

Universal Multiple-Octet Coded Character Set  
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This document gives background information to the N4007 (2011-01-21) and answers questions raised in the N4042 (2011-05-08). Please send any response regarding to this proposal to Gábor Hosszú (email: [hosszu@eet.bme.hu](mailto:hosszu@eet.bme.hu)).

## Contents

1.	Introduction.....	1
2.	Comments on SHR Characters .....	2
2.1.	Semantical distinction.....	2
2.2.	SHR characters with partly similar glyphs.....	2
2.3.	SHR characters of only historical use .....	3
2.4.	SHR characters invented after the 16 <sup>th</sup> century .....	4
2.5.	Numbers.....	4
2.6.	Punctuations.....	4
3.	An archaic SHR relic: the Vargyas inscription.....	5
4.	Naming .....	6
4.1.	Script name .....	6
4.2.	Character name .....	7
5.	Acknowledgement .....	7
6.	Bibliography .....	8
7.	Appendix .....	9

## 1. Introduction

The *Szekely-Hungarian Rovas* /sɛ:kɛj hɒŋ'ɛərɪən rova:f/ (**SHR**) is a contemporary writing system of the Hungarians. The primary purpose of encoding the SHR characters is serving the present-day SHR orthography. Therefore, the SHR character repertoire and the character names must be in accordance to the present-day SHR usage (see *Ch. 4*). Additionally, encoding the only historically used SHR characters is necessary as well for the written communication of the SHR researchers (N4007, 2011-01-21).

The author of this study emphasizes that all historical and linguistic statements in the Rovas proposals (Khazarian Rovas: N3999, Carpathian Basin Rovas: N4006, and SHR: N4007) are consequently based on theories and statements of officially acknowledged scholars: historians, archaeologists, and linguists. Moreover, the transcription of each relic uses the drawings of archaeologists exclusively.

In this document, the **IPA** (International Phonetic Alphabet) symbols are applied for representing phonemes extending with the symbols for the *undetermined back* /ɝ/ and *front* /ǝ/ vowels.

## 2. Comments on SHR Characters

### 2.1. Semantical distinction

As it is known, the *character* is the smallest component of written language that has semantic value; refers to the abstract meaning and/or shape, rather than a specific shape. In displaying Unicode character data, one or more *glyphs* may be selected to depict a particular character. However, if two characters *semantically distinct* they are encoded individually despite of the similarities of their glyph representations. Two characters are semantically distinct if they represent different sounds in the same orthography, or their glyphs are different and unrelated. Characters proposed to be encoded in N4007 are semantically distinct.

The character repertoires of the **Carpathian Basin Rovas** and the **Khazarian Rovas** show significant cultural influence of **Aramaic-derivative** scripts: *Imperial Aramaic*, *Middle Iranian (Parthian, Pahlavi)*, and *Syriac*. Furthermore, the influence of the *Lydian* script on the Rovas scripts can be detected as well. This fact is not surprising, as in the Eurasian Steppe the subsequent empires were geographically large, and they were in contact with several other cultures through trading and warfare.<sup>1</sup> In the Carpathian Basin, the Szekely-Hungarian Rovas (SHR) emerged based on two other Rovas scripts; however SHR also obtained a few loan characters from other scripts used by neighboring nations, including a character from the Greek alphabet. These facts can be utilized in the research of the Rovas script history.<sup>2</sup>

In the following, the rationale of encoding some disputed SHR characters is presented.

### 2.2. SHR characters with partly similar glyphs

SHR characters	Reasoning
⦿ F and ◊ DIAGONAL F	The SHR ⦿ F originated from the Greek Θ THETA ( <i>capital letter</i> ), <sup>3</sup> and SHR ◊ DIAGONAL F was borrowed from the Glagolitic ⦿ FITA, which can be derived from the Greek θ THETA ( <i>minuscule letter</i> ). <sup>4</sup> The SHR ⦿ F is used in the present-day SHR orthography; however, the unrelated SHR ◊ DIAGONAL F has historical significance.
◊ K and ▲ TRIANGULAR K	The SHR ◊ K can be derived from the Khazarian Rovas ◊ K <sup>5</sup> , which originated from the Syriac (Nestorian) □ QOPH /q/. Oppositely, the SHR ▲ TRIANGULAR K can be derived indirectly from the Imperial Aramaic ⤴ QOPH similarly to its other descendant, the Old Turkic ▷ IK. <sup>6</sup> It is noteworthy that the number of vertices of the glyphs were usually kept during the script history. In the last millennium, the SHR ◊ K did not change. In the Khazarian Rovas, the shape of the ◊ K was also stable during the centuries of its use. Moreover, there is no any evidence for the relation between the ◊ K and the ▲ TRIANGULAR K.
⋈ O and ! CIRCLE ENDED O	The SHR ⋈ O is the derivative of the Carpathian Basin Rovas } O, and the SHR ! CIRCLE ENDED O is the direct descendant of the Glagolitic ⋈ ON. <sup>7</sup> See also the discussion of the Vargyas relic in <i>Ch. 3</i> .

<sup>1</sup> Hosszú, 2011, *Subch. 3.1*

<sup>2</sup> Hosszú, 2011, *Section 3.6.2*


















<sup>3</sup> Hosszú, 2011, *Section 3.6.2*

<sup>4</sup> Vékony, 1986














<sup>5</sup> Vékony, 2004

<sup>6</sup> Hosszú, 2011, *Chapter 4 (The Rovas Atlas)*

<sup>7</sup> Vékony, 1986

<p>  AMB,  EMP,   MB,  NAP,  NB,   TPRU, and  TPRUS </p>	<p> These symbols are cognate; in the Middle Ages, they were supposedly invented from each other. Originally, all of these were probably developed from the ligature of a ligature of 𐌆N + 𐌄O + 𐌂P, and its meaning was /nop/ ‘period, day’ (present-day: /nop/). They can have been used in a calendar, where the dates of the mandatory feasts were listed. However, in the present-day use, they are semantically distinct syllabic symbols: 𐌂 AMB /omb/, 𐌃 EMP /emp/, 𐌄 MB /mb/, 𐌅 NAP /nop/, 𐌆 NB /nb/, 𐌇 TPRU /ho:nop/, and 𐌈 TPRUS /e:v/.<sup>8</sup> </p> <p> It is noteworthy that their design style is similar to the development of 𐌂 CLOSE UEE /y/, which was created from the ligature of 𐌄 E /e/e:/ and 𐌃 (mirrored glyph). Therefore, all of these symbols were surely developed in the same period. This period of the SHR development between the 11<sup>th</sup> and the 14<sup>th</sup> centuries can be called as “<i>Age of Ligatures</i>”. </p>
<p>  ZS and  SCH </p>	<p>  SCH was derived from  ZS, probably in the 17<sup>th</sup> century. They have distinct sound values:  ZS /z/ and  SCH /ʃ/. Besides their historical significance, there is a need for their use in the present-day SHR orthography, especially in German-origin Hungarian family names: <i>Fischer</i> 𐌆𐌊𐌋𐌌, <i>Schiller</i> 𐌆𐌊𐌋𐌌𐌍. </p>
<p>  ANT and  ENT </p>	<p> Historically, these characters were glyph variants. However, in the present-day use their sound values are distinct:  ANT /ont/ and  ENT /ent/. </p>

### 2.3. SHR characters of only historical use

<p>  GH </p>	<p>  GH /ɣ/ originated from the Parthian  HETH /ɣ/x/h/, and it exists in the Carpathians Basin Rovas (N4006) and the Khazarian Rovas (N3999) as well. The mirrored form () of  GH /ɣ/ was also common in that Rovas scripts (e.g. on <i>Fig. 2-7/a</i> in N4006). In the Hungarian language, in the 11<sup>th</sup> century, at the end of the words, /ɣ/ was vocalized, and it became /u/ or /y/.<sup>9</sup> They were used as diphthongs with the preceding vowel: /ɣu/ and /ɣy/. In the 12<sup>th</sup>-14<sup>th</sup> centuries, a monophthongization occurred: /ɣu/ and /ɣy/ became /o:/u:/ and /ø:/y:/, respectively.<sup>10</sup> This process ended up to the 14<sup>th</sup> century.<sup>11</sup> This linguistic process can be detected in the SHR glyph variations of the  GH /ɣ/ appeared for representing /ø/ø:/y/y:/: the  OPEN UE and its other glyph variant: . It is noteworthy that before the 12<sup>th</sup> century, the sound /ø/ø:/ did not exist in the Hungarian language. See also the discussion of the Vargyas relic (<i>Ch. 3</i>). </p>
<p>  OPEN V </p>	<p>  OPEN V /β/ is the indirect descendant of the Lydian  V /v/.<sup>12</sup> It was also common in the Carpathian Basin Rovas and in the Khazarian Rovas.  OPEN V disappeared from SHR in the 12<sup>th</sup>-13<sup>th</sup> centuries, when the linguistic change /β/&gt;/b/v/ occurred in the Hungarian language.<sup>13</sup> Its use is attested in the Székelydália relic: in the word  𐌆𐌇 /<sup>ε</sup>st<sup>ε</sup>nd<sup>ε</sup>β/ ‘year’ (archaic form of the present-day /estendø:/ ‘year’)<sup>14</sup> in the right bottom part of <i>Fig. 2-3</i> in N4007. </p>

<sup>8</sup> Hosszú, 2011, *Section 3.6.4*

<sup>9</sup> E. Abaffy, 2003b, p. 302, p. 312

<sup>10</sup> E. Abaffy, 2003b, pp. 339-344

<sup>11</sup> E. Abaffy, 2003, pp. 339-344

<sup>12</sup> Hosszú, 2011, *Subch. 3.3*

<sup>13</sup> E. Abaffy, 2003, p. 303

<sup>14</sup> Zelliger, 2010-11

## 2.4. SHR characters invented after the 16<sup>th</sup> century

The following Rovas characters obtained their present-day shapes in the last decades; however, as individual character they have already appeared much earlier.

⚡ DZ	The occurrence of the SHR character for DZ is attested in 1935 ( <i>Fig. 7-2</i> ).
⚡ DZS	The occurrence of the SHR character for DZS is attested in 1935 ( <i>Fig. 7-2</i> ).
⚡ Q	The occurrence of the SHR character for Q is attested in 1629 ( <i>Fig. 7-1</i> ).
⚡ W	The occurrence of the SHR character for W is attested in the 1930s ( <i>Fig. 7-3</i> ).
⚡ X	The occurrence of the SHR character for X is attested in 1629 ( <i>Fig. 7-1</i> ).
⚡ Y	The occurrence of the SHR character for Y is attested in 1629 ( <i>Fig. 7-1</i> ), and another early occurrence was in 1971 ( <i>Fig. 7-4</i> ).

## 2.5. Numbers

<p>⚡ ONE, ⚡ TWO, ⚡ THREE, ⚡ FOUR</p>	The Rovas scripts (including the SHR) are related to the Middle-Iranian (Parthian and Pahlavi) scripts. A specific property of the SHR number representation is denoting the number FOUR with four vertical bars (⚡) and not with a bar before the symbol of FIVE (⚡). This feature is identical in the Middle-Iranian scripts, which supports the supposition that SHR numerals originated from the Middle-Iranian scripts. The proposal for encoding the Parthian and Pahlavi scripts (N3286R2, 2007-09-18) motioned encoding individually the numbers ⚡ ONE, ⚡ TWO, ⚡ THREE, and ⚡ FOUR. Similarly, encoding all the listed SHR numbers is reasonable as well.
⚡ FIVE HUNDRED	The first occurrence of the ⚡ FIVE HUNDRED is attested in 1971 ( <i>Fig. 7-4</i> ).

## 2.6. Punctuations

= EQUALS MARK-LIKE HYPHEN	<p>The SHR = EQUALS MARK-LIKE HYPHEN is well attested. However, the DOUBLE HYPHEN proposed by the German National Body in N3983 could be used in the Szekely-Hungarian Rovas as well. Since the German proposal preceded the Hungarian one (N4007), the Hungarian National Body agrees with encoding the DOUBLE HYPHEN instead of the = EQUALS MARK-LIKE HYPHEN with an additional annotation in the standard:</p> <ul style="list-style-type: none"> <li>• <b>used in transcription of Szekely-Hungarian Rovas historical inscriptions</b></li> </ul>
<p>* WORD SEPARATOR CROSS, ⚡ DOUBLE COMMA-LIKE HYPHEN, ⚡ DOUBLE CROSS FULL STOP, ⚡ BEGINNING MARK RIGHT, ⚡ BEGINNING MARK LEFT, ⚡ END OF MESSAGE MARK</p>	Each SHR punctuation mark is attested in a number of independent relics. <sup>15</sup> One of them is presented on <i>Fig. 7-2</i> .
⚡ DUPLICATING MARK	Attested in different relics in 1873 and 1932-35 ( <i>Fig. 7-2</i> ). <sup>16</sup>

<sup>15</sup> Hosszú, 2011, *Sections 8.2.9 – 8.2.12*

<sup>16</sup> Hosszú, 2011, *Sections 8.2.10 & 8.2.11*

### 3. An archaic SHR relic: the Vargyas inscription

A stone inscription was found in Vargyas Village (Szekelyland, Romania) in a church (*Fig. 3-1*).<sup>17</sup> Its transcription was made by Vékony and improved by Zelliger (*Table 3-1*).<sup>18</sup> The sentence was cited from *Gospel of John*:<sup>19</sup> “*Woman, behold your son*”. The stone could be the foundation of a crucifix or a statue representing the scene of Calvary, according to its shape and the meaning of the inscription.



*Figure 3-1: Inscription of Vargyas (photos and authentic drawing)*<sup>20</sup>

Written with Szekely-Hungarian Rovas font	ŸMO) Ț NŸ10 ȚȚ
IPA phonetic transcription	<sup>h</sup> me: fioɣ t <sup>e</sup> n <sup>e</sup> kyd
Translation from Hungarian	‘[Woman,] here is your Son’

*Table 3-1: Transcription of the Vargyas relic*

The text contains the SHR character Ÿ GH /ɣ/. In the 11<sup>th</sup> century, the sound /ɣ/ became almost extinct in the Hungarian language; however, sometimes it remained in written texts.<sup>21</sup> The use of /ɣ/ in this relic may show a strong archaism, using an earlier state of the Hungarian language. Linguist Korompay claimed that after the 11<sup>th</sup> century, the use of /ɣ/ became very rare, but the diphthongs developed from /ɣ/ frequently occurs in the Hungarian Latin-based sources.<sup>22</sup> According to linguist Zelliger, the text of the inscription was probably a widely known phrase in the time of carving, and the text could not be created later than the 11<sup>th</sup> century, moreover, it could be even much earlier.<sup>23</sup> According to linguist E. Abaffy, as early as in the 10<sup>th</sup> century, the change /fioɣ/ > /fiu:/ appeared.<sup>24</sup> This inscription contains the earlier form: /fioɣ/. Consequently, the *language of text* on the Vargyas relic is no later than the 10<sup>th</sup>-11<sup>th</sup> centuries, albeit the *inscription* was probably carved into the stone in the 12<sup>th</sup> century.<sup>25</sup>

The existence of the first word /<sup>h</sup>me:/ in the epoch of the relic is proved by Hungarian linguistics.<sup>26</sup> The glyph of Ÿ CLOSE E /e/ in the inscription is Ț being only formally identical to the Ț H /h/. In addition, at the time of

<sup>17</sup> Kovács, 1994

<sup>18</sup> Vékony, 2004, p. 22; Zelliger, 2010-2011

<sup>19</sup> Ioh. 19:26

<sup>20</sup> Kovács, 1994; Ráduly, 1994

<sup>21</sup> Korompay, 2010

<sup>22</sup> Korompay, 2010

<sup>23</sup> Zelliger, 2010-2011

<sup>24</sup> E. Abaffy, 2003, p. 302, p. 312

<sup>25</sup> Benkő, L., 1990, pp. 109-122; Benkő, L., 1991

<sup>26</sup> D. Mátai, 2003, p. 402

the text, there was not yet sound /h/ in the Hungarian language; therefore the symbol ǫ may not mean /h/. The SHR character of /h/ (ǫ H) was created by duplicating ǫ CH /x/ in the *Age of Ligatures (Subch. 2.2)*.

The character M V was used for /y/ that demonstrates the earliest use of this SHR character. Later, this character was also used for representing /u/ and then /v/ because of the influence of the Hungarian Latin-based orthography, in which the Latin letters *u* and *v* similarly represented /u/, /y/, and /v/.<sup>27</sup> The SHR character of /u/ was developed from M V /y/u/v/ by duplicating its glyph: ǫ U /u/u:/y/. This innovation was carried out in the *Age of Ligatures*, see *Subch. 2.2*. The duplication shows the influence of the Hungarian Latin-based orthography, in which the duplicated characters *uu* and *vv* were common and used for /u/u:/y:/v/.<sup>28</sup>

In this relic, the character ǫ T represented both /d/ and /t/. There is another example for this representation; see the Constantinople inscription (word ǫǫǫ /k<sup>ε</sup>d<sup>ε</sup>ji/ in *Fig. 2-5* in N4007). In the Middle Ages, the present-day SHR character ǫ D /d/ was very probably derived from the character ǫ T /d/t/ as a glyph variant. Later the use of the ǫ T /d/t/ was restricted to represent /t/.

There is an earlier attempt for transcribing the Vargyas relic: /m<sup>h</sup>a:ly i:rt<sup>a</sup>:n k<sup>θ</sup>v<sup>ε</sup>t/ ‘Michael wrote (?) [the] stone’.<sup>29</sup> However, this solution is questionable for several reasons: (i) This transcription attempt presumes that the long vowel /a:/ was not written in two words (/m<sup>h</sup>a:ly/ and /i:rt<sup>a</sup>:n/). This solution is in contradiction to the medieval SHR relics, in which the long vowels were usually written, oppositely to the frequently skipped short vowels.<sup>30</sup> (ii) The transcription attempt cannot interpret the symbol ǫ CIRCLE ENDED O and ignores it. Another version of this earlier attempt is /m<sup>h</sup>a:ly j : i:rt<sup>a</sup>:n k<sup>θ</sup>v<sup>ε</sup>t/, which interprets the ǫ CIRCLE ENDED O as a colon (:). However, the punctuation mark colon (:) first appeared in late fourteenth century, according to Reimer.<sup>31</sup> As the Vargyas relic is much older; the use of the colon (:) in this inscription is impossible. (iii) As linguist Zelliger stated, the word /i:rt<sup>a</sup>:n/ never meant ‘wrote’. The word /i:rt<sup>a</sup>:n/ is the perfect participle of the Hungarian verb /i:rni/ ‘to write’ with possessive and adverbial suffixes. Moreover, linguistically, the whole expression of the older transcription is very unlike at the time of the Vargyas relic.<sup>32</sup> Because of the arguments above, this transcription is surely erroneous.

The Vargyas inscription is a very important link between the Szekely-Hungarian Rovas and the earlier Rovas scripts (Carpathian Basin Rovas – N4006 and Khazarian Rovas – N3999), since it contains the character ǫ GH /ɣ/. The sound /ɣ/ was widely used in the Hungarian language before the eleventh century. Later it changed to other sounds (together with its preceding vowel), for instance, to /ø:/ and /y:/. That is the reason why ǫ GH /ɣ/ is not found in the later SHR relics. However, variants of ǫ GH /ɣ/ survived as the SHR vowel ǫ, ǫ OPEN UE /ø/ø:/y/y:/ (*Subch. 2.3*).

## 4. Naming

### 4.1. Script name

The Rovas scripts dominantly derive from the Phoenician-origin scripts used in Persia (Iran). Among others, Sebestyén described the Phoenician roots of SHR, Róna-Tas stated that a kind of Semitic script is the ancestor of SHR.<sup>33</sup> Scholars have examined the indirect relation to the Old Turkic script as well.<sup>34</sup> Needless to say that the Rovas scripts are obviously different from the Runic script (its subgroups: early German, Scandinavian, etc.) and the Old Turkic script as well (its subgroups: Baykal-Lena area, Yenisei valley, etc.).<sup>35</sup> Therefore, the Hungarian-origin term **Rovas** /rova:f/ is used for naming the script and not the German-origin one: *rune* or *runic*. The Germanic root of *run-* was proved by Stötzner in 2008.<sup>36</sup> Additionally, the term *Rovas* has been used

<sup>27</sup> Korompay, 2003, p. 288, 291

<sup>28</sup> Korompay, 2003, p. 288, 291; Korompay, 2010; Korompay, under publication

<sup>29</sup> Ráduly, 1994

<sup>30</sup> Sándor, 1991; Vékony, 2004, p. 19

<sup>31</sup> Reimer, 1998, *Ch. IV.vii*. Paleography: Punctuation

<sup>32</sup> Zelliger, 2010-2011

<sup>33</sup> Sebestyén, 1909, p. 288; Róna-Tas, 1994

<sup>34</sup> Németh, 1917-1920, pp. 31-44; Ligeti, 1925, pp. 50-52; Nagy, 1985, pp. 269-276; Sándor, 1996, pp. 83-93

<sup>35</sup> Róna-Tas, 1996, p. 581

<sup>36</sup> Stötzner, A. in Unicode mailing list on Friday November 07 2008: „... *Though we have the runic range named “Runic” & not “Old Germanic” we have the old turkish ‘Runes’ named “Old Turkic” because \*run-\* is a germanic root & as such inappropriate to the turkish script. ...*” Retrieved in 2010 from: <http://unicode.org/mail-arch/unicode-ml/y2008-m11/0107.html>

for a long time in the international literature and it is accepted more and more in English and in other languages mostly in Central Europe. Some examples are shown in *Table 4-1*.

<b>Language</b>	<b>Version of the word Rovas</b>
Albanian	<i>rabush, labush</i>
Bulgarian	<i>pавouи, pавyии, pовyии, pъвouи</i>
Czech	<i>rabuše</i>
Danish	<i>Rovás Skriften</i>
Polish	<i>rowasz</i>
Romanian	<i>răvaș, răbuș, răboj, ráboș rábaș</i>
Serbian, Croatian	<i>rovaš, ravaš, raboš, rabuš, r(e)vaš</i>
Serbian	<i>pовашкo нисмо</i>
Slovakian	<i>rováš</i>
Slovenian	<i>rováš, rováša</i>
Ukrainian	<i>pоваии</i>

*Table 4-1: Examples of the international use of the word Rovas*

## 4.2. Character name

The Szekely-Hungarian Rovas script is still a contemporary writing system of the Hungarians. In some historical relics, the character names preceded with vowels (typically *e*). However, the vast majority of the present-day publications use the character names identical to those of the Hungarian Latin-based orthography.

## 5. Acknowledgement

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## 6. Bibliography

- Bárczy, Zoltán (1971): *Magyar rovásírás* [Hungarian Rovas Script], Textbook. Enclosure of the Journal "Nap fiai" [Sons of the Sun], 1971.
- Benkő, Elek (1996a): A siménfalvi rováslemlék és köre [The Siménfalva Rovas relic and its relations]. In: *Emlékkönyv Jakó Zsigmond 80. születésnapjára*. Ed.: András Kovács, Gábor Sipos, and Sándor Tonk, 1996, pp. 55-64.
- Benkő, Elek (1996b): A székely rovásírás. A legújabb kutatások. [The Szekely Rovas script. The latest research] In: *História* Vol. XVIII, No. 3, 1996, pp. 31-33
- Benkő, Loránd (1990): Adalékok a székelyek korai történetéhez [Data for the earlier history of the Szekelys]. In: *Új Erdélyi Múzeum*. Vol. I, pp. 109–122.
- Benkő, Loránd (1991): Nyelvészeti adalék a magyarság erdélyi megtelepedéséhez [Linguistical additions to the settlement of the Hungarians in Transylvania]. In: *Magyar Múzeum*, No. 1, pp. 52-61.
- D. Máta, Mária (2003): Szófajttörténet. Az ómagyar kor [Word class history. The Old Hungarian period]. In: *Kiss and Pusztai (2003)*, pp. 393-429.
- E. Abaffy, Erzsébet (2003): Hangtörténet. Az ómagyar kor [Phoneme history. The Old Hungarian period]. In: *Kiss and Pusztai (2003)*, pp. 301-351.
- Horváth, Mihály (ca. 1933): Rovas carving knife of Hungarian Scouts from the 1930s, sold by Scout-Store; (owner Mihály Horváth, Cleveland, USA.) *Picture from Árpád Zubrits*, 2009
- Hosszú, Gábor; Rumi, Tamás; Sípos, László (2009): *Az élő rovás. Nemzeti írásunk az egységesítés útján* [The Living Rovas. Our National Script on the Way to Unification]. Second, extended edition. Budapest: Imagent and WOU Hungary. ISBN: 978-963-87967-5-2
- Hosszú, Gábor (2011): The Heritage of Scribes. The Rovas Scripts' Relations to Eurasian Writing Systems. First edition. Budapest, ISBN 978-963-88437-4-6, *under publication*.
- Kiss, Jenő and Pusztai, Ferenc (2003, ed.): *Magyar Nyelvtörténet* [Hungarian Language History], Budapest: Osiris Kiadó
- Korompay, Klára (2003): *Helyesírás-történet. Az ómagyar kor*. [Orthography history. The Old Hungarian age]. In: *Kiss and Pusztai (2003)*, pp. 281-300
- Korompay, Klára (2010): Associate Professor in the Department of Hungarian Historical Linguistics, Sociolinguistics and Dialectology at the Eötvös Loránd University, *Personal Communication*
- Korompay, Klára (*under publication*): *Helyesírás-történet* [Orthography history]. Series: Gábor Tolcsvai Nagy (Ser. ed.): *Osiris Nyelvtörténet*. A Magyar Nyelv Kézikönyvtára. Budapest: Osiris Kiadó
- Kovács, András B. (1994): Árpád-kori lelet Vargyason [Relic from the Árpád-Age in Vargyas]. In: *RMSz* No. 1416, August 18, 1994, p. 1.
- Ligeti, Lajos (1925): A magyar rovásírás egy ismeretlen betűje [An unknown character of the Hungarian Rovas script]. In: *Magyar Nyelv* [Hungarian Language]. Vol. XXI, pp. 50–52
- Nagy, Géza (1985): A székely írás eredete [The origin of the Szekely script]. In: *Ethn.* VI. (1985), pp. 269-276
- Németh, Gyula (1917-1920): A régi magyar írás eredete [The origin of the ancient Hungarian script]. In: *Nyelvtudományi Közlemények*, vol. XLV, pp. 31–44
- Ráduly, János (1994): A vargyasi rováslemlék olvasata [Transcription of the Vargyas Rovas relic]. In: *Journal Romániai Magyar Szó*, New Series No. 1502-1503 (26-27 November) "Szabad Szombat" enclosure No. 47, 1994.
- Reimer, Stephen R. (1998): *Manuscript Studies. Medieval and Early Modern*. On-line publication. University of Alberta, Edmonton, Canada. Retrieved in 2011 from <http://www.ualberta.ca/~sreimer/ms-course/course/punc.htm>
- Róna-Tas, András (1994): Rovásírások, székely rovásírás [Rovas scripts, Szekely Rovas script], in: *Korai magyar történeti lexikon (9–14. század)* [*Cyclopaedia of the Early Hungarian History (9<sup>th</sup>-14<sup>th</sup> centuries)*], ed. Gyula Kristó, Published by Akadémiai Kiadó, 1994.
- Róna-Tas, András (1996): *A honfoglaló magyar nép. Bevezetés a korai magyar történelem ismeretébe* [The conquering Hungarian nation. Introduction to the knowledge of the early Hungarian history]. Budapest: Balassi Kiadó, ISBN 963 506 106 4
- Sándor, Klára (1991): *A Bolognai Rováslemlék*. In series: Magyar Őstörténeti Könyvtár 2. Publisher: Szegedi Tudományegyetem, Altajisztikai Tanszék, Szeged, 1991.
- Sándor, Klára (1996): A székely írás megíratlan története(i?) [The undiscovered history (histories?) of the Szekely script]. In: *Erdélyi Múzeum*, vol. 58, no. 1-2, pp. 83-93
- Sebestyén, Gyula (1909): *Rovás és rovásírás* [Rovas and Rovas writing], 1909, Reprinted by Evilath Publishers (publisher), New York, in 1969.
- Sólyom, Ferenc (2009): *Personal communication partly through Tamás Rumi*
- Vékony, Gábor (1986): Die Glagolica und osteuropäische Schriften in der späten Völkerwanderungszeit. In: *Hungaro-Bulgharica I*.
- Vékony, Gábor (2004): A székely írás emlékei, kapcsolatai, története [The relics, relations and history of the Szekely writing], Budapest: Nap Kiadó, ISBN 963 9402 45 1
- Zelliger, Erzsébet (1994): "Es bolaffjad munékonc mu'vétetönkét..." (*Bibliai exegesis – Magyar etimológia*) ["And remit our sins" (Biblical exegesis – Hungarian etymology)]. In: *Szathmári, E. Abaffy, and B. Lőrinczy (1994)*, pp. 209-215
- Zelliger, Erzsébet (2010-11): Associate Professor in the Department of Hungarian Historical Linguistics, Sociolinguistics and Dialectology at the Eötvös Loránd University, *Personal communications*.
- Zubrits, Árpád Andrew (2009): Rovas training advice, p. 325. In: *Hosszú, Rumi, and Sipos (2009)*.



## 7. Appendix

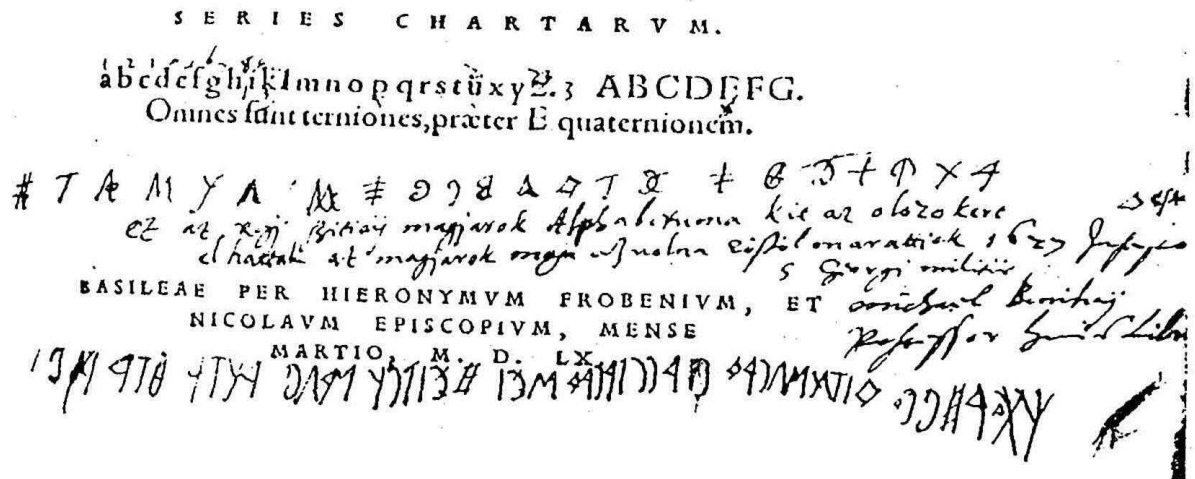


Figure 7-1: Alphabet and Rovas text by Bonyhai and another person (1629).<sup>37</sup>  
This relic contains the characters  $\diamond$  Q,  $\text{X}$ , and  $\uparrow$  Y



Figure 7-2: Alphabet and examples of Verpeléti Kiss (1935 – found by F. Sólyom).<sup>38</sup> It used individual SHR characters for DZ and DZS, moreover  $\text{§}$  BEGINNING MARK LEFT and  $\text{¶}$  END OF MESSAGE MARK. It also presents the  $\text{⊕}$  DUPLICATING MARK; see the Hungarian text: "kettő- / ző jegy" (meaning 'duplication mark') in the left bottom part of the picture.

<sup>37</sup> Benkő, E., 1996a, pp. 55-64; 1996b, p. 33

<sup>38</sup> Sólyom, 2009

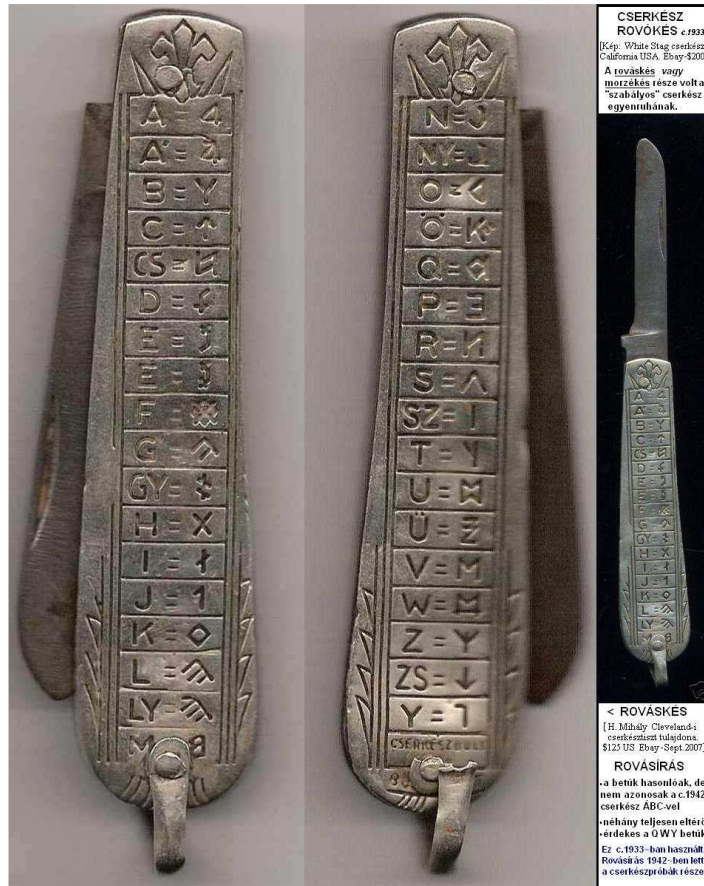


Figure 7-3: A carving knife used by Hungarian scouts (1930s).<sup>39</sup> It used individual SHR characters for W and Y as well.

a	á	b	c	cs	d	e	é	f	g	gy	h	i	j	k
↑	↑	X	↑	H	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑
k	l	ly	m	n	ny	o	ö	p	r	s	sz	t	ty	
↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑	↑
u	ú	v	z	zs	y	x								
↑	↑	↑	↑	↑	↑	↑								

k = ◊ magas hangot vons, k = ↑ mélyhangot vons!

**Számrovás:** 1 2 3 4 5 6 7 8 9 10  
 | | | | | V VI VII VIII IX X

20 50 100 500 1000  
 XX V \* \* \*

Figure 7-4: The alphabet of Z. Bárczy, 1971.<sup>40</sup> He proposed and used SHR characters for X, Y and FIVE HUNDRED in his textbook.

<sup>39</sup> Horváth, M., ca. 1933, Zubrits, 2009, p. 310

<sup>40</sup> Bárczy, 1971