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IN HONOREM

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A SUGGESTED CHRONOLOGY FOR THE IRON GATES MESOLITHIC

Adina BORONEANŢ

Abstract: *While going through the main data on the Iron Gates Mesolithic, the present paper suggests a chronological approach of the local Mesolithic based on the important number of ^{14}C dates available at this point. Nevertherless, data is biased by the fact that important sites lack the publication of substantial archaeological data and new ^{14}C dates. The proposed chronology is provisional but adaptable to new information, when available.*

Rezumat: *Prezentul articol propune o cronologie a siturilor arheologice de la Porţile de Fier pornind de la importantul număr de date radiocarbon existente, în acelaşi timp trecând în revistă principalele informaţii referitoare la mezoliticul local. Lipsa datărilor pentru unele situri importante şi a publicării fragmentare a materialului arheologic constituie pentru moment una dintre principalele probleme. Cronologia propusă are astfel un caracter provizioriu, având însă calitatea de a putea integra viitoare date.*

Keywords: *Iron Gates; Mesolithic; Neolithic; absolute chronology.*

Cuvinte cheie: *Porţile de Fier; mezolitic; neolitic; cronologie absolută.*

In geographical terms, the Iron Gates used to designate only a part of the Danube gorges, a short area of approx. 3 km in length, between the villages of Vârciorova and Gura Văii. With the construction of the first hydro-electric power station at Gura Văii, the term of 'Iron Gates' was extended to the whole Danube valley between Baziaş and Gura Văii. With the building of the second dam further down, on the Ostrovul Mare Island, the term of 'Iron Gates region' extended further down, reaching the village of Gogoşu, Mehedinţi county (Figure 1).

In November 1963, the Socialist Republic of Romania and the Socialist Federative Republic of Yugoslavia signed an agreement regarding the construction of a first hydro-electric power system in the Gura Văii - Sip Km 943 area ('Iron Gates I'), to be followed by a second one, downstream, in the area of the 865-860 river km, called 'Iron Gates II'. The first stage of the project ('Iron Gates I') developed between 1965-1971, while the second one ('Iron Gates II') began in 1977 and was finished in general lines in 1985.

Short history of the research

The Iron Gates I

The rise in the Danube level with as much as 34 m at the dam and 12 m at the end of the artificial lake was going to flood both banks, affecting not only the human communities but also the archaeological sites. Under the circumstances, the Romanian Academy created the Iron Gates Complex Research Group, aiming to study the affected area in all its cultural and environmental aspects. Archaeological research was to take place along the whole left bank of the river, an area stretching for more than 125 km, from Moldova Veche to the village of Şimian.

During this first stage a series of sites, designated then as 'Epi-Palaeolithic' were identified and some, partially excavated: Climente I Cave - 1965, 1968-1969, Climente II Cave - 1969, Veterani Cave - 1964-1969, Cuina Turcului Rockshelter - 1966-1969, Schela Cladovei - 1965,1967-1968, Ostrovul Banului - 1966, Răzvrata - 1967, 1968, Icoana 1967-1969, Veterani 'Terasa' - 1969, Alibeg - 1971. All of them, apart from Schela Cladovei are nowadays submerged.

In many cases, possible sites were spotted without the option of being excavated, mostly because of the short interval left. It is the case of the Mesolithic finds on the alluvial plain at Vârciorova, another two locations on the Ada-Kaleh Island (sites that had already been affected by the Vauban fortress built on the top of them), Ieşalniţa (further upstream from the Roman fortress of Dierna), Dubova (on the banks of the local rivulet springing from 'Tăul lui Mila' pond - V. Boroneanţ, personal communication), Păzărişte (Comori 1978: 29), Vodneac, Ilişova, Islaz (Boroneanţ, V. 2000: 4), Tişoviţa (further up from the road ramification leading to the Eibenthal mine), Cozla, Drencova, Şviniţa km 1004, Plavişeviţa (near the border police headquarters, at the entrance in the Big Cauldrons - V. Boroneanţ, personal communication), Varniţa (Pescari-Coronini village), Moldova Veche, Pojejena (Boroneanţ 2000: 4).

On the right bank of the Danube[1], archaeological excavations took place at Lepenski Vir (1965-1970), Hajducka Vodenica (1966-1967, 1969) Padina (1968-1969 and two campaigns in 1970).

The last site to be excavated on the right bank during this stage was Vlasac (1970-1971) (Radovanović 1996).

The Iron Gates II (1977-1984)

The second stage of the project, with a maximum rise in the Danube waters of 12 m at the Iron Gates II dam included rescue excavations at Schela Cladovei, Ostrovul Mare (km 873, km 875 and Schela), Ostrovul Corbului ('Botul Cliuci') on the left bank, and Ajmana, Velesnica, and Kula on the right bank of the Danube.

As in the case of the Iron Gates I, certain sites were spotted with no time for further investigations, such as the Mesolithic ones on Şimian Island (on the northern bank of the island, upstream from the former pier, with a second location on the same bank but towards the middle area of the island), Şimian village ('La Isvoare' - south of the local springs, and a second possible location between the villages of Şimian and Hinova), Batoţi (north of the village), Izvorul Frumos and Vrancea (V. Boroneanţ, personal communication).

After the above mentioned sites were flooded, Schela Cladovei was the only place where archaeological excavations continued until 1997 (1992-1996 within a joint Romanian-British project), and with the exception of a small trench excavated in 2001-2002, research was not resumed until 2007, again within a Romanian-British joint project.

The environment and climate of the Iron Gates

Morphologically speaking, the Iron Gates region is composed from three geographically distinct elements: the Danube valley, the mountain ranges bordering it and the Turnu Severin depression

The Danube Gorges area stretches for 144 km between the localities of Baziaş and Gura Văii, featuring *"a dramatic narrowness of the valley and a continuous change on the general east-west flowing direction of the Danube"* (Roşu 1973: 278). It is formed of a series of smaller gorges, separated by depressionary basins: the Gura Nerei-Valea Rilii gorge, the Moldova Veche depression, the Pescari-Alibeg gorge, the Liubcova basin, the Berzasca-Greben gorge, a widening of the valley between Greben and Plavișeviţa, the Milanovač basin, Cazanele Mari (the Big Cauldrons), the Dubova basin, Cazanele Mici (the Little Cauldrons), the Ogradena-Orşova basin, and finally, the Iron Gates region proper. Exiting the latter, the Danube leaves the Carpathian area and enters the Turnu Severin depression (Ghinea 1997: 353, Geografia 1969: 277-8).

The changes in the river direction and the alternation of gorges and basins led to the development of a 'variety of meso and micro-climates, thus of various types of habitat' (Misić 1981: 65-7) with, as it shall be seen below, a great impact on the evolution of the human communities in the area.

The area also shows perceptible differences from the temperate continental climate of Romania and Serbia. The average annual temperatures are 0.5-0.8°C lower when compared to the surrounding areas. The average temperatures in July are also 2-3°C lower, and those in January, 0.1-1.2°C higher. There is 20% more rain than the average annual percentage in Romania.

Four types of microclimates were established for the Iron Gates (with a number of local variants), two of them activating in areas where archaeological sites were identified and possibly playing a major part in location choice of the respective prehistoric communities:

- the microclimatic complex of the islands (bearing significance for the sites of Moldova Veche, Ostrovul Banului, Ostrovul Şimian, Ostrovul Corbului, Ostrovul Mare), characterized by average thermal indicators controlled by the caloric regime of the Danube.
- the microclimatic complex of meadows and lower terraces, affecting the sites at Pescari-Alibeg, Icoana, Răzvrata, Ieşelniţa, Schela Cladovei, Veterani Terasă, Pojejena, Șușca, Gornea, Liubcova, Cozla, Şviniţa, Cuina Turcului.
- the microclimatic complex of middle terraces (II-IV), with a colder climate compared to that of the meadows, with less sunny days on the western and northern slopes, with daily average temperatures 1-2°C lower compared to the meadows.
- The microclimatic complex of the higher terraces (V-VII), characterized by accentuated dynamics of the air, more nebulosity, and a further reduction of sunny days.

During the Pleistocene, the topographical configuration of the land, the altitude, soil and subsoil types, made the climatic oscillations less harsh in the Iron Gates area compared to the mainland.

At the end of the Younger Dryas (c. 10 000-9000 BC) the climate throughout Europe was warming up. Using pollen analysis, the study of varves and the ice cores, the reconstruction of the European climate during the Holocene was possible, showing a succession of different climatic periods: the Pre-Boreal, Boreal and the first part of the Atlantic were associated with the Mesolithic, while the Atlantic saw the development of the Neolithic.

At the onset of the Atlantic, the period of 6300-6000 cal BC is associated with the most drastic cooling period of the Holocene, also known as '8.2 ka cold event', determined it seems by the melting of the Laurentide icesheet and the flowing of this vast amount of cold water into the North Atlantic (Magny *et al*. 2003). This cooling phase was detected in various Northern Hemisphere marine and terrestrial climatic records (Gronenborn 2009).

During the '8.2 ka cold event' Europe went through a climatic period characterized by a drop of 2-3°C in the average temperatures, correlated to a change in the atmospheric circulation, and, on a regional scale, to a change in the precipitation regime (Figure 2.1): the area between 43°-50°N latitude (covering also the Iron Gates) saw a climate far wetter than before and after, while in the southern areas the climate become drier (Bonsall 2007: 56). It is this cooler and wetter period that is associated with the end of the foraging economy in the Iron Gates and the arrival of first agriculturalists.

Epipalaeolithic and Mesolithic in the Iron Gates

First field surveys on the left bank[2] started in 1961, followed by excavations, from 1964 and ending in 1971 when the banks were completely flooded. Given the purpose of the research (salvage as much from the flood threatened sites), only the areas in the nearby vicinity of the river were surveyed, thus explaining the apparent lack of Mesolithic sites on the higher terraces and also along the valleys of the small tributary rivers.

From early 1961, following soundings in Climente II Cave and Cuina Turcului rockshelter, human habitations dated to the end of Pleistocene were identified. Two separate stages - seen as cultural layers within the sites - were postulated and assigned to the Epipalaeolithic. With the progress of the research, this local Epipalaeolithic facies was, in time, described as 'Clisurean' (after the local name given to the Iron Gates Gorge, 'Clisura' in Romanian (Nicolăescu-Plopşor 1965, Boroneanţ 2000), 'Romanellian' (Mogoşanu 1968), 'Romanello-Azillian' (Păunescu 1970), 'Epigravettian' and eventually 'Tardigravettian of Mediteraneean origin' (Păunescu 2000).

On the left bank, a second cultural aspect was uncovered by V. Boroneanţ and Mişu Davidescu, first at Schela Cladovei and later on in many of the upstream sites. Its features were defined as very different from those of the earlier Epipalaeolithic (the new facies had a poorer lithic industry - based mainly on quartz and quartzite, but a very rich bone and antler industry, distinctive hearths and houses, and, at Schela Cladovei, a significant number of human burials). This new aspect was named by V. Boroneanţ as the 'Schela Cladovei culture', and was seen as a 'natural continuation of the Clisurean, with possible influences of the quartzitic Palaeolithic' (Boroneanţ 1973). Fl. Mogoşanu, on the other hand, the main excavator of the Upper Palaeolithic sites in Banat, saw Schela Cladovei culture as the direct descendant of Palaeolithic traditions from Hoţilor Cave (Băile Herculane) and the Banat Mountains (Mogoşanu 1978a).

During the following years, various researchers assigned the discoveries in the Iron Gates sites to the 'Protoneolithic' (Srejović 1968), 'Epipalaeolithic' (Boroneanţ 1969, 1970b; Letica 1971; Păunescu 1970, 1978), 'Epipalaeolithic' in its earlier phase and 'Protoneolithic' in the final one (Srejović 1971, 1979), 'Epipalaeolithic' for the earlier sites (Cuina Turcului, Climente II) and 'Mesolithic' for the later ones (Mogoşanu 1978b; Prinz 1987; Păunescu 1984; Srejović 1988, 1989), 'Mesolithic and Early Neolithic' (Jovanović 1972, 1973, 1974), 'Epipalaeolithic/Mesolithic' (Boroneanţ 2000).

Given the scarcity of absolute ^{14}C dates (at least for the left bank) the chronological distinction between the Epipalaeolithic and the Mesolithic was at times studied merely based on differences in the lithic typology and use of raw materials (Păunescu 1996, 2000), suggesting perhaps the existence of an early Epipalaeolithic layer (not noticed at the time of the excavations) on most of the sites on the left bank (Icoana, Răzvrata, Veterani Terasă, Schela Cladovei).

Initially, discoveries on the two banks of the river were seen as uncorrelated, and Schela Cladovei and Lepenski Vir were defined as cultural groups with parallel evolutions (Boroneanţ 1972, 1973; Srejović 1970), with some of the Romanian archaeologists considering the site of Lepenski Vir as an isolated phenomenon within the archaeology of the Iron Gates (Păunescu 1980, 1984, 1996, 2000).

The very first to formulate the hypothesis of a common ground between the two banks were the Serbian archaeologists. The suggestion was received with some reluctance by their Romanian counterparts, reluctance explained both by the lack of monumental architecture and carved boulders on the left banks sites, and also by the chronological differences suggested at the time by the very few ^{14}C dates.

Thus, local chronologies were put forward for each of the individual sites, based mostly on the stratigraphic sequences observed by the respective authors. Correlations and cultural parallels were sought among the various sites based on the architectural features, lithic typologies, bone and antler industries. But as was observed elsewhere (Bonsall 2008), very few of these proposed chronologies (Figure 3) were at the time backed by reliable series of ^{14}C dates. Many more ^{14}C dates (see Appendix 1) have been published since, showing (at least for the sites of Lepenski Vir, Vlasac and Schela Cladovei), major chronological inconsistencies between the initial subdivisions in phases, on one hand, and the results of ^{14}C dating, on the other hand (Bonsall *et al*. 1997, 2000, 2002, Bonsall 2008, Boroneanţ *et al.* 1999).

With the availability of new ^{14}C dates, a provisional chronology of the sites was suggested, and is illustrated in the table below[3]:

Period (cal BC)	**Age**	**Representative sites (with calibrated ^{14}C)**
13 000-7200	Early Mesolithic (the former Clisurean/Azillian, Tardigravettian)	Cuina Turcului, Lepenski Vir, Padina, Vlasac
7200-6300	Late Mesolithic (Schela Cladovei-Lepenski Vir culture)	Hajducka Vodenica, Icoana, Ostrovul Corbului, Ostrovul Banului, Schela Cladovei, Vlasac
6300-6000	Final Mesolithic (Schela Cladovei-Lepenski Vir culture)	Lepenski Vir, Alibeg?
6000-5500	Early Neolithic	Cuina Turcului, Lepenski Vir, Padina, Schela Cladovei, Vlasac

The Early Mesolithic
13 200-7200 cal BC

Based mainly on the typological analysis of the respective lithic industries, on the left bank, five sites were traditionally associated with this period: Climente II Cave, Cuina Turcului rockshelter, Veterani Cave, Ostrovul Banului (in the Iron Gates) and Băile Herculane-Hoţilor Cave, some 60 km up north, on the Cerna river valley (a major tributary of the Danube).

Radiocarbon dates (see Appendix 1) also suggest an Early Mesolithic occupation for the sites at Vlasac, Lepenski Vir and Padina, although the duration and character of these occupations remain rather obscure (Bonsall 2008). Location wise, apart from Ostrovul Banului, all Iron Gates sites seem to cluster in the upper area of the Gorges.

The scarcity of sites during the Late Glacial could be explained by the climatic instability during the respective period: *"The fractionation of nitrogen and argon isotopes at the end of the Younger Dryas cold interval, recorded in Greenland ice, demonstrates that warming at this time was abrupt. This warming coincides with the onset of a prominent rise in atmospheric methane concentration, indicating that the climate change was synchronous (within a few decades) over a region of at least hemispheric extent"*(Severinghaus *et al.* 1998: 141). This indicates that the Danube level fluctuated a lot from season to season, caused by the melting of snows and glaciers, presumably forcing the communities of hunter-gatherers to occupy the higher terraces, an area that had not been surveyed during the 1960-1970. It is not impossible that the banks of the river were inhabited during the nice seasons, but the flooding and erosion during Younger Dryas and later have distroyed any trace of evidence from the very beginning (Bonsall 2008).

The sites were located in the near vicinity of the Danube bank (or the Cerna river in the case of Băile Herculane), in caves and rockshelters. Lithic typology appears homogenous (endscrapers, backed bladelets, splintered flakes) with a predominance of local flint as the main raw material. Medium sized rock boulders, with small circular depressions and at times painted with red ochre were documented in most of the sites and were seen as a link to the Epipalaeolithic groups to the south, in the Italian peninsula. They were also used at times as diagnostic finds when claiming proof for earlier occupations of certain sites. The bone industry is mainly represented by awls and projectile points, with very few occurrences of tusk and antler. Decorated pieces exhibited the 'fishnet' pattern (crosshatching), parallel incisions and meanders.

The human population of the Early Mesolithic is well documented through burials and good ^{14}C for sites on the right bank of the Danube (Padina, Vlasac, Lepenski Vir). Formal disposal areas occur within the settlements. Position in the grave varies: extended on the back with arms and legs stretched, on one side with legs slightly flexed, lying on the back with flexed legs splayed on both sides and soles touching, or sitting in the Turkish position. Initially, based on 'stratigraphic' observations, some of these burials had been attributted to the Lepenski Vir - Schela Cladovei culture (Late and? Final Mesolithic) but the ^{14}C dates showed differently.

As far as the left bank is concerned, burials were found at Climente II Cave and probably Cuina Turcului. Stratigraphic and contextual information was the decisive factor for their cultural determination but no ^{14}C dates are yet available for the human remains.

It is even more difficult to talk in general terms about the architecture, as most such features are very poorly dated and documented - if at all, on both banks of the Danube. In most cases we still rely heavily on the initial local stratigraphies and suggested house/hearth-shape typologies. Apart from being largely subjective, these make incorporating new data from unpublished documentation rather difficult and raise questions over faunal and archeobotanical determinations, at times originating from unclear chronological contexts. Still, stable isotope studies for the sites of Vlasac, Lepenski Vir and Padina, suggest that at the beginning of the Holocene, local communities relied heavily on the resources of the river, but significantly less than those of the Late Mesolithic, after 7200 cal BC. Diet analyses show that fish was eaten throughout the year, despite the fact that fishing might have taken place on a seasonal basis. This also pointed to the existence of some means of preserving the fish for later consumption, indicating a certain degree of sedentarization of the Early Mesolithic communities (Bonsall 2008).

The Late Mesolithic

7200-6300 cal BC (the 'Schela Cladovei-Lepenski Vir culture')

Based on newer or older (recalibrated) ^{14}C dates there are nine sites where human activities are documented during the Late Mesolithic: Hajducka Vodenica, Lepenski Vir, Răzvrata, Icoana, Padina, Vlasac, Schela Cladovei, Ostrovul Banului, Ostrovul Corbului. Another two - Veterani Terasă (Veterani Terrace) and Ostrovul Mare - are likely candidates, when considering various architectural features similar to above listed ones.

Summary

The Late Mesolithic hunter-gatherer communities in the Iron Gates were almost always associated to sedentism, house building, intensive exploitation of the local resources, food storage, exchange and social complexity (Voytek and Tringham 1989; Radovanović and Voytek 1997; Bonsall 2008).

It is clear that sites in the Iron Gates appear to be diverse and hard to classify. Part of the problem is the bias introduced by excavations themselves (size and intensity of excavation, excavations means, authors of the excavations, etc). A second factor might be site preservation issues limiting the research at the time (Ostrovul Banului was already partly under water, Icoana was covered by the Austrian road, river erosion was present almost everywhere) making difficult to tell how much of the sites was affected and how. In many cases, information on site size and organization is impossible to infer .

Chronology of the sites (see Appendix 1)

There are 45 date AMS ^{14}C for Schela Cladovei, all from secure contexts. 36 of them span between 8100-7450 BP (7100-6300 cal BC), and all dated burials (12) fall within this time frame. Vlasac also has a large number of AMS dates. In the light of these new dates, some of the features initially attributed to the Mesolithic, fall within the chronology of the Early Neolithic. Moreover, there are new ^{14}C dates sugesting (as seen above), the occupation of the site during the Early Mesolithic as well. Lepenski Vir, despite the fact that it has some ^{14}C falling within the earlier occupation phases, seems to point mostly for an intense activity of the site after 6300 BC (Bonsall 2008).

The rest of the sites are poorly dated, making a 'refined' chronology of the area difficult. There are five dates for Icoana, two for Hajducka Vodenica, one for Răzvrata and only two for Padina that fall within this time period. Ostrovul Corbului, on the left bank, has 5 dates, with four of them falling within the limits of Late Mesolithic.

Architecture

From publications, houses were of the single room, semi-sunken hut type, oval or trapeze shaped. The oval ones were noted at Veterani Terrace, Icoana, Ostrovul Banului. The trapeze shaped ones had the entrance on the large side and were dug at variable depths (0.32m at Schela, 0.40m at Icoana, 0.82m at Vlasac) (Bonsall 2008). The floor of the 'house' was a scattered mixture of rocks, bone, antler (tools included), lithics, at times disarticulated human remains (mandibles - Veterani, Ostrovul Mare, Schela Cladovei).

The rectangular hearths, with the border made of worked stones appear less frequent on the left bank, and mainly on the lower part of the Gorges (Schela Cladovei, Ostrovul Banului, Ostrovul Mare, Ostrovul Corbului). The simple round hearths seem to be a lot more common, with examples in all sites. On the left bank, presence of the hearths inside the house was almost always documented. Sometimes they occurred outside houses, but no clear connection between the two could be established.

Postholes were observed at Vlasac, Veterani Terasă, Ostrovul Banului. Small pits dug into the floor of the house/outside the house might have been used for the storage of raw materials (antler, flint). In the exterior of the houses, similar small pits but containing a large number fish bones - perhaps for storage purposes, were documented (Bonsall 2008, Boroneanţ and Boroneanţ 2009).

At Vlasac, out of the 43 excavated houses, some fell chronologically into the time frame of the Early Neolithic (6000-5500 cal BC). These are in fact the larger 'houses', with a trapeze shape and facing the Danube, with analogies at Lepenski Vir and Padina B.

Burials

An impressive number of burials were assigned to this period at Lepenski Vir, Vlasac, Padina on the right bank, and at Schela Cladovei on the left one. Burials were also documented at Icoana, Ostrovul Corbului, Kula (Boroneanţ 2010a, Boroneanţ and Boroneanţ 2009, Radovanović 1996), but in much smaller numbers, with size of the excavation explaining perhaps the small number of skeletons.

In most cases the burial rite is inhumation, although claims for cremation have been made for Schela Cladovei and Vlasac (Boroneanţ 2000, Borić *et al*. 2009). Skeletons were generally found in extended position on their back, hands along the body or on the pelvis/chest. Lying on one side with arms and legs slightly flexed was also reported. The presence of disarticulated bones was explained either as extraction of certain bones and their separate re-inhumation at an ulterior moment or as remains of disturbed burials (Bonsall 2008; Boroneanţ 2010a).

Both at Schela Cladovei and Vlasac skulls were found buried separately, as a group or as a single item (Boroneanţ *et al.* 1999, Boroneanţ and Boroneanţ 2009). Again, this suggestes the extraction of the skull from the grave, after the soft tissue was gone, an argument also supported by the lack of cut-marks on the bones. Such practices were noted in the Natufian sites in Levant, as a characteristic of the PPNA (c. 9500-8800 cal BC), in connection with worshipping of the ancestors and the preservation of the social memory of the community (Bonsall 2008).

It is debatable though whether the chronological overlapping of the funerary space and the living space is real. In most of the sites, field reports talk about the dead being buried under the floor of houses or around hearths. In the case of the Schela Cladovei, within the first group of burials presented, the skeletons appeared under the level of the floor, and around the hearth, but there is no indication that they were introduced after the 'house' was built (Boroneanţ and Boroneanţ 2009, Boroneanţ 2010a). It is thus possible, that the living and the dead occupied indeed the same space but at different times (Bonsall 2007, 2008).

In some cases the funerary space had been used for a rather long period of time: at Padina, the 12 skeletons found in the funerary chamber (and covered with stones), provided dates starting from the Early Mesolithic to the Late one (Bonsall 2008: 258; Jovanović 2008). The funerary practice of covering the body with stones, was also documented at Lepenski Vir, both during the Early and the Late Mesolithic (Radovanović 1996, figs. 4.2, 4.6). The practice of using stones to cover the skeletons was also noted on the left bank at Schela Cladovei and Ostrovul Corbului, but lack of ^{14}C dates makes impossible to say when did this practice started (Boroneanţ and Boroneanţ 2009, Mogoşanu 1978a, Boroneanţ 2010b).

Social status - although suggested by the presence in some graves of shell beads (at times in impressive numbers like at Ostrovul Banului and Schela Cladovei (Boroneanţ 2000) - is difficult to discuss. Traces of red ochre on skeletons were reported in most of the sites with burials. Other items reported as associated to burials were flint and bone/antler implemenst - but in most cases it was impossible to tell whether they were part of the grave goods or part of the infill of the pit. Although a

systematic study was never undertaken - most of the published data being fragmentary - there does not seem to exist a status differentiation based on sex or age.

Presence of the domestic dog in the area was documented from the Early Mesolithic (Cuina Turcului, Ostrovul Banului), but the Vlasac dog burial so far appears as a singular case, although it occurred in other parts of Europe (Boroneanţ 2010a, Radovanović 1996, Bonsall 2008).

Subsistence

Hunting has always been seen as one of the major sources for food and raw materials in the Iron Gates. Hunted game included deer, roe, wild boar but perhaps also animals hunted for fur, such as brown bear, wolf, otter, badger. The presence of bird bones explained their hunting both for meat and feathers. Large fish was caught, together with freshwater mussels and snail, completing the riverine diet. The large quantities of fish bone found, and their size mainly, raise the question of storage. With at least a semi-sedentary population, food storage was an important issue, and although the Iron Gates area was rich in resources, providing for food during winters must have been difficult. Fishing is abundant on the Danube during March/April and September /October. Catfish is less active in winter while sturgeon can be easily caught only during their migration period (Bonsall 2008).

Unfortunately, no features that could be safely associated with food storage have been reported. Still, it was suggested that the so called rectangular hearths (with no traces of burning on the inside) might have been used as storage recipients (Voytek and Tringham 1989). Small pits filled with fish bones were reported on the left bank at Schela Cladovei and Ostrovul Corbului (Bonsall *et al*. 1997, Boroneanţ 2010a, Boroneanţ 2010b). On the other hand, storage containers made of hide, tree bark, wood or other materials are likely not to have survived (Bonsall 2008).

Plant remains are rare in the archaeological record. Even at Schela Cladovei where flotation was employed during 1992-1996 excavations, their presence was scarce (Mason *et al*. 1996). Undoubtedly, although gathering fruit and berries would not have been difficult in a habitat such as the Iron Gates, it is rather a time and energy consuming activity, and needs a specialized gear. Analysis of the Mesolithic diet (on the Vlasac population) suggested that 60-80% of the food was of aquatic origin, probably mostly fish, considering the number and the size of the fish bones. As for the rest of 20-40% of food of terrestrial origin, it is impossible at this point to discern between the meat or plant/vegetable consumption (Bonsall 2008).

It was suggested that the living animals themselves were the means of storing food. A possible later Mesolithic occupation was sugested in the present paper for Cuina Turcului. Studying the faunal assemblage from this site, Al. Bolomey observed the unusually large number of dog remains, pointing to dog consumption (Boroneanţ 2010a). Dog bones are also very numerous at Vlasac (the second important animal (20%) after deer (68%), wild boar coming only to 12%). They have high percentages at Schela Cladovei also (Bonsall 2008). The number of broken and disarticulated bones, the breakage patterns of the long bones and skull also might point to dogs as a possible food source (Bökönу 1975: 168). For Padina, A.T. Clason suggested the same thing (Clason 1978). Also, a change in the dog size for the Iron Gates sites from Mesolithic to Neolithic (larger in the former period and smaller in the second) could be an indicator of a change in the utilitarian use of the dog (Bökönyi 1975: 168, Bonsall 2008).

Exchange perhaps occurred between the Iron Gates communities and other groups, as suggested by the presence of shells of Adriatic or Mediterannean origin (Srejović and Letica 1978, Boroneanţ *et al*. 1999). Exchange implies contacts with other groups, and it is hard to believe they could only be of a trading nature. After C. Bonsall (Bonsall 2008: 263), such communties (of tens of individuals perhaps) would not have been viable unless they functioned within a larger social network, providing for an exchange of goods and information, religious ceremonies and even mating.

Such contacts might have been at times violent, as suggested by the number of trauma cases within the Schela Cladovei (15%) and Ostrovul Corbului population, causing in many cases the death of the individual (Bonsall 2008, Mogoşanu 1978a). Such manifestions, although more seldom, occurred on the right bank of the river also (Roksandić 2000, 2008, Bonsall 2008).

The Final Mesolithic

6300-6000 cal BC ('Schela Cladovei-Lepenski Vir' culture)

The only site that has a good series of radiocarbon dates for the 6300-6000 cal BC is Lepenski Vir. At Schela Cladovei and Vlasac a conspicuous gap in the radiocarbon list was noted

(Figure 3.2), suggesting either a decrease in the site activity or a major change in the nature of the activity of the site (Bonsall 2008).

During this time period, the west and central Europe knew a colder and wetter climate, possibly causing in the area of the Iron Gates frequent and severe floodings of the banks and leading to the relocation of the local communities on the higher terraces (Bonsall *et al*. 2002, Magny *et al*. 2003, Bonsall 2007, 2008). Two or three sites from the left bank of Danube are possible candidates for human occupation during the Final Mesolithic, based on old ^{14}C dates and some of their cultural features: Alibeg, Ostrovul Corbului and Ostrovul Mare.

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The 6300-6000 cal BC period when the 'gap' in the ^{14}C dates occurred on most sites is the time when Lepenski Vir site flourished (Figure 3.2) and when houses with plastered floors and burials around the houses or under their floors are mostly documented on this particular site. The frequency of the decorated objects increased (among them the sculpted boulders - associated also to the Late Mesolithic but in smaller numbers), as well as the deposition of animal parts inside the houses (Bököny 1972; Dimitrijević. 2000, 2008; Bonsall. 2008). One explanation for the continuing occupation at Lepenski Vir might be the very special character of the site, perhaps a ritual centre (Srejović 1972; Gimbutas 1991).

Despite the appearance of new elements (questionable pottery fragments, polished stones) old traditions still persist. The type of burial does not change. Diet remains almost the same - as indicated by stable isotope analyses: Lepenski Vir people had a diet similar to those of the Schela Cladovei and Vlasac people during the Late Mesolithic, with a heavy reliance on aquatic resources, perhaps even a bit more so during the Final Mesolithic (Bonsall 2008: 266).

The most straightforward explanation for the gap observed in the ^{14}C dates is the 8200 BP cooling event, the most dramatic climatic oscillation of the Holocene (Bonsall *et al*. 2002; Magny *et al*. 2003; Bonsall 2008). For 3-400 years the whole Europe experienced a cooling of the climate of 2-3°C compared to the previous period, with temperatures during the winter even lower than that, and major changes in the precipitation system. Mesolithic sites were affected, with sites probably being moved up the terrace. Their absence in the archaeological record during this period might be the result of the archaeological efforts having concentrated on the floodable areas of the Danube valley during the building of the two dams and not on the higher terraces. It is rather unlikely that the communities left the river banks for good, given the fact the river was an excellent food source. At least fishing camps must have existed on its banks.

Final Mesolithic - Early Neolithic contacts?

Most Neolithic specialists accept nowadays the idea that Early Neolithic spread from the area of Thessaly and Marmara Sea up north, following the valleys of the main rivers. There is a Blagotin (Morava valley) radiocarbon date of ca 6200 cal BC, thus situating Early Neolithic at this time only 125 km from the Danube (Whittle *et al.* 2002; Bonsall 2008). Early Neolithic dates from the Pannonian Plain, from southern Romania (Măgura) or southwestern Romania (Schela Cladovei), as well from Transylvania are statistically inseparable, situating the beginning of Neolithic in the area around 6000 cal BC (Andreescu and Mirea 2008; Whittle *et al*. 2002; Biagi *et al.* 2005; Bonsall 2008). The contact was thus possible. Was it also probable?

We chose to follow below some of the main points, as proposed by C. Bonsall (Bonsall 2008) when discussing the posibility of Mesolithic-Early Neolithic contacts, backed by more data from the sites on the left bank of the Danube.

Discrepancies of old stratigraphies

Recent research on the pottery in problematic contexts (Garašanin and Radovanović 2001), showed that at least part of the 'unwanted' pottery fragments associated to some of the houses really belonged there (contrary to the idea of D. Srejović). They also seem to range between 7083±69BP (c.5950 to 5700 cal BC) (Bonsall 2008: 270).

At Padina, B. Jovanović (Jovanović B. 1987; 2008) observed that the trapeze houses associated (by. D. Srejović) to the Mesolithic, were frequently associated to Early Neolithic pottery.

At Alibeg, V. Boroneanţ observed the occurrence of pottery fragments inside 'Mesolithic' huts while at Ostrovul Corbului, Fl. Mogoşanu also identified some Early Neolithic pottery in a burial considered 'indubitably Epipalaeolithic' (Boroneanţ 2010a).

Correlating the field documentation with new ^{14}C dates on contexts seen as secure, D. Borić and V. Dimitrijević (Borić and Dimitrijević 2007) suggested that in fact pottery was present at Lepenski Vir around 6300 cal BC, thus, chronologically, during the Final Mesolithic. On the other hand, an attempt to seriate the trapeze shaped buildings based on their ^{14}C - buildings seen as characteristic to the Late Mesolithic period - situated them at the earliest at 7083±73 uncal BP (ca 5950 cal BC) Consequently, a division for the trapeze houses time of use, in an earlier phase with no pottery, and a later one when the pottery was present, was advanced (Bonsall 2007; 2008).

At Vlasac, both C. Bonsall (Bonsall *et al.* 1997) and D. Borić (Borić 2008) observed a discrepancy between the new radiocarbon dates and the old chronology (Vlasac I a, I b, II, III) proposed by D. Srejović, et Z. Letica (Srejović and Letica 1978) based mainly on stratigraphic observations, stressing the fact that stratigraphic layers are useful when establishing a cultural succesion at a 'feature' or a trench level, but this should not be easily generalized to the entire site.

At Padina also, from the radiocarbon dates obtained on faunal remains, it was suggested that the trapeze houses associated with pottery occurred earlier than 6000 cal BC (Borić and Miracle 2004). The hypothesis was later contested by C. Bonsall who invoked the unsecure context of the samples (Bonsall 2007: 58).

Infant burials

D. Borić and S. Stefanović suggested that the practice of burying neonates under the floor of the buildings (occurring at Lepenski Vir) is an element that spread from the Epipalaeolithic and Neolithic sites in the Eastern Mediteranean, and thus a proof of contact between the two types of populations (Borić and Stefanović. 2004). But, as observed (Bonsall 2008), none of these burials was dated, and thus their Late Mesolithic date is doubtful. This specific type of burial could as well be another special feature of the Lepenski Vir site.

Diet studies

Presence of carbon and nitrogen isotopes in the human collagen allows the determination of the diet type the individual of a certain community had. In the Lepenski Vir population from 6300 to 6000 cal BC (Final Mesolithic), two types of diets were noticed: a predominantly aquatic one (fish and shells, with high values of N^{15} and $C^{13,}$ present on other sites during the Late Mesolithic in the Iron Gates), and a second, showing a very important terrestrial component. This latter diet was determined only in three individuals, making them perfect candidates for individuals of a Mesolithic community who lived their lives in a Neolithic community and were brought back to be buried in their place of origin (Bonsall 2007: 62, Fig 5; 2008: 274) or who were perhaps individuals with special diet requirements.

Other evidence also indicates that some Mesolithic traditions survived in the Iron Gates area after 6000 cal BC: buildings with a trapezoidal ground plan continued to be erected on sites such as Lepenski Vir, Padina and Vlasac, together with the deposition of the sculpted river boulders.

Other suggested arguments for a contact between the two types of populations were the appearance in Mesolithic contexts of 'exotic' goods - such as the Mediteranean mussel and snail shells occurring on some sites, as well as the pyrotechnology of the lime plaster floors, a technique unknown in the European Mesolithic, but present in the Early Neolithic of Greece (Perles 2001; Bonsall 2008).

Conclusions

The Mesolithic sites on the left bank of the Danube were presented in general lines within a proposed chronological framework. The short time allocated for excavations and the difficult working conditions had influenced the outcome of the excavations. Quite a number of field surveys took place, with results still waiting for publication. When comparing sites, the quantity of the available information is highly variable, both between the right and the left bank, but also within the left bank itself. Variation is given not so much by the amount of published information but by the excavation methodology and professional interests on the part of the authors of the research. Lithic analysis played the major part, as the main excavators of the Mesolithic sites (Fl. Mogoşanu, Al. Păunescu, V. Boroneanţ) were all specialists of the Palaeolithic. Less importance was given to architectural structures and burials, as indicators of change within human communities. On the other hand, Mesolithic and Early Neolithic in the Iron Gates were always studied separately, as two different ages that had nothing in common. Each of them was 'diagnosed' taking as a starting point the type of most common archaeological finds for the respective age, *e.g.* lithic industry for the Mesolithic and pottery for the Early Neolithic.

With new available data, no longer relying just on stratigraphies and typologies, the image of the Iron Gates Mesolithic is starting to change, as we must distance ourselves from the traditional view:

"The prevailing view of the Iron Gates Mesolithic, based on excavations conducted in the 1960s, is of a foraging society, which, in the course of its long development from the Late Glacial to the mid-Holocene, exhibited an increasing degree of social complexity and sedentism. In this scenario, there was an initial period of cave occupation when people followed a nomadic lifestyle based on hunting terrestrial herbivores. Then, around 7600 cal BC, the foragers began to intensify their exploitation of aquatic resources, which made possible a reduction in residential mobility leading to the establishment of semipermanent or permanent settlements on the banks of the Danube. According to some archaeologists, so successful was this foraging adaptation that the Mesolithic inhabitants of the Iron Gates were able to resist the adoption of agriculture for centuries after it became established in the surrounding regions, even though they traded with neighbouring farmers for pottery and other goods." (Bonsall 2008: 275)

Although most of the sites are nowadays submerged, the old collections are a valuable source of information. Further field research on the upper terraces of the Danube can bring new data on what the pattern of the human occupations might have been at the beginning of the Holocene. The study of the faunal remains can yield information on seasonality, group mobility or function of a certain site. AMS dating and stable isotope analyses already suggested some changes in the chronology of the area and in certain aspects of the Mesolithic-Neolithic transition, while tracking population movements in and out of the Gorges.

Some of the issues that have been addressed recently are still highly speculative: food storage, social complexity, long-distance exchanges. It has been said that it is not complexity that characterized these Iron Gates Mesolithic communities, but rather stability (Bonsall 2008). Between 9500-6300 cal BC there seemed to be very few changes in subsistence, architecture, lithic and bone/antler assembleges. It is only after 6300 cal BC that new features are seen in the Iron Gates: the carved boulders, burials under the floor of the houses, plastered floors, pottery fragments (?), polished stone artefacts. This coincides with a cooling of the climate, triggering frequent and severe floodings of the Danube banks, forcing human communties to relocate their settlements on the higher terrace of the Danube. As shown previously, these terraces never made the subject of research. It is also possible that this cooling event stopped the advance of Neolithic communities only approximately 100 km from the Iron Gates. And during this period (6300-6000 cal BC) the two types of communities came into contact - as the stable istope analyses suggested for the site of Lepenski Vir. A contact that perhaps involved a change of population, goods and ideas.

If we have a look at the map in Figure 1, along the Danube bank between Baziaş and the dam at Iron Gates II, there are at least 50 Mesolithic and/or Early Neolithic archaeological sites (Boroneanţ 2010a). Mesolithic finds were reported in 17 of them, and in each one of these 17, an Early Neolithic occupation was also documented. Coincidence? In some of the remaining 33 Early Neolithic sites, Mesolithic presence was at times suspected. Either way, with all the rediscovered sites along the left river bank, the image of the Iron Gates area around 6000 cal BC looks a lot more dynamic than previously thought.

Notes

1. There was a difference in the method of the research between the left and the right banks of the Danube. While the Romanian archaeologists tried to cover as large an area and identify as many sites as possible, on the right bank the accent fell on the intensive and systematic study of the already located one (Radovanović 1996: 4).

2. Previous archaeological research took place on the left bank at the beginning of the '20 Al. Bărcăcilă collected prehistoric items from the areas of Schela Cladovei, Gura Văii, Ostrovul Banului and Ostrovul Corbului, items considered at the time to be Neolithic (Bărcăcilă 1924: 280-296). Many of them were later reinterpreted as part of the Schela Cladovei culture (Boroneanţ 1973: 11).

3. Only sites with ^{14}C dates are listed in the table. Adapted after Bonsall 2008.

Bibliography

Comori (1978) *Comori arheologice din Regiunea Porţile de Fier*, Bucureşti.

Geografia (1969) *Geografia Văii Dunării Româneşti*, Bucureşti: Ed. Academiei R.S.R.

Andreescu, R., Mirea, P. (2008) 'Teleorman Valley. The beginning of Neolithic in southern Romania', *Acta Terrae Septemcastrensis* 7: 56-71.

Bărcăcilă, Al. (1924) 'Antiquites prè- et proto-historiques des environs de Turnu Severin', *Dacia. Revue d'archéologie et d'histoire ancienne* I: 280-96.

Biagi, P., Shennan, P and Spataro, M., (2005) 'Rapid rivers and slow seas? New data for the Radiocarbon chronology of the Balkan peninsula', in L. Nikolova, J. Fritz and J. Higgins (eds.) *Prehistoric Archaeology & Anthropological Theory and Education. Reports of prehistoric research projects* 6-7, pp: 41-52, Salt Lake City: Karlovo.

Bökönу, S. (1972) 'The vertebrate fauna', in D. Srejovic (ed.) *Europe's first monumental sculpture, new discoveries at Lepenski Vir*, pp. 186-9, London: Thames & Hudson.

—— (1975) 'Vlasac: An early site of dog domestication', in A.T. Clason (ed.) *Archaeozoological studies. Papers at the archaeozoological conference 1974, held at the Biologisch-Archaeologisch Institut of State University of Groningen*, pp. 167-178, Amsterdam, North Holland Publishing Company.

Bonsall, C. (2007) 'When was the Neolithic transition în the Iron Gates?', in M. Spataro and P. Biagi (eds.) *A short walk through the Balkans: the first farmers of the Carpathian Basin and the adjacent regions*, Quaderno Vol. 12, pp. 53-66, Trieste: Trieste Società per la Preistoria e Protostoria della Regione Friuli-Venezia Giulia.

—— (2008) 'The Mesolithic of the Iron Gates', in G. Bailey and P. Spikins (eds.) *Mesolithic Europe*, pp. 238-79, Cambridge: Cambridge University Press.

Bonsall C., Rosemary L., McSweeney K., Carolina S., Douglas H., Boroneanţ V., Bartosiewicz L., Robert P. and Chapman J., (1997) Mesolithic and Early Neolithic in the Iron Gates: A Paleodietary Perspective, *Journal of European Archaeology* 5: 50-92.

Bonsall, C., Cook, G., Lennon, R., Harkness, D., Scott, M., Bartosiewicz, L. and K. McSweeney (2000) 'Stable isotopes, radiocarbon and the Mesolithic-Neolithic transition in the Iron Gates', *Documenta Praehistorica* 27: 119-32.

Bonsall, C., Macklin, M.G., Payton, R. and A. Boroneanţ (2002) 'Climate, floods and river gods: Environmental change and the Meso-Neolithic transition in south-east Europe', *Before Farming: The Archaeology of Old World Hunter-Gatherers* 3-4(2): 1-15.

Borić, D. (2008) 'Kultura Lepenskog vira u svetlu novih istraživanja (Lepenski Vir Culture in the Light of New Research)', *Glasnik Srpskog arheološkog društva* 24: 9-44.

Borić, D. and Dimitrijević, S. (2007) 'When did the Neolithic package reach Lepenski Vir? Radiometric and faunal evidence', *Documenta Praehistorica* 35: 53-72.

Borić, D. and Miracle, P. (2004) 'Mesolithic and Neolithic (Dis)continuities în the Danube Gorges: New AMS Dates from Padina and Hajducka Vodenica (Serbia)', *Oxford Journal of Archaeology* 23(4): 341-71.

Borić, D. and Stefanović, S. (2004) 'Birth and death: infant burials from Vlasac and Lepenski Vir', *Antiquity* 78: 526-46.

Borić, D., Raičević, J. and Stefanović, S. (2009) 'Mesolithic cremations as elements of secondary mortuary rites at Vlasac (Serbia)', *Documenta Praehistorica* 36: 247-82.

Boroneanţ, A. (2010a) *Perioada de trecere de la Mezolitic la neoliticul timpuriu la Porţile de Fier*, Academia Română, unpublished PhD thesis.

—— (2010b) 'Ostrovul Corbului - o discuţie asupra mormintelor mezolitice și neolitice timpurii', *Buletinul Muzeului Judeţean Teleorman. Seria Arheologie* 2: 5-28.

Boroneanţ, A. and Boroneanţ, V. (2009) 'Schela Cladovei 1965-1968. După 40 de ani', *Studii de Preistorie* 6: 6-24.

Boroneanţ, A., Boroneanţ, V., Miriţoiu, N. and Soficaru A. (2008) 'The Icoana burials revisited', *Studii de preistorie* 5: 24-41.

Boroneanţ, V. (1969) 'Decouvertes d'objets d'art épipaleolithiques dans la zone des Portes de Fer du Danube', *Rivista di Scienze Preistoriche* XXIV(2): 283-98.

—— (1970) 'La periode Epipaleolithique sur la rive roumaine de Portes de Fer du Danube', *Prehistorische Zeitschrift* 45(1): 1-25.

—— (1972) 'Noi date despre cele mai vechi manifestări de arta plastică pe teritoriul României, (Nouvelles données sur les plus anciennes manifestations d'art plastique sur le territoire de la Roumanie)', *Studii și Cercetări de Istoria Artei* 19(1): 109-15.
—— (1973) 'Recherches archeologiques sur la culture Schela Cladovei dans la zone des Portes de Fer', *Dacia. Revue d'archéologie et d'histoire ancienne. Nouvelle Série* XVII: 5-39.
—— (2000) *Paleolithique superieur final et Épipaleolithique dans la zone des Portes de Fer*, Bucureşti: Ed. Silex.
Boroneanţ, V., Bonsall, C., McSweeney, K., Payton, R. and Macklin, M.G. (1999). 'A Mesolithic burial area at Schela Cladovei, Romania', in A. Thevenin (ed.) *L'Europe des derniers chasseurs. Epipaleolithique et Mesolithique, Actes du 5-e Colloque International UISPP (Commission 12)*, Grenoble, 18-23 September 1995, pp. 385-90, Paris: Éditions du Comité des Travaux Historiques et Scientifiques.
Clason, A.T. (1978) 'Padina and Starčevo game, fish and cattle', *Paleohistoria* 20: 141-73.
Dimitrijević, V. (2000) 'The Lepenski Vir fauna: bones in houses and between houses', *Documenta Praehistorica* 27:101-17.
—— (2008) 'Lepenski Vir animal bones: what was left in the houses?', in C. Bonsall, V. Boroneanţ and I. Radovanovic (eds.) *Iron Gates in Prehistory*, *British Archaeological Reports, International Series* 1893, pp. 175-204, Oxford: Archaeopress.
Garasanin, M. and Radovanović, I. (2001) 'A pot in house 54 at Lepenski Vir', *Antiquity* 75: 118-25.
Ghinea, D., (1997) 'Enciclopedia geografică a României' vol. II, Bucureşti: Ed. Enciclopedică.
Gimbutas, M. (1991) *The civilization of the Goddess*, San Francisco: Harper.
Gronenborn, D. (2009) 'Climate fluctuations and trajectories to complexity in the Neolithic: towards a theory', *Documenta Praehistorica* 36: 97-110.
Jovanović, B. (1972) 'The Autochtonous and the Migrational Components of the Early Neolithic of the Iron Gates', *Balcanica* 3: 49-58.
—— (1973) 'The Early Neolithic architecture of Đerdap (Iron Gate)', *Actes du VIII-e Congrès International des Sciences Prèhistoriques et Protohistoriques*, Belgrade 9-15 Septembre 1971, II, pp. 290-3, Belgrade.
—— (1974) 'Praistorija Gornjeg djerdapa' *Starinar New Series* XXII: 1-22.
—— (1987) 'Die Arhitektur und Keramik der Siedlung Padina am Eiserner Tor, Jugoslawien', *Germania* 65(1): 1-16.
—— (2008) 'Micro-regions of the Lepenski-Vir culture: Padina in the Upper Gorge and Hajducka Vodenica in the Lower Gorge of the Danube', *Documenta Praehistorica* 35: 289-324.
Lazarovici, Gh. (1974) 'Cu privire la neoliticul din Banat', *Tibiscus* 3: 45-63.
Letica, Z. (1971) 'Vlasac - Nouvel habitat de la culture de Lepenski Vir a Đerdap', *Archaeologia Iugoslavica* X: 7-12.
Magny, M., Bégeota, C., Guiot, J. and O. Perona (2003) 'Contrasting patterns of hydrological changes in Europe in response to Holocene climate cooling phases', *Quaternary Science Reviews* 22: 1589-96.
Mason, S., Boroneanţ, V. and Bonsall, C. (1996) 'Plant remains from Schela Cladovei, Romania', *Mesolithic Miscellany* 17(2): 11-14.
Misić, V. (1981) *Šumska vegetacjia Klisura i Kanjona Istočne Srbije*, Belgrad: Institut za Biološka Istraživanja Siniša Stanković.
Mogoşanu, Fl. (1968) 'Importanţa descoperirilor arheologice din zona Porţile de Fier pentru înţelegerea paleoliticului din Banat', *Comunicări* VIII, Craiova.
—— (1978a) 'Mezoliticul de la Ostrovul Corbului, o noua așezare de tip Schela Cladovei', *Studii și cercetări de istorie veche și arheologie* 29(3): 335-51.
—— (1978b) Paleoliticul din Banat, Bucureşti: Academia R.S.R.
Nicolăescu-Plopşor, C.S. (1965) 'Epipaleolitic şi mezolitic. O problemă de terminologie', *Studii și cercetări de istorie veche* 16(4): 765-73.
Nicolăescu-Plopșor, C.S. and Păunescu, Al. (1962) 'Azilianul de la Baile Herculane în lumina noilor cercetari', *Studii și cercetări de istorie veche* 12(2): 204-10.
Păunescu, Al. (1970) 'Epipaleoliticul de la Cuina Turcului-Dubova', *Studii și cercetări de istorie veche* 21(1): 3-29.
—— (1978) 'Cercetările arheologice de la Cuina Turcului Dobova', *Tibiscus. Istorie* 5 (Volum inchinat celei de-a 60 aniversari a Unirii): 11-56.
—— (1980) 'Evoluţia istorică pe teritoriul României din paleolitic până la începutul neoliticului', *Studii și cercetări de istorie veche și arheologie* 31(4): 519-45.

—— (1984) 'Cronologia paleoliticului și mezoliticului din Romania în contextul paleoliticului central și sud-est european', *Studii și cercetări de istorie veche și arheologie* 35(3): 235-65.
—— (1996) *Ostrovul Corbului*, Bucureşti: Ed. Caro.
—— (2000) *Paleoliticul şi mezoliticul din spaţiul cuprins între Carpaţi şi Dunăre*, Bucureşti: Ed. AGIR.
Perlés, C. (2001) *The Early Neolithic in Greece*, Cambdridge: Cambridge Univesrity Press.
Prinz, B. (1987) 'Mesolithic adaptations on the Lower Danube: Vlasac and the Iron Gates Gorge', *British Archaeological Reports International Series* 330, Oxford: Archaeopress.
Radovanović, I. (1996) *The Iron Gates Mesolithic*, Ann Arbor: International Monograph Series, Archaeological Series 11.
Radovanović, I. and Voytek, B. (1997) 'Hunters, fishers or farmers: sedentism, subsistence and social complexity in the Djerdap Mesolithic', *Analecta Praehistorica Leidensia* 29: 19-31.
Roksandić, M. (2000) 'Between Foragers and Farmers in the Iron Gates Gorge: Physical Anthropological Perspective' *Documenta Praehistorica* 27: 1-100.
—— (2008) 'The Mesolithic-Neolithic in the Đerdap as evidenced by non-metrical anatomical variants', in C. Bonsall, V. Boroneanţ and I. Radovanovic (eds.), *Iron Gates in Prehistory*, *British Archaeological Reports International Series* 1893: pp. 55-76, Oxford: Archaeopress.
Roşu, Al. (1973) *Geografia fizică a României*, Bucureşti: Ed. Didactică și pedagogică.
Severinghaus, J.P., Sowers, T., Brook, E.J., Alley, R.B., and Bender, M.L. (1998) 'Timing of abrupt climate change at the end of the Younger Dryas interval from thermally fractionated gases in polar ice', *Nature* 391: 141-6.
Srejović, D. (1968) 'Lepenski Vir (Boljetin) - predneolitska i neolitska naselja', *Arheološki Pregled* 10: 85-7.
—— (1970) 'Lepenski Vir (Boljetin) - predneolitska i neolitska naselja i nekropole', *Arheološki Pregled* 12: 72-3.
—— (1971) 'The roots of Lepenski Vir culture', *Archaeologia Iugoslavica* 10: 13-21.
—— (1972) *Europe's First Monumental Sculpture: New Discoveries at Lepenski Vir*, London: Thames & Hudson.
—— (1979) 'Protoneoliti - kultura Lepenskog Vira', *Praistorija Jugoslavenskih Zemlja II, Neolitsko Doba*: 33-76.
—— (1988) 'The Neolithic of Serbia: A Review of Research', in D. Srejovic (ed.) *The Neolithic of Serbia: Archaeological Research*, Belgrade: University of Belgrade.
—— (1989) 'The Mesolithic of Serbia and Muntenegro', in C. Bonsall (ed.) *The Mesolithic in Europe: Proceedings of the 3rd International Symposium*, pp. 481-91, Edinburgh: John Donald
Srejović, D. and Letica, Z. (1978) *Vlasac. A Mesolithic settlement in the Iron Gates*, Beograd: Serbian Academy of Sciences and Arts Monograph, DXII.
Voytek, B. and Tringham, R. (1989) 'Rethinking the Mesolithic: The Case of South-East Europe', in C. Bonsall (ed.) *The Mesolithic of Europe: Proceedings of the 3rd International Symposium*, pp. 492-9, Edinburgh: John Donald.
Whittle A., Bartosiewicz L., Boric D., Pettitt P. and Richards M. (2002) 'In the beginning: new radiocarbon dates for the Early Neolithic in northern Serbia and south-east Hungary', *Antaeus* 25: 63-117.

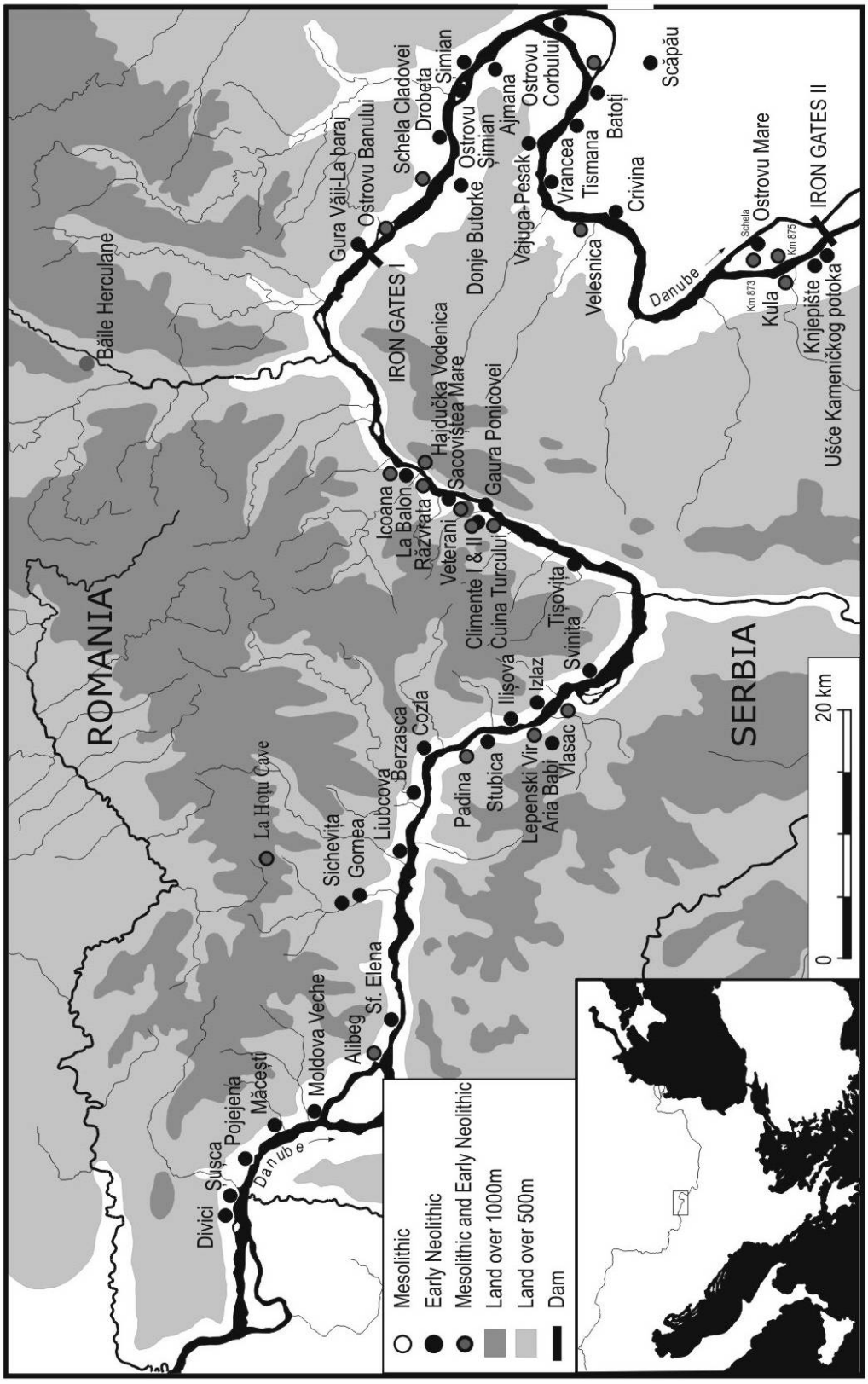


Figure 1. Mesolithic and Early Neolithic sites mentioned in the text.
Siturile mezolitice şi neolitice timpurii menţionate în text.

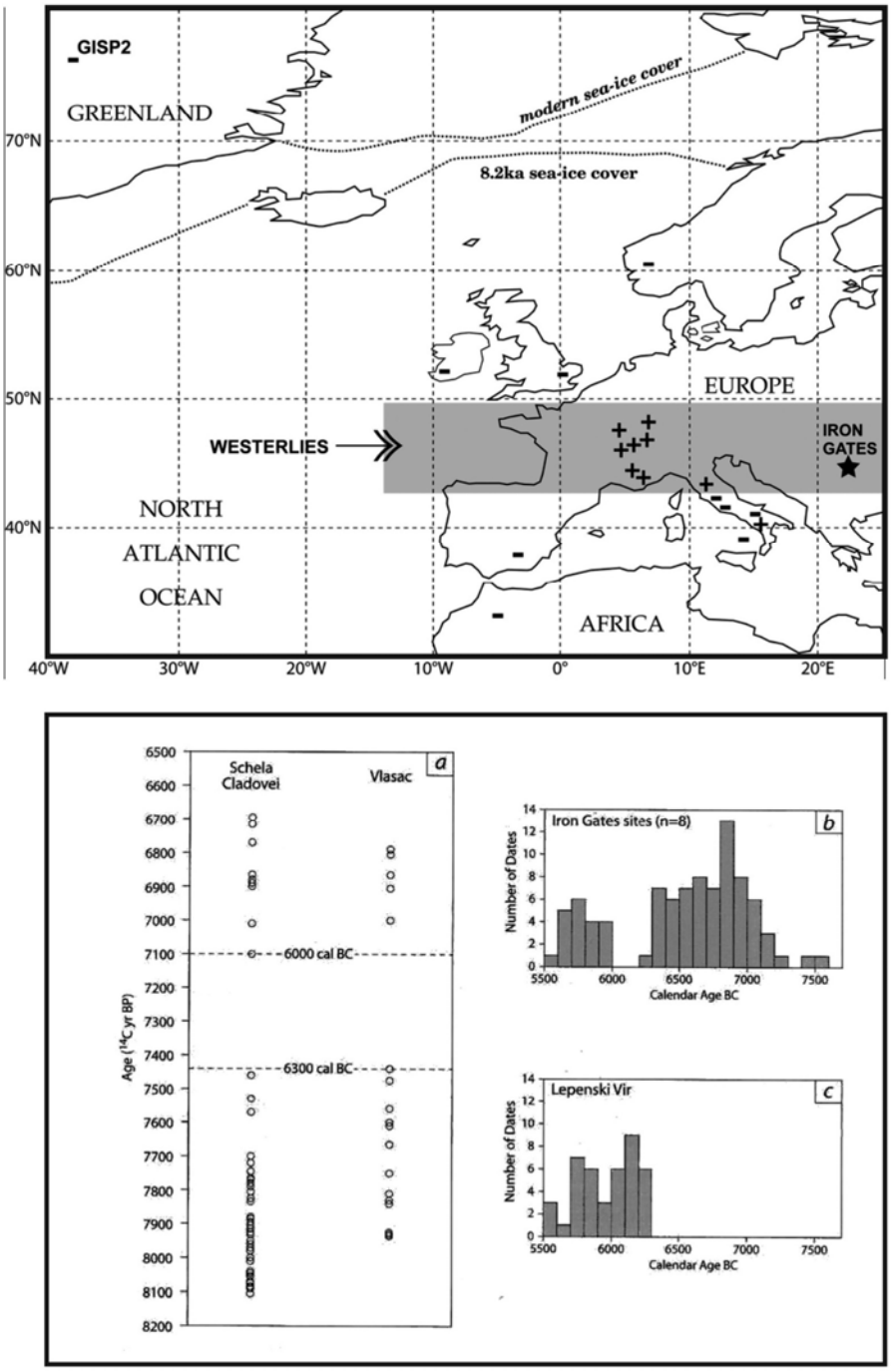
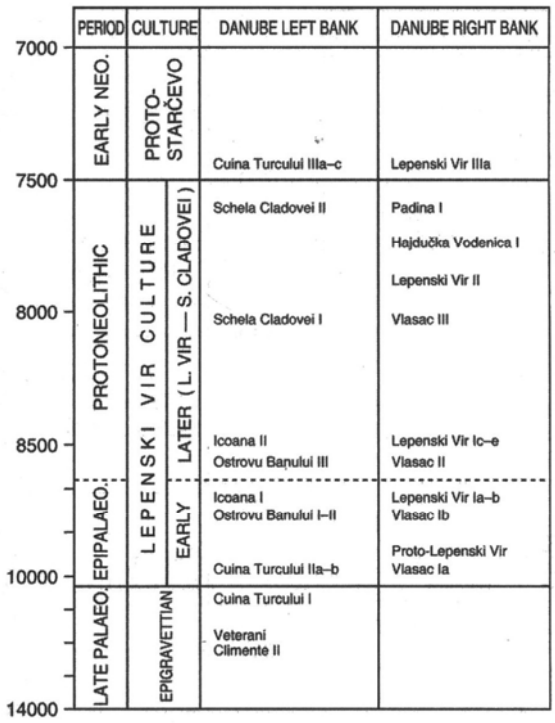
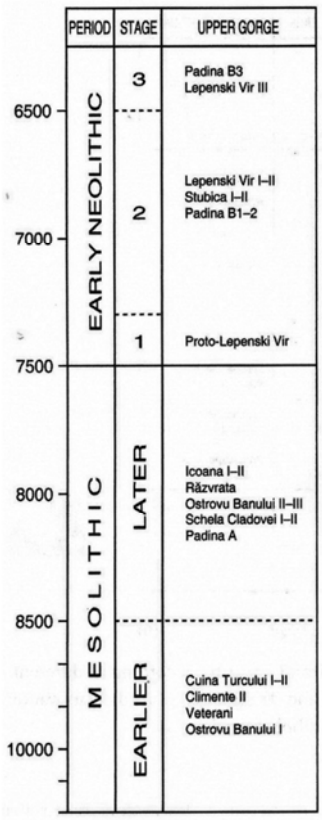


Figure 2. 1. Hydrological conditions during the 8.2 ka cold event. Shaded area: mid-European zone with wetter conditions. Reference sites with positive (+) and negative (-) water budget during the 8.2 ka event (adapted from Magny *et al*. 2003); 2. The radiocarbon 'gap' in the Iron Gates: a. ^{14}C mean ages for Schela Cladovei and Vlasac; b. Calibrated (median probability) ages per 100-year period between 5500 and 7700 BC from Hajducka Vodenica, Icoana, Ostrovu Banului, Ostrovu Corbului, Padina, Răzvrata, Schela Cladovei, Vlasac; c. Calibrated (median probability) ages per 100-year period between 5500 -7700 BC from Lepenski Vir (after Bonsall 2008: 266, Figure 10.6).

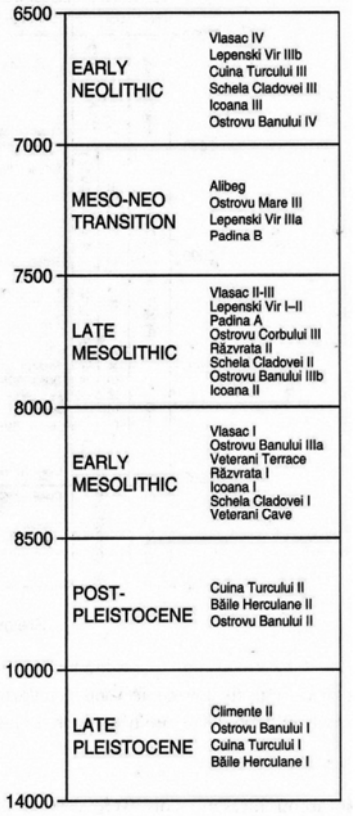
1. Condiţiile hidrologice pe durata evenimentului de răcire 8.2 ka. Zona marcată: zona europeană având condiţii mai umede. Situri de referinţă având cantităţi de precipitaţii pozitive (+) și negative (-) pe durata evenimentului de răcire de la 8.2ka (adaptat după Magny *et al*. 2003); 2. Perioada de pauză și datele de radiocarbon: a. Valorile medii ^{14}C pentru Schela Cladovei și Vlasac; b. Vârstele calibrate (valorile medii) pentru perioada 5500-7700 BC pentru Hajducka Vodenica, Icoana, Ostrovu Banului, Ostrovu Corbului, Padina, Răzvrata, Schela Cladovei, Vlasac; c. Vârstele calibrate (valorile medii) pentru perioada 5500-7700 BC pentru Lepenski Vir (după Bonsall 2008: 266, Figure 10.6).



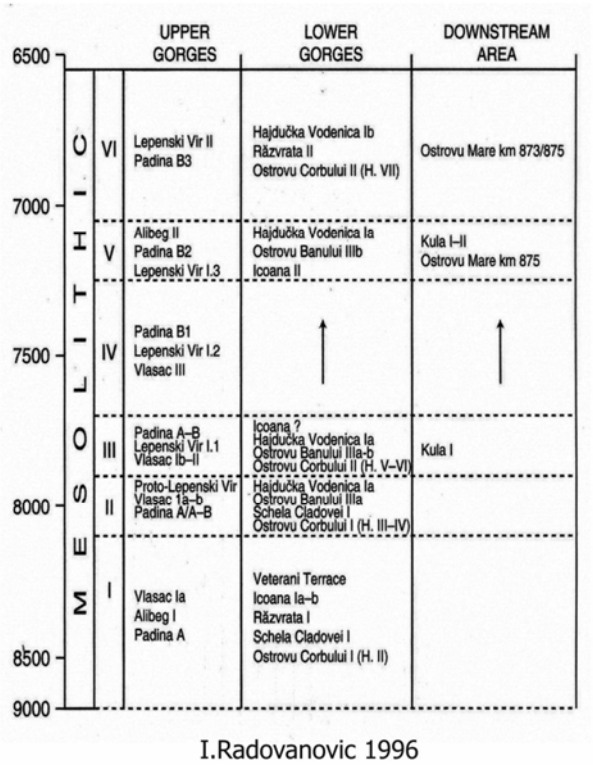
D. Srejovic 1969



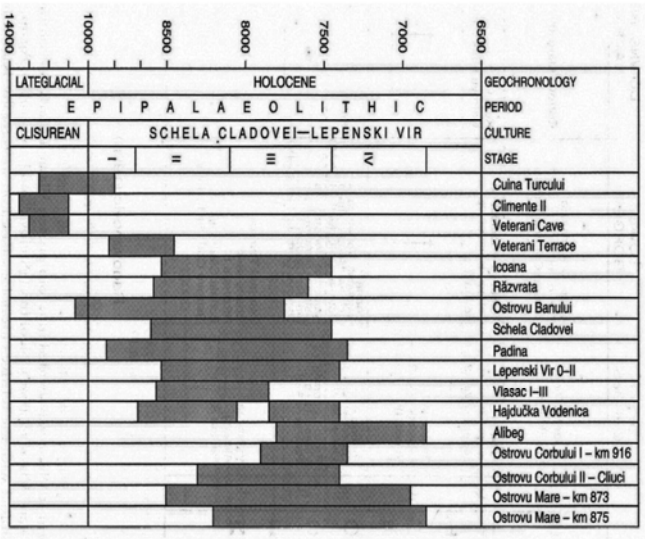
B. Jovanovic 1969



R. Tringham & B. Voytek 1989



I.Radovanovic 1996



V. Boroneanț 2000

Figure 3. Proposed chronologies for the sites in the Iron Gates (after Bonsall 2008). Cronologii propuse pentru siturile de la Porţile de Fier (după Bonsall 2008).

Appendix 1

Site	Context	Material	Lab. No.	BP	cal BC (2σ)
Cuina Turcului	Hearth, layer 1, 5.90-5.95 m	C	Bln-803	12,600 ± 120	13221-12275
	Hearth, layer I, 6.20—6.40 m	C	Bln-804	12,050 ± 120	12232-11711
	Hearth, layer I, 5.70—5.85 m	c	GrN-12665	11,960 ± 60	12023-11754
	Hearth, layer II, 3.68-3.85 m	C + B	Bln-802	10 125 ± 200	10639-9251
Hajducka Vodenica	Burial 8	H	OxA-11128	***8165 ± 90***	7477-6833
	Burial 15 ('younger')	H	OxA-11126	***7524 ± 77***	6503-6227
	Burial 12	H	OxA-11127	***7522 ± 82***	6561-6222
	Burial 20	H	OxA-11109	***7389 ± 84***	6419-6078
Icoana	Trench IV, 2.10 m, horizon lb	C	Bln-1078	8605 ± 250	8287-7075
	Trench IV, 0.50 m, horizon la	C	Bln-1077	8265 ±100	7518-7070
	Trench II, 1.60 m, horizon la	C	Bonn no. 2	8070 ± 130	7448-6647
	Trench II, 1.20 m, horizon lb	C	Bonn no. 3	8010 ± 120	7306-6610
	Trench II, 2.00 m, horizon lb	C	Bonn no. 4	7660 ±110	6750-6247
	Trench III, 1.00 m, horizon II	C	Bonn no. 1	5830 ± 120	4993-4402
Lepenski Vir	Burial 60 ('LV Ic')	H	OxA-11715	***9020 ± 80***	8445-7953
	Burial 69 ('Proto-LV')	H	OxA-11703	***8784 ± 72***	8202-7609
	Under house 23	B	OxA-8610	8770 ± 60	8180-7605
	House 62 ('LV Ib')	C	KN-405	7430 ± 160	6592-6006
	Burial 61 ('LV Ic')	H	OxA-11698	***7374 ± 80***	6406-6071
	Burial 14 ('LV I—II')	H	OxA-11704	***7368 ±75***	6396-6072
	House 36 ('LV Ia')	C	Bln-74ob	7360 ± 100	6425-6049
	Burial 54d ('LV Ib')	H	OxA-11700	***7353 ± 72***	6385-6067
	Burial 54c ('LV Ib')	H	OxA-11696	***7346 ±57***	6365-6074
	Burial 45b ('LV I')	H	OxA-11701	***7337 ± 79***	6388-6053
	House 36 ('LV Ia')	C	Bln-740a	7310 ± 100	6392-6010
	Burial 31a ('LV III')	H	OxA-5827	***7308 ± 108***	6401-5997
	Burial 79a	H	OxA-11705	***7312 ± 79***	6366-6029
	House 54 ('LV Ib-c')	C	Z-143	7300± 124	6426-5928
	Burial 26 ('LV I')	H	OxA-11693	***7284 ± 47***	6233-6056
	House 54 ('LV Ib-c')	C	KN-407	7280 ± 160	6445-5845
	Burial 54e ('LV Ib')	H	OxA-11697	***7250 ±59***	6227-6017
	House 54 ('LV Ib-c')	C	Bln-738	7225 ± 100	6354-5896
	Burial 7/I ('LV I')	H	OxA-11692	***7218 ± 81***	6243-5917
	House 27 ('LV Id-e')	C	KN-406	7210 ± 200	6445-5720
	Rear of house 51, under level of house XLIV	B	OxA-8618	7200 ± 60	6217-5986
	Burial 7/I ('LV F) (repeat)	H	OxA-12979	***7157 ± 77***	6215-5892
	Burial 44 ('LV III')	H	OxA-5830	***7152 ± 106***	6233-5797
	Burial 89a ('LV IF)	H	OxA-11702	***7133 ± 75***	6208-5845
	Between houses 20 and 33 ('LV Ia-b')	F	OxA-8725	***7060 ± 114***	6207-5721
	House 54 ('LV Ib-c')	C	Bln-653	7040 ± 100	6081-5719
	Burial 32a ('LV III')	H	OxA-5828	***7036 ± 95***	6066-5728
	House 54 ('LV Ib-c')	C	Z-115	6984 ± 94	6028-5676
	Burial 9 ('LV IIIb')	H	OxA-11695	***6982 ± 50***	5983-5747
	Burial 88 ('LV III')	H	OxA-5831	***6980 ± 92***	6023-5677

	House 47 ('LV Id-e')	C	UCLA-1407	6970 ± 60	5983-5735
	Burial 8 ('LV III')	H	OxA-11694	***6942 ± 47***	5972-5729
	House 37 ('LV Id')	C	BM-379	6900 ± 150	6055-5544
	House 37 ('LV Id')	C	Bln-678	6900 ±100	5984-5636
	House 1 ('LV Id')	C	Bin-575	6860 ± 100	5982-5572
	House 9 ('LV Id')	C	Bln-647	6845 ±100	5978-5565
	House 16 ('LV Ie')	C	Bln-576	6820 ± 100	5972-5554
	House 34/43 ('LV I?')	C	Bln-650	6820 ± 100	5972-5554
	House 32 ('LV Ie')	C	P-1598	6814±69	5867-5571
	House 37 ('LV Id')	C	Bln-649	6800 ± 100	5899-5526
	Burial 35 ('LV III')	H	OxA-5829	***6718 ±93***	5777-548o
	House IX (XV IF)	C	Bln-654	6630 ± 100	5723-5378
	House 51 ('LV Ie')	C	Bln-652	6620 ± 100	5718-5376
	House XXXII ('LV II')	C	Bln-655	6560 ± 100	5657-5324
Ostrovu Banului	Trench IV, horizon III, hearth 2	C	Bln-1080	8040 ± 160	7455-6593
	Trench I, horizon III, hearth 1	C	Bin-1079	7565 ± 100	6606-6227
Ostrovu Corbului	Hearth, level I, 4.50-4.53 m	C	SMU-587	8093 ±237	7567-6503
	Hearth, level II, 4.02-4.12 m	C	SMU-588	7827 ±237	7350-6228
	Hearth, level I, 4.20-4.38 m	C	Bln-2135	77i0± 80	6692-6423
	Hearth, level I, 4.20—4.38 m	C	Bln-2i35a	7695 ± 80	6681-6421
	Level I, 4.23 m	C	GrN-12675	7640 ± 80	6647-6368
Padina	Under house 14	B	OxA-11102	9990 ± 55	9760-9307
	Burial 21	H	OxA-mo6	***9729 ± 73***	9314-8839
	Burial 11	H	OxA-11104	***9700 ± 72***	9292-8835
	Burial 15	H	OxA-11105	***9138 ± 71***	8547-8247
	Midden - profile 3, segment 1, excavation level 3	B	OxA-9055	8445 ± 60	7590-7357
	Bear *(Ursus arctos)* bone	B	BM-1403	8138 ± 121	7477-6710
	Burial ia (antler artefact)	B	OxA-11108	7750 ± 50	6654-6471
	Burial ia	H	OxA-11107	***7525 ± 77***	6504-6227
	House 17, hearth (bone artefact)	B	OxA-11103	7315 ± 55	6353-6053
	'Occupation layer' (?) ('Padina B2')	C	GrN-8230	7100 ± 80	6203-5778
	Trapezoidal building (?) ('Padina B3')	C	GrN-7981	7075 ± 50	6047-5845
	Padina Bi	C	GrN-????	7065 ± no	6206-5725
	House 18, floor	B	OxA-9052	6965 ± 60	5983-5732
	Under floor of house 15 (bone artefact)	B	OxA-9054	6790 ± 55	5784-5574
	Hearth (in trapezoidal building 'Padina BI')	C	GrN-8229	6570 ±55	5625-5390
Razvrata II	'Hut'	C	Bin-1057	7690 ± 70	6645-6434
Schela Cladovei	Bone artefact, Area VI	B	OxA-9140	8105 ± 60	7312-6830
	Bone artefact, Area VI	B	OxA-9135	8085 ±60	7302-6818
	Burial, Area III	H	OxA-4385	***8090 ± 118***	7448-6681
	Bone artefact, Area VI	B	OxA-9139	8075 ± 60	7293-6775
	Burial, Area III	H	OxA-4379	***8070 ± 122***	7442-6649
	Burial, Area VI	H	OxA-9007	***8055 ± 86***	7296-6690
	Burial, Area III	H	OxA-4380	***8046 ± 122***	7338-6644
	Burial, Area III	H	OxA-4382	***8046 ± 124***	7345-6642
	Bone artefact, Area VI	B	OxA-9138	8040 ± 60	7162-6701

	Bone artefact, Area VI	B	OxA-9137	8010 ± 60	7072-6699
	Bone artefact	B	OxA-9207	8000 ± 80	7128-6654
	Burial	H	OxA-8502	***7988 ± 72***	7072-6665
	Bone artefact	B	OxA-9374	7980 ± 60	7055-6696
	Burial, Area III	H	OxA-4378	***7971 ± 115***	7282-6536
	Burial, Area VI	H	OxA-8583	***7960 ± 97***	7126-6601
	Bone artefact, Area VI	B	OxA-9132	7950 ± 55	7044-6687
	Burial, Area III	H	OxA-4381	***7932 ± 130***	7173-6499
	Bone artefact, Area V	B	OxA-9131	7925 ± 60	7033-6656
	Bone artefact, Area III	B	OxA-8582	7880 ± 290	7515-6227
	Bone artefact, Area VI	B	OxA-8584	7915 ±85	7050-6608
	Burial, Area III	H	OxA-8581	***7904 ± 93***	7060-6573
	Bone artefact, Area VI	B	OxA-8549	7905 ± 60	7032-6644
	Burial	H	OxA-8547	***7886 ± 92***	7051-6532
	Bone artefact, Area VI	B	OxA-9136	7895 ±55	7030-6641
	Burial, Area III	H	OxA-4383	***7834 ± 120***	7041-6472
	Square C/III, layer 22 ('Vlasac IF)	C	Lj-2047a	7925 ±77	7049-6643
	Dwelling 5 - square BC/V, layer 18 ('Vlasac Ib')	C	Bln-1170	7840 ± 100	7034-6486
	Square d/5, layer 9 ('Vlasac Ib - end')	C	Bin-1171	7830 ± 100	7030-6478
	Burial 83 ('Vlasac III')	H	OxA-5826	***7804 ± 104***	7028-6461
	Burial 54 ('Vlasac I')	H	OxA-5823	***7756 ± 113***	7028-6421
	Square c/9, layer 14 ('Vlasac II')	C	Bln-1169	7665 ± 60	6632-6429
	Square b/18, layer 13 ('Vlasac II')	C	Bln-1052	7610 ± 60	6594-6379
	Burial 24 ('Vlasac III')	H	OxA-5825	***7598 ± 113***	6653-6227
	Square b/9, beneath hearth 16 ('Vlasac II')	C	Z-267	7559 ±93	6591-6236
	Square b/9, layer 6 ('Vlasac II - end')	C	Bln-1168	7475 ± 60	6439-6233
	Square A/II, Layer 13 ('Vlasac III')	C	Bin-1954	7440 ± 60	6438-6125
	Dwelling 1 - square C/III, layer 26 ('Vlasac Ib')	C	Z-262	7000 ± 90	6032-5718
	Dwelling 1 - square C/III, layer 26 ('Vlasac Ib')	C	Bln-1951	6905 ±100	5984-5638
	Dwelling 2 - square a/18, layer 18 ('Vlasac Ib')	C	Bln-1053	6865 ±100	5983-5617
	Dwelling 2 — square a/18, layer 18 ('Vlasac Ib')	C	Bln-1014	6805 ±100	5964-5532
	Dwelling 1 - square C/III, layer 26 ('Vlasac Ib')	C	Bln-I05ia	6790 ± 100	5891-5522

List of radiocarbon dates for the Iron Gates sites (after Bonsall 2008: 246-51). Dated material: B = terrestrial mammal bone; C = charcoal; F = fish bone; H = human bone.

Lista datelor de radiocarbon pentru siturile de la Porţile de Fier (după Bonsall 2008: 246-51). Probe datate: B=mamifer terestru; C= cărbune; F=os de pește; H=os uman.