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Review

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## Carbo Vegetabilis Charcoal Burners, Pits & Kilns

'Karbuna, karbuna', je jedan brižan Ćić po Opatije kričal, i karbun prodaval, kega mu j tovarić va voziće pejal. A Ćić je neboh već storil račun još kad je va šume palil karbun... (Drago Gervais: ĆIĆ)

'Burning' of charcoal, as a basic or an additional activity, has today almost completely disappeared. However, archival data, travel writings and notes witness on a rather common tradition in this region, lasting for several centuries, and the relevant readings confirm it in an almost identical from, not only in the neighboring area, but also in wider region of Europe. The recent field research has confirmed the continuity of this tradition with several charcoal burning families, who engage in this demanding activity every year and build charcoal kilns (ugljenice, karbunice, kope, vuglenice), mostly in the regions of Istria, Gorski Kotar and Hrvatsko Zagorje.

Following the examples from the Western Europe, today there exists a tendency to 'conserve' and 'revitalize' charcoal burning in Nature Parks, or maybe even in ethno (eco) open air museums.

The usage of charcoal (ugalj, karbun, ćumar), has been known almost during the entire history of humankind and the first traces of its usage date back 30000 years ago when it was used for making the first cave drawings.

The production of charcoal dated back to the Bronze Age when it was crucial for the development of metallurgy, which was dominant till the discovery of fossil fuels at the beginning of the 18<sup>th</sup> century.

However, charcoal (*carbo vegetabilis*) is still used both as a raw material and as fuel in many parts of the world, for different purposes. In metallurgy it is used in production of ferro-alloys, in chemical industry as technologically valuable material for obtaining the active coal, in medicine (Hippocrates used to recommend it as antitoxic), in military industry (gunpowder) and in houses and restaurants for barbecues.<sup>1</sup>

Several centuries long tradition of producing, 'burning', charcoal ('sweet coal') in the wooded hills and mountains in various regions of Croatia, had an important role in the economy, not only of respective families, but also of the entire local communities until the middle of the  $20^{\rm th}$  century.

New raw materials, energy sources, technologies, changes in the way of life, different needs and new systems of value, have significantly influenced the disappearance of some or the majority of traditional crafts and occupations, even though some of them were the basis of subsistence for some families for centuries, or an additional occupation of temporary or seasonal character as was the case with the production, distribution and usage of charcoal.

In spite of the changes and passage of time which is not 'on their side', some traditions have persisted, transformed or appropriated for different folklore manifestations, social occasions and cultural contexts as the second or modified 'existence'.

Since the production of charcoal was primarily adopted by rural population and was a technologically inefficient and non profitable occupation, such an activity was, for all the above reasons, doomed to disappear even though now there are some initiatives to single out certain localities and organize 'educational paths' in the context of cultural tourism.

However, even at the beginning of the 21<sup>st</sup> century, this tradition can still be found in fragments or, very exceptionally, as a still living tradition in the regions of Ćićarija, through Gorski Kotar and Lika, over Kordun, Banija and Hrvatsko Zagorje, to certain regions of Slavonija.<sup>2</sup>

<sup>&</sup>lt;sup>1</sup> Just to illustrate the point, charcoal was used in manufactures, industry and traffic as propellant – coal gas was obtained from charcoal by dry distillation – and this was confirmed by data from France in 1818 when an owner of a number of blacksmith's shops wanted to use the gas produced from charcoal for burning his ovens. However, the first industrial usage of the gas produced from charcoal occurred in England in 1840 and in a porcelain factory in France. According to the German sources the first attempts in this direction occurred in an iron smeltery in St. Stephan's in Styria.

Today the demand for charcoal is still relatively high and it keeps rising. The total world consumption is estimated to 40,5 million tons per year , out of which 19,8 million tons is used in Africa. Contemporary process of production is conducted in specially designed ovens and retorts used for heat treatment of wood. The percentage of pure carbon reaches from 84% to 90%, depending on the type of wood (beech, birch, hornbeam, oak, juniper, fir) and technology.

<sup>&</sup>lt;sup>2</sup> Burning of charcoal in traditional way, outside Croatian borders, is today still preserved in some regions of Serbia and Bosnia. It is common in some parts of Western Serbia – Šumadija (near Guče, Lučani, Ivanjica, Kosjerić and Kraljevo) and in Negotinska Krajina (near Negotino, Bor, Majdanpek); in Central Bosnia, especially near Fojnica and in the region of Vareš and the mountains of Vranice and Zvijezda, and in some regions in the Northwestern Bosnia. Those charcoal kilns (ćumurane, žež(e)nice, žege), for 'cooking, smelting' (kuhanje, kađenje) of charcoal were made from the mixture of soil, leaves, fern and mud or made

Of unquestionable documentary value are, although very short, written accounts, notes and stories on the lives of charcoal burners (*ugljenari*), dating from the period of the last hundred years or so, some of them based on direct observations and impressions, some written as the memoirs of the charcoal burners (*ugljari*, *karbunari*, *paljeri*, *vugleničari*) themselves and some collected during field research in the regions where the charcoal is still 'burned' in the kiln (*ugljenica*, *kopa*, *mulac*, *k(a)rbunica*, *vuglenica*).<sup>3</sup>

In 1898, a natural scientist, geographer and travel writer, Dragutin Hirc, wrote: 'The person traveling through the forests of Gorski Kotar could meet *ugljari* and see their *ugljenice*, charcoal kilns, where they burn the coal. I have seen many times, how they use sledges to transport the timber down steep slopes. A burner sits on the front and uses a rudder to climb down the slope. When he unloads the timber, he puts the sledge on his back and climbs up the slope again.... In Bakar, Kraljevica, Novi and Senj there were large warehouses to which the coal was brought from the whole region of Gorski Kotar. According to the last preserved report of the Chamber of Trades and Crafts from the town of Senj, from 1891, 8, 254 160 kgs of coal were brought to these town, out of which 3, 773 560 kgs were brought to the town of Bakar alone, while in 1892, 7, 968 110 kgs were brought.' He continued by quoting Vaclav Aderle (from *Oesterreichische Forest – Zeitung*, 1890, nr. 366):

'And scarcely did the warm coastal wind melt the snow which for the whole of six months had been covering the slopes of Gorski Kotar, and the pink flowers of hellebore and bright yellow primrose garlands appeared over beech bushes and the winter died out in spring: the mountainous paths were full of life, resounding with the unison song of men, women and children: charcoal burners were coming from the coast to the forests of Gorski Kotar.

To the forests, they brought a kettle for boiling polenta, chest with their clothes, baskets, glasses or water pots and they would offer their services to the owner whom

of brick, were circular, 3-4 meters high, with dome or a cone-like structure on the top. The central part of the whole construction (in central Bosnia) was *vito* and the logs (*cjepanice*, *lašajnderi*, *ceplje*, *podžežnice*) were arranged around it, up to its top called 'cap' or 'head' (*kapa* or *glava*). In some of these villages the production of charcoal was directly linked to blacksmiths' shops and smelters.

<sup>&</sup>lt;sup>3</sup> Charcoal burners were frequent characters in many literary genres, both as main characters and subsidiary characters. Besides Drago Gervais in his poem 'Čić', Ivan Goran Kovačić also mentioned a charcoal burner of gigantic statue, Franina Brdar, and his friendship with the shepherd Jačica Šafran ('Mrak na svijetlim stazama'). In the fairytale by Wilhelm Hanff and in Paul Verhoven's movie 'The Heart of Ice', a young charcoal burner Peter Mink, made a 'devil's contract' with Michael and exchanged his 'warm heart' for a 'heart of ice', which was a condition for entering 'better' social circles. Manuel Bandiera wrote a novel 'Charcoal Burning Boys', there was also a short appearance of a charcoal burner in Karlo L. Kolodi's 'Pinocchio' and two burners were mentioned in a folk's tale from the region of Lužička Serbia, 'A disobedient son', etc. There was also an expression 'the charcoal burner's infidelity' which alluded to the cunningness, caution and distrust needed in this line of work.

<sup>&#</sup>x27;Carbonari' in the 19th century Italy were the members of a secret organization which fought for united Italy, and they appeared in the Kingdom of Naples during the Napoleon Wars. Their branches were active in France and Portugal. In gastronomy, the famous sauce *carbonara*, and the pasta of the same name made of eggs, bacon and Parmesan cheese, got their names after these *carbonari umbri*.

they knew from previous years. They would quickly agree upon the salary and the prices of corn flour which they obtained from the owner and which was quite expensive. They took the groceries needed for a week and off they went to the forest, which would come live again with their songs. First they would built themselves a cabin, from logs and wooden polls, and obtained all the boards they needed in the nearby saw-mill. Afterwards the head of their group would select a suitable place (*kopište*) for burning coal.

At the hearth they would thrust two poles into the ground and connect them with a thin board and a woman would hit it with a mallet three times to summon the burners to lunch.

They also packed light sledges, rakes, shovels and they also had to think about water, because it was quite scarce in these limestone regions. They would search for snow in deep pits and hollows, covered it to preserve it and when needed, they would melt it on wooden boards and drink it.

They would take in all the supplies and went off to work. On *kopište* the most experienced burner would arrange the logs, the others would cover them with branches and soil and light up the fire; they should be careful not to put the logs on fire, but only to singe them. They transported the coal to the large warehouses in Rijeka, Bakar, Kraljevica, and then by ferryboats (*tragheti*) to Jakin, Chioggia, Venice, etc. The lives of our charcoal burners were full of poetry, sweat, hardships and hard work. They toiled from dawn till dusk, they worked during the nights, and those who went to sleep, would break their bones on the hard ground. Today it would be the scorching sun, tomorrow the ice cold wind or cold weather, storm, dust or rain and yet their merry songs witnessed of their joy and happiness.

I have never heard a burner curse, even when I would find him in heavy rain, choking in thick smoke. If I would ask one of them, how did they feel, they would retort: 'Ah, well, sir, as long as the God gives us good health and polenta!'

Polenta was their everyday bread, sometimes seasoned with bacon, and they also ate cabbage, potato, salty coastal cheese, onions, and during holidays a bit of ham (*prosciutto*). If they would find dormice in a hollow birch tree (*pušina*), they would kill them with smoke and roast them.

They would place a board between two tree stumps, sit on logs around it and have lunch together, except for those who were on the burning site.

On Sundays and holidays they went down to the village to praise the Lord. At dawn the mountain would come alive with girls' songs. The men would arrive later, they would settle their accounts with the owner after the mass, take the flour, drink a glass of wine with their comrades and return to the mountain to their *ugljarica*' (Hirc 1993:47,48).

A hundred years later Josip Lučić Botrin published his memoirs of childhood spent in the region of Kastavština: 'Working with charcoal was considered to be quite fancy, and the men from these regions preferred working in the mountains to working in the factory or some other town work...

We have come a long way from the times when hordes of men from the villages of Halubje went to the mountains to burn coal (*krbun*). They were up there every summer, from snow to snow, and that lasted for four months. They made coals from the timber cut down for them by foresters, and these were mostly birch tree logs good for nothing else. The cut down timbers were sawn to an exact measure and were arranged in the charcoal kilns (*ugjenice*), which looked like domes and were thus called *kopi*, and if they were smaller, *mulci*. The burning site was called *kopišće*.

A smoldering flame was sustained in *kopa*, and when the coal was cooled down, the wood was arranged in heaps. Charcoal (or 'sweet coal') was light and pure, without sulfur, and after it burned down, there was small amount of ashes. The coal heated better than the wood and it was used in some crafts, by blacksmiths and even in metallurgy. Ironing was impossible without coal and it was used for making gunpowder. Children were acquainted with charcoal burning at an early age, and after they finished the elementary school they would follow older boys to the mountain and later, as adults, they worked in groups (called *kumpanije*) as companions. Maximum four men worked in one *kupmanija* and the oldest one was the head of the group.

As early as the month of April, *kumpanija* went to the mountain to collect snow and store it near the place where they would burn coal. They would place heaps of snow on one place and cover it well. When the weather would grow warmer, worms would sometimes appear in those snow heaps, but the water was still good for cooking and drinking. When they collected the snow, they went back home and waited for warmer weather. At the beginning of May, when the snow melted down, they went to the mountain. In earlier periods they would carry the tools, clothes and food themselves and later, a few *kupmanijas* would organize a joint transport. Flour for polenta and bacon were the main and actually the only food in the mountains, and they would obtain it and use it collectively, while everything else a person brought with him/her was their own. The first job in the mountains was to build a cabin, which they called *kućica*, in which they would spent one third of a year. The cabin was built from logs placed one next to the other, covered with planks and a door, made from boards, was placed on the house's front.

Close to the door and next to the entrance there was a hearth enclosed with a circle of larger stones and next to the walls each burner would make for himself a sleeping bench which they called *klada*. Above the bench there was a shelf on which they kept their belongings, which they used everyday (sugar, coffee, spoon, etc.). In front of the house there was a large trough and above it small planks where they would put snow which would melt down into the trough.

This is what it looked like, when I visited during my summer holidays a *kumpanija* on Suho in which there were: Ludve Botrin, Drago Ivanićev, Dolfo Patrijarkov and my father who was the oldest and was the cook and the head of the group.

I remember that the small house looked very nice to me, but there was no space in it for another sleeping bench, so I had to sleep on the twigs placed on the ground. We slept with our clothes on, as it was customary with the charcoal burners, but we still had to find something to cover ourselves, since we were in the forests on the mountain 1000 meters high and it could get really cold even during the summer. During that time, at almost all the burning sites near Suho, *kopi* and *mulci* were already burning, the smoke rose from them, and their smell permeated the forest. When the day was breaking, and the burners were already up, the birch and pine trees were covered by the blue smoky mist. During my first night in the burners' cottage, I tossed and turned in my hard bed and listened to the sounds of forest at night.

Half asleep, I heard that some of the burners got up in the night, put on their shoes and went to the burning site where *kopa* was burning. They had to do that every night so that the flames would not turn wood into ashes instead of coal. If the burner who was checking up the *kopa* noticed that something went wrong, he would alert everybody and they would go and made the necessary repairs. If the night was uneventful, in the morning the burners would put on their shoes and go to the trough to take some water from it and wash their hands and eyes. For breakfast, lunch and dinner the burners would eat only polenta, potato-pie or *cicmara*, and drink the ice cold water obtained from snow. During rains, they would collect snails which would significantly improve their menus.

As the summer was coming to its end, the burners would finish off their work in the mountains, since soon after the Day of Mala Stomorina the weather could turn foul. When all the coal was transported and some of it was stored in their cabins, they would also collect the burned leftovers (*braška* and *krbini*), which would also come in handy for lightning up their house fires during winter. If they decided not to burn coal at the same spot next year, they would dismantle the cabin and bring the cabin wood home with them. When they would arrive home, they would have a lot of trouble trying to wash out the black sooth from the coal which went under their skin' (Lučić 2005).

The accounts are here presented entirely not only because they represent authentic testimonies which confirm the charcoal burning as an important means of subsistence which included whole families or organized '*kupmanije*' on entire regions, but also because they are a valuable proof of harsh livelihoods, life conditions and social status.<sup>4</sup>

Today in the regions of Gorski Kotar (from Čabar and Šegin, through Risnjak to Osojnik and Jadrče near Vrbovsko), Kastavština and Halubje (with Marčelji and Viškovo

<sup>&</sup>lt;sup>4</sup> According to some data, charcoal burning in these regions could be dated back to the 16<sup>th</sup> century and its production flourished after opening of the ironworks in Čabar and Brod na Kupi in the 17<sup>th</sup> century. In 1875, Charles Yriarte wrote about his travels through Ćićarija: 'They are all charcoal burners, they live without education, without tradition, without memories; their wives are closer to animals than to human beings and they do the hardest of jobs. They are the ones driving their long, narrow wagons down the roads in dark nights....while Ćić lies on coal sacks...'. Between the two world wars it was confirmed that two women 'went to sell coal to Volosko, a policeman came and wrote a report and the judge sentenced them to three days in jail'.

today being the northern outskirts of the town of Rijeka) and in the nearby Učka region, in Ćićarija, 'paleri' and 'krbuneri' (charcoal burners) working in this harsh trade are very rare and the members of the younger generation hardly know what does it mean when a 'paler' says: 'I'm going to light up the *mulac*'.

Karbunice, kope and mulci (smaller kope made from the leftovers of non-carbonized wood), are built vertically by arranging logs in circles in two or three levels on the burning site (kopišće), so that the circular base ends up in a cone-like structure on the top. In the first level, the logs are around 2 meters high, in the second around 1 meter and in the third (on top) they are from 30-40 centimeters long. When the cone is built to the height of approximately 3 meters, wet leaves (feathers) and even grass are placed on top. The coal dust (braška) from previous burnings is mixed with moist soil and placed above all this. Holes (škulje, pipe) are then made on the body of karbunica, through which the smoke will come out and during the burning process they are closed from top to the bottom. The appearance of a thick blue smoke is a sign that the top holes have to be closed, and then the lower holes are closed until the end of the process the duration of which depends on the size of karbunica (from 20-30 to 60-70 m³). (fig. 2.01)

However, in the region of Ćićarija there were two traditions of burning depending on whether the kilns were burned form the bottom or from the top ('head') and with some minor differences in construction. If the kiln was burned from the bottom, an empty space was left in the central part 'above which thin boards were placed, and that space opened up at the doors through which the *karbunica* was lit. The doors had to reach the central part.' If the kiln was burned from the top, 'when the *karbunica* was still under construction, a *heart* was made....of thin, very dry wood.... We would leave it open at the top until a large flame would rise. Then from the top to bottom we would place logs 10 centimeters long. We called this *bokanje*. We would be doing it for three or four days, placing woods inside three times a day. After that, we would close up the top; take a thin metal plate and would cover everything with soil.' (Bjažić 1999).

The first tradition is characteristic for the Southwestern slopes of the Učka mountain in the villages of Nova Vas, Šušnjevica, Brdo, Letaj, Brest (Kraljevski), Brgudac, and the second for the Northwestern region: Žejane, Mune, Dane, Jelovice, Vodice as well as in Slovenia, in a region close to Čićarija.

During the  $19^{th}$  and the first half of the  $20^{th}$  century, charcoal was produced in the vicinity of the town of Zagreb, in Samobor Mountains and on the Eastern slopes of Medvednica, in the region of Bistra.<sup>6</sup>

 $<sup>^{5}</sup>$  From  $1\mathrm{m}^{3}$  of wood (the beech tree was considered the best) you can get 100 kilograms of charcoal.

<sup>&</sup>lt;sup>6</sup> Vuglenari worked in Gornja Bistra, Poljanica and Markov travnjak. There is an initiative to commemorate their trade by building a model of vuglenica under the frameworks of the Project 'Educational Path' in the Nature Park Medvednica. One 'kopa' with a small charcoal burners' cabin has been already placed on the educational path 'Leska' in the Nature Park Risnjak as part of the festival of traditional trades and crafts in the village of Poklon on Učka Mountain (above Opatija and Veprinac) and since the Fall of 2007 a building and burning of a small kiln has been included into the program. Numerous festivals orga-

This ancient, original way of building *karbunice* and *kope* has been preserved until recently in some cases in Istria and Gorski Kotar (besides with leaves, they can be covered with straw, fern, corn stalks and saw dust) and very rarely in the Eastern regions where it has been replaced by the tradition of brick and dome shaped *vugljenice*, *ugljenare* and *ugljare*.

Hence I was really surprised when I found the old type of *vuglenice* very similar to the Ćićarija and Gorski Kotar type, in the region of Hrvatsko Zagorje, on the Northern slopes of Ivančica Mountain, in the villages of Prigorec and Ivanečka Željeznica during my field work in the Spring of 2007. (fig. 2.02)

In this region, charcoal burning was common during the 19<sup>th</sup> and the first half of the 20<sup>th</sup> century. There was a kind of symbiotic bond between the charcoal burners, smelters and blacksmiths, since in the vicinity there were active mine pits from which Zink carbonate and Galenite, iron ore, were exploited and in the nearby Kuljevčica there was a Zink smeltery, which was an additional motif for the existence of these crafts in the second half of the 19<sup>th</sup> century and the entire work was coordinated by the *Societe Anonime Metalurgique Austro-Belge* and *Viennese Industrial Charcoal Burning Association*.

A few families burn *vuglenice* even today. In the past they would sell the charcoal to the railway, a few Varaždin companies and a *ciglana* in Gornje Tužno, and sometimes even to the ironworks in Lendava, today they pack it in paper bags and sell it mostly to the local restaurants. Sometimes, during the summer, they manage to find a salesman and sell larger quantities to tourist places in Dalmatia.

Vuglenica is build from a circular base, logs are placed vertically around four hawthorn poles and are covered by leaves, pine tree branches, coal dust, soil and 'forest sand'. The hardest part is the 'stepping', 'peštanje' or 'bokanje' which is done five to six times so that a 'head' (glava) is opened which is soft due to the lowering of the coal, especially after 10 to 15 days of štoranje. Štoranje, opening up of vuglenica, and extracting coal is done in the early morning hours, after pouring water over vuglenica and cooling it down.

In the Eastern regions, from Sv. Ivan Zelina to Kalnik Mountain, in the summer of that same year, I have found both charcoal kilns and burners (*vuglenice* and *vugleničari*) in Zrinščina and a few families in Draškovec and Zaistina as well as in the villages un-

nized in some villages, regions, nature parks and open air museums such as Neerdar, Kyllburg, Tharandt, Dorchberg, Bad Kohlburg, Lüsslingen, Hirschberg, Odenwald, 'Hessenpark', 'Freilichtmuseum Stübing', 'Natur Hohe Wald – Niederesteeich', Westfäliches Freilichtmuseum Hagen', 'Parko Nazionale della Majella', etc. remind us on a very common tradition of charcoal burning, with models of charcoal kilns made of soil, leaves and 'braška' in Swiss and Bavarian Alps, in Schwarzwald Mountains, but also on a wider region of forests from the Apennines to Transylvania.

Large amounts of wood, mostly beech wood, next to charcoal burning were also used for obtaining 'pepeljika', 'potaša' and for obtaining lime. 'Pepeljika' (KCO3) was used as one of the main raw materials for the production of glass until the middle of the 19<sup>th</sup> century. Hence next to the charcoal burners the forests of Gorski Kotar all the way to Papuk in Slavonia were also exploited by 'pepeljičari'.

der the slopes of Kalnik Mountain, Globočec, Duga Reka, Glogovnica, Stupe, Apatovac, Ludbreški Ivanec.<sup>7</sup>

Vuglenice (sometimes called ovens) are generally build up to 3 meters high. Close to the ground (podnice), there is an opening through which the logs are placed inside the vuglenica, which is shut by metal doors when vuglenica is lit and through which the coal is extracted. On the top, there is an opening (grot) through which the vuglenica is filled to the top and a wooden construction used for transporting wood for burning is connected through a platform (trepa) with the top of vuglenica.

Larger logs are placed close to the ground and towards the top, smaller logs up to 8 centimeters in diameter (*priglin* and *runt*) and *gule* – the wooden leftovers which could not be cut down to smaller logs. The *vuglenica* is lit at the top and during burning the holes, *dimnice*, are closed from top to bottom.

The burning process in this type of *vuglenice* lasts for approximately ten days, after which the *vuglenica* is cooled down, opened and the coal is extracted and packed for transport. (fig. 2.03)

Smaller quantities of charcoal are still burned in the mountainous regions near Našice and Đakovo, to the East of Kalnik, and these last remaining charcoal burners also supply the local restaurants and barbecues.

Notwithstanding the regional dialecticisms, it is interesting to observe that in the traditional charcoal burning terminology in the whole region where the charcoal was being produced, a few common terms are used: k(a)rbini – insufficiently carbonized wood, mulci – smaller kope, braška – coal dust, bokanje – stepping, passing, filling or even kuhanje (cooking) as the names of the process. On one hand, this could be explained by expansion and diffusion of an occupation which was much more common in the Western regions and on the other hand, by population migration, especially from the region of Gorski Kotar towards the East.

Today in Croatia there is only one small industry producing charcoal. This is Belišče, LTD., which produces coal by dry distillation, packages it and sells as EKO GRILL BRIKET, and there are also a few smaller producers who use brick kilns and are work-

<sup>&</sup>lt;sup>7</sup> In the majority of the villages around Kalnik, up to 20-30 years ago, *vuglenice* were built in the old way and covered by earth. Some were composed of several hundred meters of wood and burned for 45-50 days, and the coal was extracted for almost two weeks. The job was very hard and demanded the constant attention of several workers, who had to maintain *vuglenica* and react in dangerous situations when the heavy rain threatened to destroy it or when '*preboka* and *žar* escaped aside' or when it was 'breaking' at the top (*spušta od ramena*), making a big whole in the middle. These are rare today, and the new kilns which can be used for a few years are build from brick and plastered with mortar – mixture of lime and cement. This technique was adopted from the masons – builders of charcoal kilns from the Western Serbia, from Kosjerić, who built for them the first kilns in the 1980ies. Since then, the members of many families in Zrinščina (Rebek, Posilović, Mojčec, Škuratan) have been building and maintaining the new kilns – *vuglenice*. An interesting finding is that at the beginning of the 20<sup>th</sup> century the charcoal burners from Zagorje sold their coal on the Britanski Trg in Zagreb (once known as Ilički trg, Mali Plac) and slept in the nearby house called by the townspeople 'Charcoal Burners' Hotel'.

ing for wood-processing industry (like the one in the town of Križevci). Similar kilns can still be found in Garešnica and in Buzet.

However, the fact remains than the charcoal burners, with the several generations long tradition of engaging in this business and despite of certain adjustments and improvements in the technique of building charcoal kilns, are counting off their last days. The remaining sites where the coal is still burned in the traditional way are actually in a certain way corresponding with modernity only as the loci of local imagery.

Translated by Tanja Bukovčan