

## The Carving of the Solar Eclipse on a Medieval Croatian Tombstone

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To medieval man, the sky and celestial bodies represented a pattern of invariability and a reliable symbol of everyday continuity.<sup>1</sup> Anything that stood out of the ideal picture was considered as a foreboding of bad things.<sup>2</sup> Three such phenomena instilled particularly great fear: the eclipse of the sun, the eclipse of the moon, and comets. Annalists recorded not only such astronomical occurrences, but also the terror that they caused among people, as well as the quest for their consequent relation with wars, plagues or periods of hunger that ensued. In Croatia, the best examples of massive psychoses were noted by Thomas the Archdeacon (1200 – 1268), a chronicler from Split, and by his fellow citizen *a Cutheis* (second half of the 14<sup>th</sup> century – first half of the 15<sup>th</sup> century). Thomas the Archdeacon had the chance to see two solar eclipses: a full one in 1239, and a partial one in 1241.<sup>3</sup> The first eclipse was recorded in Italy, too, and the second one was also mentioned in several German chronicles.<sup>4</sup> These facts point to the path of the shadow of the Moon across the surface of the Earth. Michael, son of Madius de Barbazanis (1284 – 1358), also from Split, left a brief note on the partial eclipse of the sun that took place in 1330. Unfortunately, he took no notice of impressions of the people and implications of the phenomenon within his environment.<sup>5</sup> The mysterious *a Cutheis*, whose name is unknown, left a catastrophic account of celestial phenomena which he considered to be omens of lethal plague that was to come in the year 1348, the Black Death that swept across entire Europe.<sup>6</sup> However, *a Cutheis*' vivid description of the eclipse doesn't match historical events, because no eclipse of the sun could be seen from Split or its surroundings at that time, according to the relevant bibliography. His account seems to make a very proficient use of older templates.<sup>7</sup>

<sup>1</sup> Otto Mazal, *Sternenwelt des Mittelalters* (Graz, 1993), 7-8.

<sup>2</sup> Ibidem, 150.

<sup>3</sup> Thomas Archidiaconus, "Historia Salonitana", ed. Franjo Rački, in *Monumenta spectantia historiam Slavorum meridionalium*, 26 (Zagreb, 1894), 121-122 and 139-140.

<sup>4</sup> *Croniche di Giovanni, Matteo e Filippo Villani*, 1 (Trieste, 1857), 85; *Monumenta Germaniae historica*, 9 (Hannover, 1851), 593, 597, 639.

<sup>5</sup> Miha Madijev Barbazanis, "Historija," in *Legende i kronike* (Split, 1977), 183.

<sup>6</sup> *A Cutheis*, "Tabula," in *Legende i kronike* (Split, 1977), 191, 389.

<sup>7</sup> Mirko D. Gimšek, "Srednjovjekovne zabilježbe o astronomskim pojavama u Hrvatskoj,"

After the death of Pavao Pavlovic of Zadar (after 1416), a big gap in Southern Croatian chronicles ensued – up to the 16<sup>th</sup> century. Hence, we have no preserved texts that describe emotions of the people in times of later eclipses or passings of comets that could have been seen in Southern Croatia.<sup>8</sup> This literary gap is filled, at least in visual form, by a relief ornament from a large monument found in Zagora (Dalmatian hinterland). The tombstone was placed in Brštanovo, 16 kilometres north of Split.

Somewhere in the centre of the small village, beneath the Mosec mountain, there is a church consecrated to the Blessed Virgin Mary. During the Middle Ages, its titular was St. George. The geographic coordinates of the edifice are: 016° 25' 8" E, 43° 39' 50" N; 300 m above sea level. Around the church, there is a local cemetery which has been used since the Middle Ages. Medieval tombstones mostly west of the church, in vicinity of the cemetery gates, prove its origin. When I visited the cemetery for the first time in 1995, several tombstones were covered with a layer of soil. After some unearthing and cleaning, all of them saw the daylight for the first time after many years, judging from the bright white colour of the stone surface. Seven preserved tombstones have various ornaments, three do not have any ornaments – while three remains were altered in later times. Two of the three re-carved pieces were built in into a small mortuary. Southwest of the church, there is a limestone monument in a row of several ones, positioned E–W. The monolith is 197 cm long, 23 to 40 cm thick and 127 cm wide, and its estimated mass is 2100 kg<sup>9</sup> (Fig. 1). The tombstone has the form of a thick slab – which is the usual form for open ground tombstones in this part of the medieval Croatian kingdom.

Croatia entered the late Middle Ages internally divided into twenty *županijas* – administrative and military entities similar to English counties.<sup>10</sup> At first, Brštanovo was part of Zagora County, in the thirteenth century it was annexed to Klis County. Until the first half of the fourteenth century, Brštanovo was owned by the Šubić magnates, then the Nelipić magnates took over for the next hundred years – until the year 1434.<sup>11</sup> However, the Biserić family is quoted to have ruled the village directly. In 1336, Prince Miadin III Šubić bestowed the village to the noble Vidoje, the Biserić ancestor, "for faithful serv-

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[Medieval notes on astronomic phenomena in Croatia], in *Almanah Bošković* (Zagreb, 1954), 198-199.

<sup>8</sup> J. Schroeter, *Spezieller Kanon der zentralen Sonnen- und Mondfinsternisse, welche innerhalb des Zeitraums von 600 bis 1800 n. Chr. in Europa sichtbar waren* (Kristiania, 1923), 137-139.

<sup>9</sup> Slobodan Šestanović, *Osnove geologije i petrografije – primjena u građevinarstvu* [Basics of geology and petrography – their application in building] (Zagreb, 1986), 160. I took into account the specific mass of limestone, which is 2.69 g/cm<sup>3</sup>.

<sup>10</sup> G. O. Sayles, *The Medieval Foundations of England* (London, 1974), 180.

<sup>11</sup> Krešimir Kužić, *Povijest dalmatinske Zagore* [History of Dalmatian Zagora] (Split, 1997), 34, 39.

ice."<sup>12</sup> The people in the whole region lived on selling cereals and livestock to the citizens of the nearby coastal town of Split. A change for the better began in 1358, when the Croatian-Hungarian King Louis I of Anjou defeated Venice and opened the gates to seaborne trade.<sup>13</sup> The next hundred years were a period of incomparable prosperity, reflected by many new cathedrals and palaces in cities and by hundreds of tombstones in the countryside. Some of them weighed more than 5 tons, but their average mass was somewhere about 1000 kg. They were carved in limestone, which can be found in large quantities in nearby hills.

Back to our subject. On some distant day, an ox team hauled this thick slab from nearby slopes to the grave of an unknown wealthy person.<sup>14</sup> A close look at the upper side of the monument reveals a number of ornaments. The whole surface of an irregular rectangular shape was bordered with a thin twisted stripe. "Was," because part of the stripe is missing from the lower right part of the tombstone, probably due to relentless passing of time. The time left its mark in the shape of several other impairments, namely vertical and horizontal cracks. The stripe surrounds several interesting ornaments. On the left side, but closer to the lower corner, there is an 8-point star. In the centre, along the lower border, there is a crescent with tips pointed towards the left upper corner, and near the right tip there is a 7-point star. The span of the crescent is 21 cm, and its width 4,5 cm. On the opposite side, near the middle of the upper border, a simple Latin cross,<sup>15</sup> 43 cm long and 27 cm wide, was carved. Finally, near the right part of the border, there is a quaint figure that promptly catches attention. It is a circle, bordered with an ornament that looks like a string of flower petals at first glance. The disc chiselled by the stonemason has an outer diameter of 38 cm ("rays" included). Cracks divide the ring of rays in two parts – a smaller and a bigger one. To the right there are three rays, while to the left and to the south there are 15 rays. There should have been about 32 rays in the original design, but to this day the number is reduced due to knocking off, possibly even during the carving. On the left side of the disc there is an easily visible crescent, with lips gently pointed towards the right upper corner of the twisted stripe. The crescent has the same dimensions as the one in the field.

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<sup>12</sup> Ibidem, 53-54.

<sup>13</sup> Tomislav Raukar, *Hrvatsko srednjovjekovlje* [The Croatian Middle Ages] (Zagreb, 1997), 80, 151-166.

<sup>14</sup> Stjepan Gunjača, "Prinos poznavanju porijekla i načina stećaka" [Contribution to the understanding of the origin and type of tombstones], in *Izbor iz djela* (Split, 1991), 81-82.

<sup>15</sup> George Ferguson, *Signs & Symbols in Christian Art* (London, Oxford, and New York, 1976), 164.

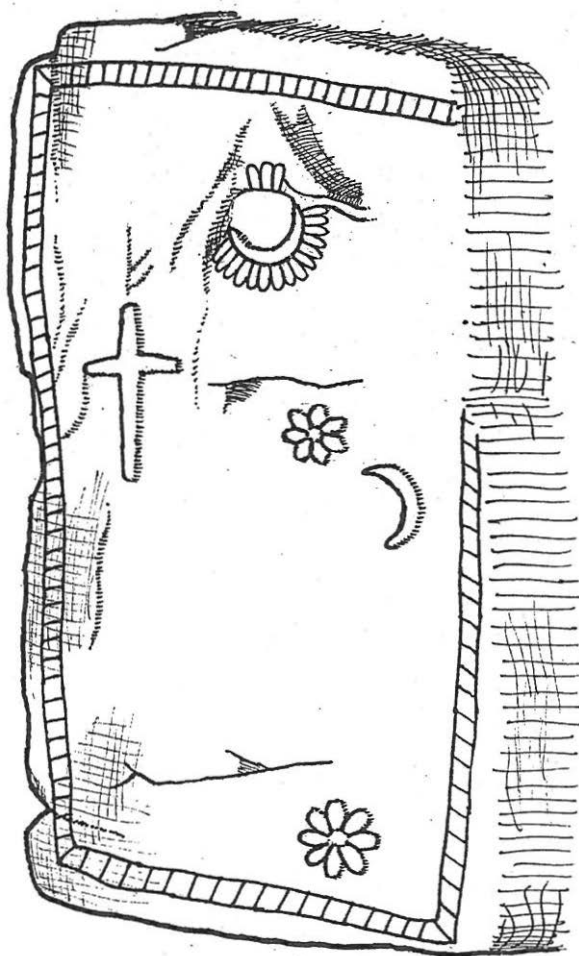


Fig.1: Tombstone from Bršanovo (actual position – viewed northward).

This description raises a question – what does the entire composition mean? It is obvious that it is neither vertically nor horizontally symmetrical. To a casual observer it might seem confusing and random. Even the stars have different number of points. The cross does not occupy a conventional central position on the bordered surface, too. It could be said that it is a nice work of a simple village stonemason.

On the contrary, however, it appears to be a brilliant design of a celestial, that is, astronomical reality that existed or occurred at the time when the deceased passed away. The first group on the left, the crescent and two stars, lead us to believe that it depicts a fixed event – it could be the day of death of the deceased. At the moment of death, one of his family or kinsfolk might have memorised the positions of visible night celestial bodies. It was the moon, the Venus and the Mars. Consequently, the moon is shaped classically – like a crescent, while the Venus has the form of a 7-point star. Mars is symbolically depicted as an 8-point star.<sup>16</sup> Their common disposition on the slab corresponds to their sky position and their relation to horizon, symbolised by the twisted stripe.

Because of the two crescents, we can conclude that the carving of the figural composition on the opposite, right side of the slab, undoubtedly depicts the Sun covered by the Moon – an eclipse, to be precise. In spite of its floral look, one can soon realise that the figures represent celestial bodies. One has to admit that the chiseller solved the problem of two overlapping discs – the sun and the moon – in an artful manner. He couldn't have depicted the invisible disc of the full moon, as the actual situation demanded,<sup>17</sup> because the clearness of the design would have been lost. Instead, he decided to use the regular symbol for the Moon, a crescent, carving it atop the disc with a ring of rays symbolizing the sun.

Judging from the orientation of the cross, whose longer arm currently points westwards, instead of eastwards, I think that the monument must have been turned round by 180 degrees at unknown time. Besides, both the figures of the separated crescent and the "solar" one are in their natural positions only if we turn the tombstone into its original position. It is well known that the convex part of the moon is oriented towards the sun during its first quarter, so the tips point eastwards.<sup>18</sup>

Concerning the meaning of the eclipse, one possible explanation was that it marked the year (or even the day) of birth of the deceased. However, I reject this solution having in mind the combined astronomical, political, economic and custom realities of the period. It is a matter of fact that in this area there are no ornamented tombstones indisputably dated to the first half of the fourteenth century. Only such tombstones could be associated with the eventual birth of the

<sup>16</sup> Ivo Banac, *Grbov biljezi identiteta* [Coats of arms as signs of identity] (Zagreb, 1991), 37, 94.

<sup>17</sup> Vladis Vujnović, *Astronomija* [Astronomy], I (Zagreb, 1994), 151.

<sup>18</sup> *Ibidem*, 131.

deceased in the years 1239, 1241, or 1270, when solar eclipses could have been seen in parts of Croatia.<sup>19</sup> With a presumed life span of 50 to 70 years, we would have years of death that do not correspond with the period that the tombstone was made in, or, more precisely, with this kind of ornament.<sup>20</sup> Let us examine the next two perceptible eclipses which occurred in 1431 and 1433.<sup>21</sup> This would mean, according to the presumed life span, that the deceased passed away between 1481 and 1501. That period, however, is out of the question because entire Southern Croatia was economically and demographically devastated by decades of Turkish ravaging.<sup>22</sup> One certainly may ask for the fourteenth century eclipses.<sup>23</sup> The answer applying to these and all the eclipses generally, however, has to be that there have not been any tombstones registered giving reference to the birth year. Therefore, the only possible explanation is that the figure depicts the year of death of the deceased.

Which eclipse does the ornament refer to? The problem lies in the close succession of the two partial eclipses of the fifteenth century that occurred within two years.<sup>24</sup> But, it may help, if we use other data – with regard to the slab and the celestial situation. In 1431, the eclipse occurred on February 12, beginning 3:35 and ending at 3:51 pm.<sup>25</sup> It was described as *grandissima* by an Italian chronicler, and that also tells us something about the path of the moon shadow.<sup>26</sup> The other eclipse, two years later, happened on June 17 and lasted from 4:38 till 4:52 pm.

The stonemason's cleverness is obvious, but we haven't come closer to the solution – which eclipse did he refer to? There is only the possibility to analyse the position of the planets and moon carved on the left side. Using the days of eclipses to be a time axis, we found that such a position of the celestial bodies was on June 21, 1433, at 9:00 pm. At this very day the deceased under the monument might have died. On the celestial sphere the positions were:<sup>27</sup>

<sup>19</sup> Th. Oppolzer, "Canon der Finsternisse," *Denkschriften der kaiserlichen Akademie der Wissenschaften, mathematisch-naturwissenschaftliche Classe*, 52 (1887): 117, 119; Schroeter, *Spezieller Kanon*, 8, 44, 46.

<sup>20</sup> Šefik Bešliagić, *Stećci na Blidinju* [Tombstones in Blidinje] (Zagreb, 1951), 51-53, 70; Marian Wenzel, *Ornamental Motifs on Tombstones from Medieval Bosnia and Surrounding Regions* (Sarajevo, 1965), 19-51.

<sup>21</sup> Oppolzer, "Canon," 252; Schroeter, *Spezieller Kanon*, 53.

<sup>22</sup> Raukar, *Hrvatsko*, 405-439.

<sup>23</sup> Schroeter, *Spezieller Kanon*, 129-134.

<sup>24</sup> Ibidem, 137-138.

<sup>25</sup> See the multimedia astronomy software CD: 1 Maris Multimedia, Redshift 3, Events, Eclipses (Kingston: Maris Technologies Ltd, 2001).

<sup>26</sup> *Cronaca di ser Guerriero da Ciubbio dall'anno MCCCCI, all'anno MCCCCCLXXII*, *Rerum Italicarum scriptores*, 21/4 (Città di Castello, 1902), 48.

<sup>27</sup> See the multimedia astronomy software CD: 2 Maris Multimedia, Redshift 3, Object info (Kingston: Maris Technologies Ltd, 2001).

	RA	Dec	Azm	Alt
Mars	16h 42m 57s	-26° 35' 44"	164° 56'	18° 22'
Venus	09h 46m 02s	+14° 32' 52"	279° 33'	11° 24'
Moon	10h 19m 29s	+04° 58' 07"	267° 29'	11° 09'

Besides, knowing that the eclipse was partial, there is the question whether an eye-witness from Brstanovo knew that. It should be fascinating that in this case the crescent doesn't symbolise the moon but the sun protruding behind the Moon. Namely, looking from this geographical position the covered Sun has been assuming such crescenting appearance.

All the mentioned conclusions concede us to reconstruct the chronology of the occurrences. The events may have happened in this order:

1. the eclipse occurred on June 17, 1433;
2. the deceased died on June 21, 1433 at 9:00 p.m. and person(s) present at this moment memorised the positions of the celestial bodies;
3. the deceased was buried;
4. a stonemason cut the tombstone in a quarry roughly;
5. the tombstone was hauled down to the graveyard and placed upon the grave;
6. a stonemason carved the position of celestial bodies following the instructions of the person(s) present at the moment of death of the deceased.

That is to say, the eclipse preceded quite well-timed – the unusual phenomenon occurred before the deceased was dead, so the relatives of the deceased used it as an opportune and remindful time stamp.

Where did the medieval Croats find the inspiration to record the most important events in their lives, and the death of a related person certainly was, by marking the positions of celestial objects? A part of the answer is given in a note of the aforementioned Thomas the Archdeacon. He described how Croats would start clattering metallic vessels in order to scare the demons that were eating the moon, when they would notice that the latter was darkening.<sup>28</sup> We can also find the 8-point and 6-point star on moulds found near Knin.<sup>29</sup> They are particularly valuable because they were made in the seventh century – at the time when Croats hadn't had accepted Christianity yet. Furthermore, we can find the star and the crescent on many medieval coins, as well as on coats of arms of Croatian noblemen,<sup>30</sup> cities and regions. For example, the neighbouring principality of Poljica had a coat of arms featuring a star and a crescent until the

<sup>28</sup> Thomas Archidiaconus, "Historia," 25.

<sup>29</sup> Josip Korošec, "Ostava brončanih matrica za otiskivanje u Biskupiji kod Knina" [The remains of bronze matrix moulds in Biskupija near Knin], in *Starohrvatska prosvjeta*, serija III/6 (Zagreb, 1958): 31, 33.

<sup>30</sup> Adam S. Eterovich, *Croatian and Dalmatian Coats of Arms* (Palo Alto, 1978).

Turkish invasion in the 15<sup>th</sup> century.<sup>31</sup> The links between astronomical phenomena and the old Croatian architecture has also been proved..<sup>32</sup> Finally, thanks to the diligence of ethnographers there are many works describing the folklore customs, until recently alive, that include the "star" Danica, i.e. Venus - these are the remains of ancient celestial cults.

As a conclusion, we could say that the medieval Croats attributed great importance to carvings of ancient symbols of the light -the stars and the Moon - on their forefathers' graves, despite the influence of several centuries of Christianity. Still, the cross was added as a public sign of religious belonging of the deceased. Thanks to that medieval custom and the lucky concurrence of events related to the tombstone of Brštanovo we succeeded to define its manufacture time. In this way we could try to date other Croatian tombstones with carved symbols of the celestial bodies. Last but not least, the tombstone from Brstanovo near Split confirms Petrarca's words about the differences between Italians and Croats.<sup>33</sup>

*...Unum mare  
est nobis, sed non unum litus,  
non unus animus, non unum ingenium,  
non unus denique seu vivendi seu  
loquendi mos.*

*...We have the same sea  
but different shores,  
different souls, different learnings,  
language and customs  
utterly different.*

(Translated by Vigor Maštruko)

<sup>31</sup> Miroslav Pera, *Poljički statut* [The statute of Poljica] (Split, 1988), 208.

<sup>32</sup> Mladen Pejaković and Nenad Gattin, *Starohrvatska sakralna arhitektura* [Old Croatian sacral architecture] (Zagreb, 1988).

<sup>33</sup> Francesco Petrarca, *Le familiari*, 2, ed. V. Rossi (Firenze, 1934), 244-245.

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46

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HERAUSGEGEBEN  
VON GERHARD JARITZ

GEDRUCKT MIT UNTERSTÜTZUNG DER KULTURABTEILUNG  
DES AMTES DER NIEDERÖSTERREICHISCHEN LANDESREGIERUNG

**niederösterreich kultur**

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## Inhalt

Vorwort .....	5
Péter Szabó, Medieval Trees and Modern Ecology: How to Handle Written Sources .....	7
Krešimir Kužić, The Carving of the Solar Eclipse on a Medieval Croatian Tombstone .....	26
Alexandr B. Tscherniak, Der Fuchsschwanz. Einige Bemerkungen zum Schulgedicht <i>Videant qui nutriunt natos delicate</i> .....	34
Gerhard Jaritz, Fear and Fascination: Late Medieval German Perceptions of the Turks Revisited .....	40
Rezensionen .....	48
Anschriften der Autoren und Rezensenten .....	62

## Vorwort

Das vorliegende Heft von *Medium Aevum Quotidianum* widmet sich sehr unterschiedlichen Zugängen zu einer Geschichte des Alltags und der materiellen Kultur des Mittelalters, welche neuerlich den interdisziplinären Charakter des Forschungsfeldes deutlich machen sollen. Péter Szabó (Budapest) vertritt einen umweltgeschichtlichen Ansatz zur Analyse von ungarischen *perambulationes* und der in ihnen auftretenden Verwendung und Beschreibung von Landschaftselementen. Krešimir Kužić (Zagreb) beschäftigt sich mit astronomischen Erklärungsmodellen von Gestirnkonstellationen auf einem kroatischen Grabstein. Alexandr B. Tscherniak (Sankt Petersburg) bietet in einer literatur- und sprachhistorischen Analyse den Deutungsversuch des spätmittelalterlichen „Fuchschwanzes“. In einem Beitrag zum Türkenbild des Spätmittelalters in der schriftlichen Überlieferung werden unterschiedliche Konnotationsmuster in den Beurteilungen festgestellt. Alle vier Beiträge konzentrieren sich direkt oder indirekt stark auf verschiedene Varianten von Kontextualisierung, deren Berücksichtigung sich in der modernen alltagsgeschichtlichen Forschung des Mittelalters und der frühen Neuzeit als unerlässlich erweist.

Die nächsten beiden Hefte unserer Reihe werden im Frühling bzw. Frühsommer 2003 als Sonderbände herausgegeben werden. Sonderband XIII/XIV wird eine neue Auswahlbibliographie zu Alltag und materieller Kultur des Mittelalters bieten. Seit Erscheinen der letzten derartigen Publikation in *Medium Aevum Quotidianum*–Newsletter 7/8 (1986) sind doch viele neue wissenschaftliche Veröffentlichungen aus unserem Interessensbereich erschienen, und eine Neuherausgabe ist damit notwendig geworden. Sonderband XV wird Untersuchungen beinhalten, die unter der Leitung bzw. Herausgeberschaft von Aaron J. Gurjewitsch von der russischen Forschung in Bezug auf die Analyse von Bildquellen für die Kultur-, Alltags- und Mentalitätsgeschichte des Mittelalters vorgelegt wurden. – Darüber hinaus befinden sich weitere Hefte in Planung, welche wieder alltagshistorische Beiträge beinhalten sollen, die bei den Internationalen Mittelalter-Kongressen in Kalamazoo und Leeds im Jahre 2003 vorgetragen werden.

Für die Jahre 2004/2005 sind zwei weitere Themenhefte geplant, welche sich interdisziplinär, überregional und komparativ mit den Problemkreisen von „Mittelalterlicher Alltag und das Phänomen der Verkehrten Welt“ bzw. mit „Mittelalterlichen Bewertungsstrategien von materieller Kultur“ auseinandersetzen sollen. Alle Mitglieder und Freunde von *Medium Aevum Quotidianum* sind

sehr herzlich eingeladen, an diesen Bänden aktiv mitzuarbeiten und uns bei diesbezüglichem Interesse so bald wie möglich darauf bezogene Themenvorschläge zu übermitteln.

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