de resursele locale de apă subterană. În funcție de geologia și geomorfologia locală, două tehnici principale au fost utilizate în procesul de recoltare a apei: prin fântâni și puțuri acolo unde apa se află la adâncimi mari și prin cișmele acolo unde izvoarele apar la zi. Din acest motiv, majoritatea cișmelelor sunt situate în partea de sud-vest a Dobrogei, regiune locuită anterior de turci și bulgari.

Prezentul studiu rezumă activitatea (încă în desfășurare) realizată în ultimii trei ani privind colectarea datelor referitoare nu numai la prezența cișmelelor în partea românească a Dobrogei, ci și la starea lor actuală, pentru a le identifica pe cele cu valoare istorică și culturală, în vederea unei ulterioare protecții oficiale.

Keywords: Dobruja, spring water fountains, Ottoman Empire.

Cuvinte cheie: Dobrogea, izvoare, Imperiul Otoman.

INTRODUCTION

In the Dobruja region, constantly affected by drought and with a poor river network, the most part of the human settlements are dependent on groundwater resources. Until the relative recent upgrade of water infrastructure for most villages, two ways for water harvest were used, strongly dependent on local geology and geomorphology: either through wells in areas where water is located at significant depths, or through spring water fountains where springs are present.

As the studies (in fact few in number for the territory of Romania¹) on the popular techniques of access to drinking water do not treat the subject of spring water fountains,

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the intent of the present study is to draw a new research direction, by inventorying the spring water fountains on the Romanian territory of Dobruja, and through detailed analysis of their characteristics. Taking into consideration the patrimonial value of those already recorded in the List of Historical Monuments and in the National Archaeological Repertoire, as well as the possibility of identifying in the field other spring water fountains with historical or cultural value, the recording and documenting of the present fountains in this region and their state of preservation were identified as a proper action, and a first step for their future protection. Subsequently, as the amount of information increased, it was disseminated to the public through social networks, a relatively easy way to exchange views on this subject.²

This study is a synthesis of the personal documentation activity, started three years ago and which is currently still ongoing. The analysis of bibliographic and cartographic sources as well as the completion of these data by field trips are the main ways in which disparate information is brought together in an attempt to complete a less addressed chapter, that of human relations with this scarce resource of Dobruja.

BIBLIOGRAPHIC AND CARTOGRAPHIC INFORMATION SOURCES

Regarding the bibliographic data, sporadic mentions of these spring water fountains appear only after 1913, when following the Peace Treaty from Bucharest, the counties of Durostor and Caliacra (Southern Dobruja) became part of the Kingdom of Romania. Short articles in the local press identify their Ottoman³ origins and try to link their numerous presences in the landscape to the Ottoman campaigns of the late sixteenth

¹ For the Dobrudja region, studies on the characteristics of the reel wells existing in the south of Constanța County were carried out by the ethnographer-researcher Hedwig Ulrike Rușdea, with the occasion of the reconstruction of such a fountain (from Chirnogeni village) within the Astra Museum.

² <https://www.facebook.com/Ci%C8%99mele-Dobrogea-110838110276960>

³ "Among other ancient monuments that can be found here, there are also the numerous Turkish fountains, most of which were built in the 16th century. On some of them this date can still be read today. (...) The number of these spring water fountains, as well as the long length of the stone gutters in which the water is collected, would give rise to a historical conjecture, - if we take into account the date of construction of some of them, which coincides with the reign of Michael the Brave, - namely, that Durostor was probably, at that time, an area of concentration of the Turkish armies and especially of those who marched against this ruler in 1594, and that these fountains were built specifically to satisfy the needs of the Turkish cavalry. We find this opinion in Mr. Cămărășescu's book, "Durostorul", printed in 1915 by him as prefect of this county, and in which he exposes the situation of this region from all points of view" (author's translation). Petrescu 1932-1933, 53-56.

century. Sometimes their importance in the life of the community is emphasized, as a point of attraction⁴ and core of some social activities.



Fig. 1. Drawing of the spring water fountain in the old barracks of Babadag (Bearn 1828).

The oriental atmosphere given by their existence in the landscape also contributes to the first visual representations of the fountains in the Southern Dobruja, either in photographs (most of them in the form of postcards) or in paintings located in the Dobrich-Balchik region. Most likely, this time gap of almost forty years can be attributed to the weak presence of spring water fountains in the urban settlements of Northern Dobruja and their surroundings, being therefore more difficult to observe. The situation changes simultaneously with the incorporation of the Southern Dobruja in the Romanian Kingdom, when their location in the urban centres of the new territory (Silistra, Tutrakan, Dobrich, Balchik) is noted as a

⁴ "The fountains, inherited from the Turks, built of stone, flowered with arabesques, play a big role in the life of the fair. Here, at certain hours, lads and girls gather, idylls are knotted innocently, the gossips of the slum are sold, friendships are bound and untied, marriages are prepared, guilty ties, adulteries, divorces are plotted. The spring water fountain takes the place of the salon; the fountain is the place where the races approaches and merge; the fountain, more than the school, is the alembic where the spiritual unity of the heterogeneous fair is distilled" (author's translation). Vladimir 1933, 2.

defining element of the human footprint on the natural environment. Until now (1913), their existence is considered only in geographical syntheses of the Dobruja territory, (especially in the case of spring water fountains located outside the villages and which could be used as more important landmarks)⁵, or as additional elements in various other accounts of the Dobruja region, such as the description of a fountain in northern Tulcea County by Martin Gruneweg in 1582⁶, that of the fountain inside the Babadag former barracks, sketched by Hector de Bearn in 1828⁷, or that of the fountain in the village of Mahmut Cuius (today Izvorul Mare) by Thomas Abel Spratt in 1854.⁸

Concerning the cartographic sources, the special importance of fountains from a military point of view, at a time when cavalry and artillery regiments depend entirely on the use of animals, determines the need to map them in military maps since the early years of the Romanian administration in Dobruja, drawing often done at a quality that determines a much better agreement to the reality on the ground than in the case of new maps. The different editions of the maps of the General Army Staff (Fig. 2) thus complete the relatively poor information provided by the bibliographic sources, both by directly indicating the presence of the spring water fountains and indirectly by suggestive toponyms and hydronyms such as Cișmele' Hill or Cișmele' Valley⁹. The change in the name of some valleys over time, as well as in some cases the omission of existing spring water fountains on the most recent military maps makes the information contained in those maps even more valuable. In addition, the representation on the old maps of some settlements that are now non-existent anymore has contributed at certain moments to the discovery of some spring water fountains that would have been more difficult to identify, or, together with bibliographic data associated with those localities, provided information about people who built them.

Moreover, the cartographic information was completed in certain situations with the help of satellite images, especially useful for identifying the spring water fountains built at a later date than the last edition of the military maps accessible for

⁵ Ionescu 1904, 83, 90, 91, 96, 113, 163, 388, 478; *Marele Dicționar Geografic al României* 1898, 547-548.

⁶ *Călători Străini* 2011, *Supplementum* 1, 88.

⁷ Bearn 1828, 15.

⁸ On the route between Kustenje and the Danube. Spratt 1856, 203-210.

⁹ On the old military maps, the number of these valleys for the whole of Northern Dobruja is twelve. There are currently only five left. The causes are the change of name, in certain situations, or the lack of mapping of that valley on the new maps, a situation registered as the total absence of the name.

consultation, and also for mapping a good part of the existing fountains in the Bulgarian area of Dobruja. Although not the subject of the present study, the location of these spring water fountains was necessary to define the data that make more probable their existence in a certain region of Dobruja.



Fig. 2. Detail of the Ostrov–Almalău area on the map of Dobruja (1887 edition).

The last and most important step is to identify the presence of the fountains in the field and record certain of their characteristics¹⁰ in a database created for this purpose. This stage often allowed the collection of information provided by the inhabitants of the region and helped to discover spring water fountains that are either non-existent on maps or difficult to identify on satellite images, or the causes that led to the degradation or disappearance of some of them.

By corroborating data from different bibliographic sources with those provided by these maps, and supplemented with data collected from the field, the distribution of most spring water fountains in Dobruja was determined (Fig. 3); a distribution which can be considered representative for the purpose of this study, even if through future identifications of other spring water fountains new locations will be added.

¹⁰ Type of construction, used material, general condition of the construction, etc.

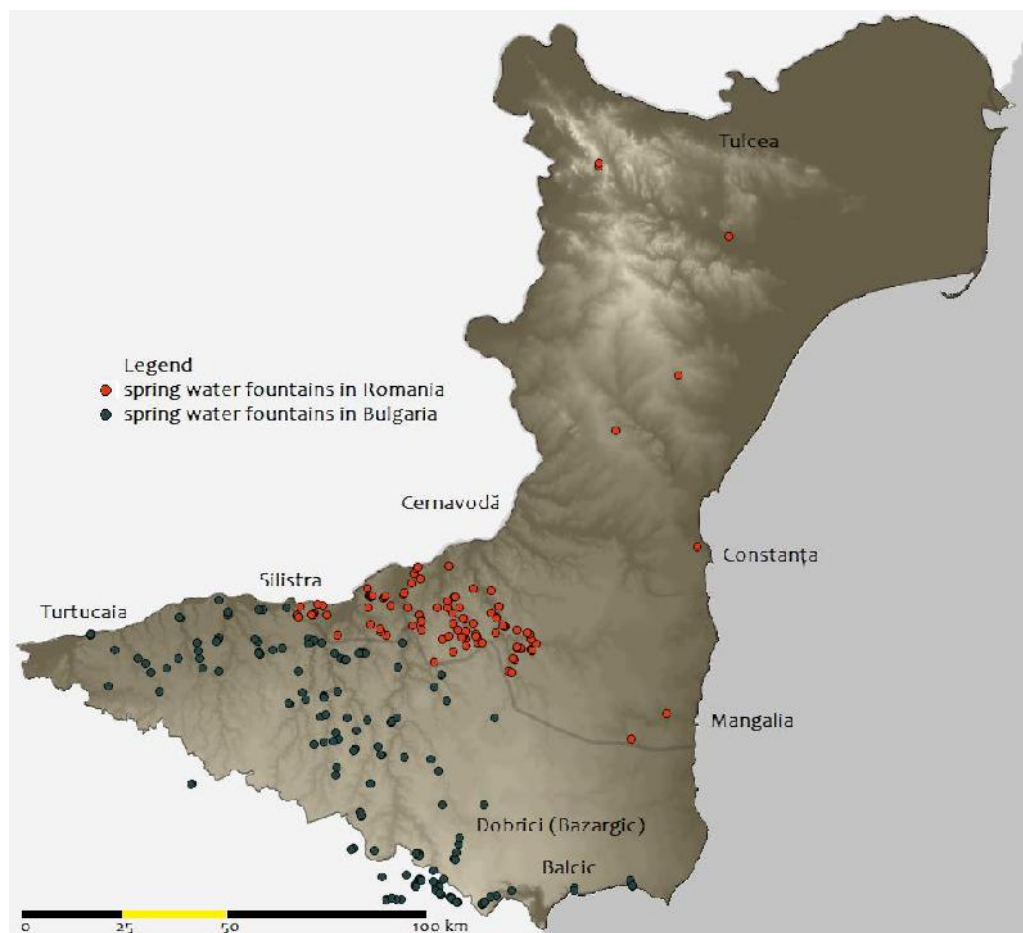


Fig. 3. Distribution of spring water fountains on the territory of Dobruja (Romania & Bulgaria).

This distribution of spring water fountains within the Dobruja territory is relatively easy to explain once the local geographical conditions have been identified, especially from a hydrogeological point of view. In southern Dobruja, with the exception of the spring water fountains located along the Danube in the Ostrov–Oltina area, where the aquifers are confined in permeable Pliocene strata,¹¹ a large part of the fountains are fed by deep aquifers in Sarmatian limestones. Because in the southwest of Dobruja the respective limestones are above the level of the valleys, the aquifer layer is sectioned by them, appearing in the form of springs that are often captured through the spring

¹¹ Manolescu 1923.

water fountains¹². The main advantage of using springs (and spring water fountains) fed by Sarmatian aquifers is given by the constancy of their flow, little influenced by the spatial and temporal variations of precipitations in a year.

In the case of central and northern Dobruja, where the presence of rocks capable of maintaining aquifers is much lower, most springs are supplied with water from the southern part of Eastern Carpathians¹³ that reached the region by tectonic fractures, dissociating the flow of springs from the existing local climate regime. Dependence on feeding through fractures, however, has generated situations in which reductions in spring flows have been noted after major seismic events, sometimes leading to the abandonment of some spring water fountains that have become useless. Because despite the rather large volume of water that is supplied by some of these resurgences, their number is relatively small compared to the situation in southern Dobruja, the catchments through the spring water fountains will also be less numerous (Fig. 4).

WATER CAPTURE TECHNIQUES

Because the spring water fountains are in fact captured springs, in a region like Dobruja where animal husbandry has always been a basic activity, the main goal pursued by their architecture is to simultaneously provide the necessary water to a large number of animals, maintaining at the same time the water quality. Therefore, except in very rare situations, one can speak of a similarity in the structure of these constructions. Protecting the spring and gutters against sediment clogging or collapses thus requires the creation of a system to support the immediately adjacent slope through a retaining wall strong enough to withstand pressure. For this reason, the choice of both the material and the construction technique converges towards the natural stone, shaped in parallelepiped blocks, and arranged in a relatively small number of horizontal rows.

Similarly, for the construction of gutters the stone has the best characteristics,¹⁴ especially since the activity of the animals at the time of watering affects their edges, causing their degradation over time. The need to fill all gutters with fresh water requires that a continuous circuit of water through them be maintained, a circuit that will be interrupted in case of damage to the edge of a gutter. Being the most used elements in the structure of a spring water fountain, the respective gutters that end up being worn are most often repaired (and completely replaced in time) using cement.

¹² Radu, Protopopescu-Pache 1955.

¹³ Braikoff 2007.

¹⁴ A trough made of wood has so far been found in one place, at a tap in the village of Carvăn, but it is not certain if the original construction had them all made of wood, or if it replaces a damaged stone trough.

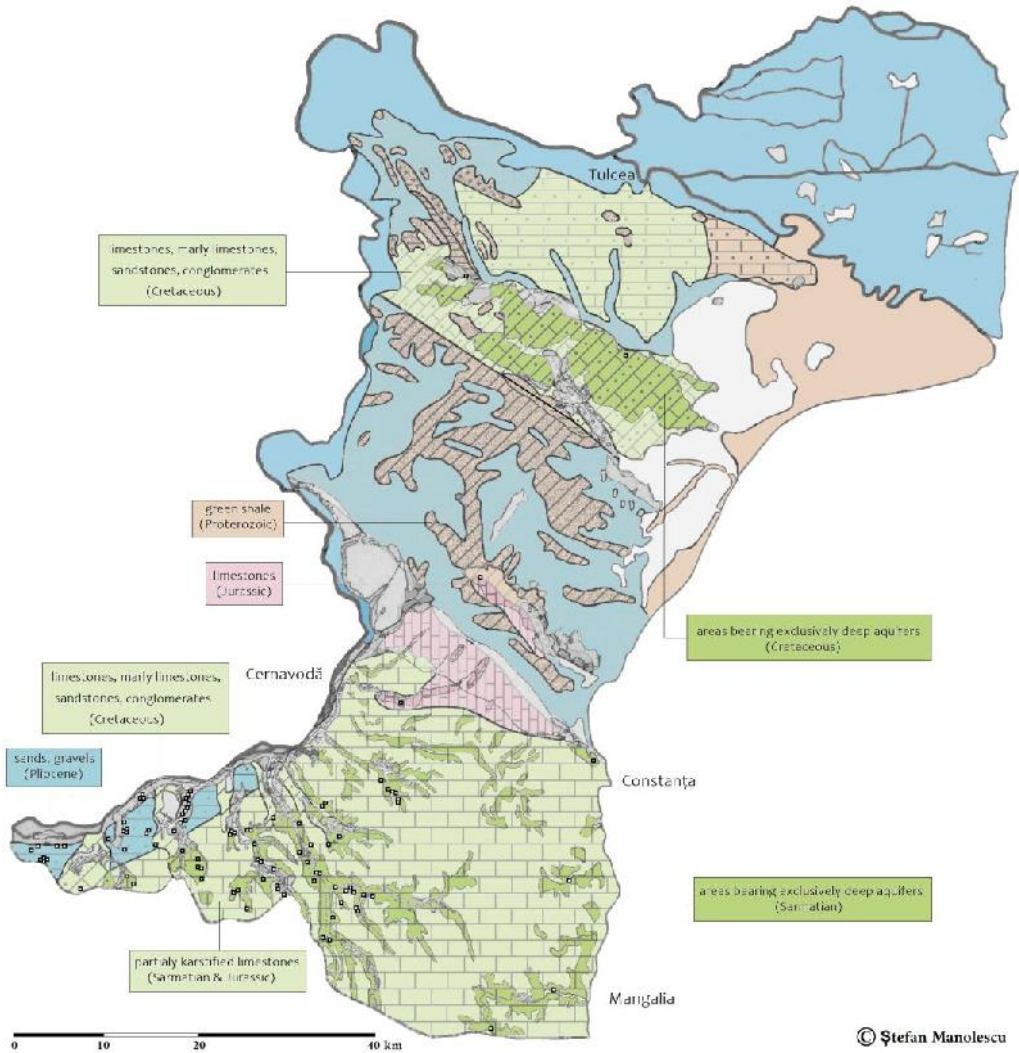


Fig. 4. Distribution of spring water fountains on the territory of Dobruja (Romania) in a hydrogeological context.

This current ease in obtaining modern binders has also led to less attention in selecting the type of rock, the cases of spring water fountains built of unshaped stone and cement becoming more common, along with the rarity of those that retain all the original elements.

The central element of any fountain, and which gives the distinctive feature of each of them, is the structure for water source capture. Sometimes completed with a

sediment settling chamber, most often without, and releasing water through one or more pipes, it is generally located at one end of the tap, so that the supplied water can circulate through all the gutters. The study of the rare taps in which the distribution pipes are placed in the middle of them, with the (often unsuccessful) intention to create two directions of filling the gutters, confirms the advantage of the most common type of construction, given the avoidance of water stagnation in the gutters.

Results of several archaeological research carried out in the Babadag area,¹⁵ corroborated with information provided by chroniclers,¹⁶ indicate the use in certain situations of ceramic pipes for capturing and transporting water from the spring to the long-distance fountain, if the surroundings in the immediate vicinity of a settlement would have been deficient in water and if the number of its inhabitants had justified the effort.



Fig. 5. Drawing of the old spring water fountain in the village of Adamclisi, where former friezes of the Tropaeum Traiani monument were used as gutters (Grigore Tocilescu).

Due to the fact that the existing rock types in Dobruja do not always favour the carving of flat surfaces that allow an almost perfect joint, or a hardness that determines a high resistance in time of the structure, in addition to using existing resources from local quarries located near the human settlements, there were also identified cases in which it was preferred to reuse some stone blocks taken from the ancient ruins located nearby.¹⁷

¹⁵ Vasiliu 1996, 195-224

¹⁶ "In the western part of the city, at the foot of the hill, there is a fountain called "Iusuf pasha's fountain", which flows like two spools. Apart from that, it has no other drinking water. The water known as the Yemeklik fountain, located an hour away from the city, was transported by tubes by the vizier shown above, who made it flow into the city and pleased the population, building fountains in several places" (author's translation). Mehmet 1980, 314.

¹⁷ Such a peculiarity can be observed at the tap in the village of Mireasa (Ghelengic / Gelincik), located in central Dobrudja. The predominant rock in the region is green shale, with an irregular cleavage and little resistant to weathering, and for this reason it was preferred to use limestone blocks, most likely taken from the former fortress of Ulmetum. The situation



Fig. 6. Spring water fountain in the forests of Oltina village.

POPULATION AND BUILDERS

The concentration of taps in the regions that were mostly inhabited by ethnic Turks and Tartars provides a first indication of the origin of their builders. Although the old names of human settlements in Dobrudja cannot always be considered a valid indicator of the ethnicity of the people who inhabited them at a given time, at least in the territories of Dobrudja, the distribution of Turkish and Tatar ethnic groups was compact until 1877. Thus, it can certainly be attributed to them an important role in the spread of that type of construction. The change of the ethnic structure by the emigration of a good part of the Muslim population after this year, simultaneously with the action of colonization of the territory by the Romanian administration, was also marked by what could be called cultural appropriation. The cases of existing

of the old spring water fountain in the village of Adamclisi, where friezes from the monument were used as gutters, also illustrates the saving of time and effort achieved by using the stones already present in the ancient ruins (Tocilescu Gr.). Other examples are the spring water fountain from Valea Cutiei and a spring water fountain in the vicinity of the village of Oltina (Fig. 6); in both cases stones from other constructions can be identified in their structure.

spring water fountains where a new founder leaves his mark were discovered both in the bibliography¹⁸ and often in the field. For villages inhabited by ethnic Bulgarians or Romanians who are located in favourable areas from a hydrogeological point of view, and also at relatively short distances from the mostly Turkish-Tatar settlements, the hypothesis of taking over this way of water usage can be issued. In fact, the absence of other ethnic groups (Germans, Circassians, Russians, Ukrainians, etc.) in these regions is most likely the reason why the spring water fountains builders belong only to the nationalities mentioned above.

The difficulty of access to drinking water in Dobrudja may explain a certain peculiarity of some of the spring water fountains raised by Muslims, closely related to the concept of *sebap*, and manifested by the desire of wealthy people, sometimes with a high social position¹⁹, to facilitate the daily life of locals through a special deed such as providing a source of water. For this reason, a special care for mentioning goodness is found in the form of texts that as a general rule mention the deed of mercy of the founder together with the blessing of those who will enjoy it, carved in stone, and placed above the mouth of water supply. Called *kitabe*²⁰ and noticed by the first travellers who occasionally described the fountains in Dobrudja, this detail can still be found in its original condition at several spring water fountains in the region,

¹⁸ „Climbing the Cocoș Valley, there is a stone tap, with a cold and crystalline water. The following inscription is engraved on the stone: "The Year of Christ 1867, August 15. With the help of God, this fountain was made by Mr. Theodor Moruian, for the holy Cocoș monastery, dedicated to the Holy Trinity, to commemorate him." The stone has a rectangular shape. The crescent and the sun at the bottom of the cross, as well as the scimitar below, show that it was made during the Turkish domination". *Marele Dicționar Geografic al României* 1898, 547-548.

¹⁹ The example of the fountain in the village of Izvorul Mare (former Mahmut-Cuius) and those in the village of Gherghina (former Defcea) whose construction is attributed to the governor Said Mîrza Pasha (Mateescu T.). A cartographic detail on an old map of Dobrogea (fig. 2) as bibliographical references (Sfințescu C.) associates the name of Ibrahim Pasha both by the existence of a fountain in the Ostrov-Almalău region, and by the fountains in the center of Dobrich (former Bazargic), fed with water brought from great distances. In the Babadag region, the foundation of the spring water fountain in the old barracks is linked to the name of Sultan Mahmud II, while for another located west of the city, that of the vizier Yusuf Pasha.

²⁰ So far (2021), such kitabe have been identified at the spring water fountains in the villages of Șipote (Ghiolpunar), Pădureni (Nastradin), Valea Țapului (Teke Deresi), Fântâna Mare (Bașpunar, Constanța County), Lespezi (Tekechioi), Văleni (Yenişenlia) and in the town of Babadag. A historical case is described by Hector de Bearn at the former barracks in Babadag.

sometimes even helping to establish the identity of the founder. A unique situation arises in the village of Mireasa (former Ghelengik), where such a text is written in the form of a poem on a marble slab that exceeds the dimensions of those usually encountered (Fig. 7).

During the field research, the builders' attention to the aesthetic factor was noticed several times, materialized mainly by decorating the water capture structure through stone-carved frames, or small niches of different shapes (*taș niși*) intended to house the drinking vessel. Although the original vernacular architecture of the fountains was either modified over time by interventions that degrade the unitary aspect (most often), or by acts of vandalism, details such as the *alem*-type decorative element of the fountain in the village of Pădureni (Nastradin) or the mouths of water distribution at the fountain in Izvorul Mare (Mahmut Cuius), carved in the shape of lion heads (Fig. 8), emphasizes the respect of the old builders of fountains for a rare vital resource.



Fig. 7. The spring water fountain in the village of Mireasa (former Ghelengik).



Fig. 8. Water distribution openings at the fountain in Izvorul Mare (former Mahmut Cuius).

CURRENT STATUS AND FUTURE ACTIONS

Closely related to the human presence in the region and having an important role in the local economy by creating the conditions for carrying out pastoral activity in good conditions, the taps represent, by their specificity, true symbols of the Dobrudja landscape. At present, their continued use in everyday rural life, as well as the disappearance of the technical skills needed to maintain their original appearance, makes them sensitive to most types of degradation caused by permanent activity. Very often uninspired interventions, frequently irreversible, affect a large part of the taps built by the former inhabitants, and very few keep all the original characteristics unaltered. Less common but still alarming are the cases of extreme vandalism, manifested even today by destroying the structure of the spring water fountains in search of alleged treasures. Apart from the direct anthropic action, the elements of nature also have a rather important role in the action of their degradation, being affected especially the spring water fountains located outside villages and which for various reasons no longer supply water.



Fig. 9. Spring water fountain in Ostrov village.



Fig. 10. Spring water fountain in Pădureni village (former Nastradin).

Documenting in the field the presence of the spring water fountains and their condition is only the first step. An ongoing concern is to raise public awareness through virtual media (a quick way that can run in parallel with research), to increase the attention especially of people in rural areas, who have constant access to spring water fountains and thus can influence locally future conservation decisions. Other potential directions of study, useful in such actions, are the analysis of construction techniques and materials used by the old inhabitants, to facilitate the possible rehabilitation of some now degraded spring water fountains. Moreover, conferring the status of historical monument is desirable in the case of taps with characteristics that qualify them for special protection (Fig. 9-10).

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