Grapholinguistics in the 21st Century. Conference scheduled for Paris, 17-19 June 2020; held remotely due to COVID-19.

A "Sacred Amulet from Easter Island – 1885/6 –": Analyzing Enigmatic Glyphic Characters in the Context of the *rongorongo* Script

Robert M. SCHOCH (Boston, Massachusetts, USA) schoch@bu.edu

Tomi S. MELKA (Las Palmas de G.C., Spain) tmelka@gmail.com

Abstract

A newly discovered artifact known as the "Sacred Amulet from Easter Island" ("EISA") displaying a limited number of rongorongo-like signs is brought to the attention of rongorongo (RR) scholars and other interested readers. Unfortunately, the names of the original Rapanui creator of the artifact and its first European collector have not come down to us; however, according to an old label attached to the object, it was collected in 1885 or 1886.

Initial probability estimates of this odd-looking piece suggest a custom-built "lunar-based calendar", possibly designed for propitiatory and/or divination ends. Given the re-occurrence of the "full moon" glyph /152/ on this artifact – among other glyphs –, the best way to evaluate its function and its general meaning is by comparison with the apparent "Lunar Calendar" (Ca6 – Ca9) on tablet "Mamari" (Barthel, 1958; Guy, 1990). Although there is no exact match, the partial overlap between the "Lunar Calendar" on "Mamari" and the "Sacred Amulet from Easter Island" is of interest, and requires proper documentation.

The fact that the "amulet" may post-date the year 1864 – the chronological boundary marking the arrival of Christianity on Easter Island and the generally presumed "end" of the classical RR scribal tradition – does not diminish its status as a carrier of *rongorongo* signs. "EISA", evidently, cannot be equated with the pre-missionary extended texts appearing on various skillfully carved RR objects; yet, it may be an item for possible inclusion in a special sub-corpus dealing with the post-missionary pieces.

As a corollary, we conclude that in the light of past and current RR research, hypotheses should not go by unquestioned and should be critically assessed within the available evidence.

Introduction

The study of poorly known scripts that have thus far eluded generally agreed upon decipherment can be hampered by such factors as a small corpus for study, lack of a true bilingual text, apparent scribal variations and eccentricities within the corpus, questions as to whether the script under consideration is an "early script" or a more developed and standardized script, and disagreements among modern scholars as to which inscriptions should be regarded as canonical (that is, authentic) and thus worthy of serious study. These considerations play into the study of the indigenous rongorongo script of Easter Island (Rapa Nui), first recorded in 1864 by the missionary Joseph-Eugène Eyraud.









Figure 1. The "Sacred Amulet from Easter island – 1885/6 – ". Scale in centimeters. (All photos, unless otherwise attributed, copyright R. M. Schoch and taken with the permission of the anonymous owners of the artifacts.)

There is a further aspect of *rongorongo* studies that should be taken into account. The majority of texts explored in the literature occur on wooden tablets and lack any type of specific context or supplementary non-linguistic data. For instance, there are no known *rongorongo* inscriptions accompanying indigenous illustrations, nor have many *rongorongo* inscriptions survived on artifacts of a functional nature beyond mere tablets; among the generally agreed upon canonical corpus of twenty-five *rongorongo* texts (Barthel, 1958; Fischer, 1997), one is inscribed on a long "staff", two are inscribed on *rei miro* (wooden gorget-like ornamental artifacts), and one short and partially defaced inscription occurs on a statuette of a *tangata manu* (birdman). The remainder are on wooden "tablets" of various shapes, sizes, and preservation status. Thus, in general, the artifacts that record the *rongorongo* texts provide little in the way of clues as to the meanings of the inscriptions.

¹ The designation "early script" is a convention on our part; we do not "condone" / endorse a teleological linear scale for the classification of scripts (cf., among others, Moorhouse, 1946, p. 17; Gelb, 1963 [1952], pp. 190–205, who did overtly make such claims). We recognize that the "early script/s" designation can be potentially ambiguous, as it may hint at the alphabetic script/s as the epitome of perfection, which they are not (in our assessment).

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"EISA"

In this context, we present a newly discovered artifact bearing rongorongo-like signs. Currently in an anonymous private collection, this artifact was reportedly collected by a missionary in 1885/6, and once belonged to the English anthropologist and collector Harry Geoffrey Beasley (1881-1939). The three-dimensional ellipsoidal-shaped (elongated gourd-shaped) object is made wood (approximately 17.5 cm in length) with hair and two pieces of bone attached (tied) to it. On its surface were painted a dozen rongorongo-like glyphs, along with other abstract symbols ("asterisk-like" and "+like" signs). Attached to it is a paper label, pasted over a portion of the painted surface, that reads "Sacred Amulet from Easter Island – 1885 –" (abbreviated here as "EISA" [Easter Island Sacred Amulet]; possibly the date can be interpreted as "1886"). Initial probability estimates of this oddlooking piece suggest that it is a custom-made "lunar-based calendar", possibly designed for propitiatory and/or divination ends. On "EISA" the "full moon" glyph (Barthel, 1958, code number /152/) appears; this glyph was known previously only from the apparent "Lunar Calendar" on the authentic rongorongo tablet "Mamari"; thus, evaluation of the function and general meaning of "EISA" and the glyphs painted thereon is elucidated by comparison with the inscription on "Mamari". Although there is no exact match, the partial overlap between the "Lunar Calendar" on "Mamari" and the glyphs on the "Sacred Amulet from Easter Island" is of interest and requires proper documentation. Based on our analysis, "EISA", may have served as a sort of "pocket calendar" that was perhaps used for "magical" and performative purposes; that is, it bears performance writing used for the express purpose (among others) of achieving effects such as avoiding harmful influences, securing the multiplication of chickens, fish, turtles, sea birds, or the protection / abundance of harvested plants, and so forth.

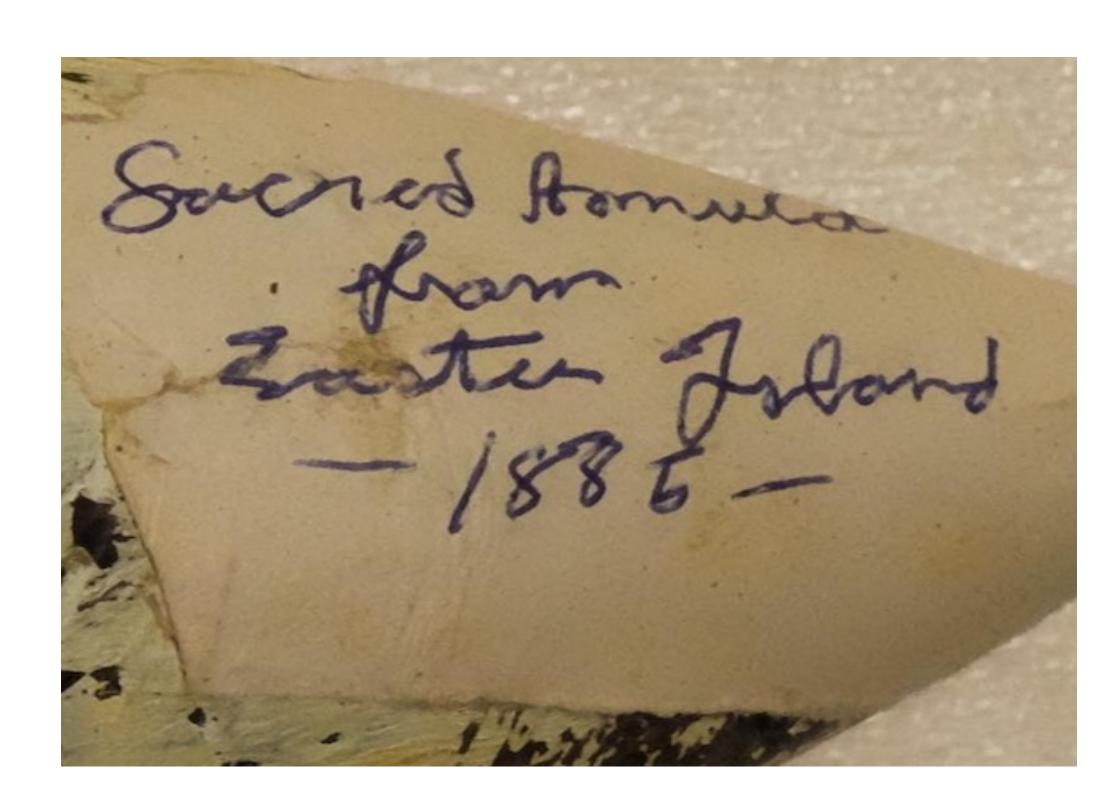


Figure 2. Label glued over the bottom surface of the artifact bears the inscription "Sacred Amulet from Easter Island – 1885 –" (or possibly, 1886).





Figure 3. Excerpt from tablet "*Mamari*" showing the only other known instance of the moon glyph /152/ (from Thomson, 1891, Plate XLV).



152



Figure 4. Left: A close-up image of the "full moon" glyph /152/ on the "Easter Island Sacred Amulet – 1885/6 –" ("EISA"). Right: Drawing of glyph /152/ from Barthel (1958).

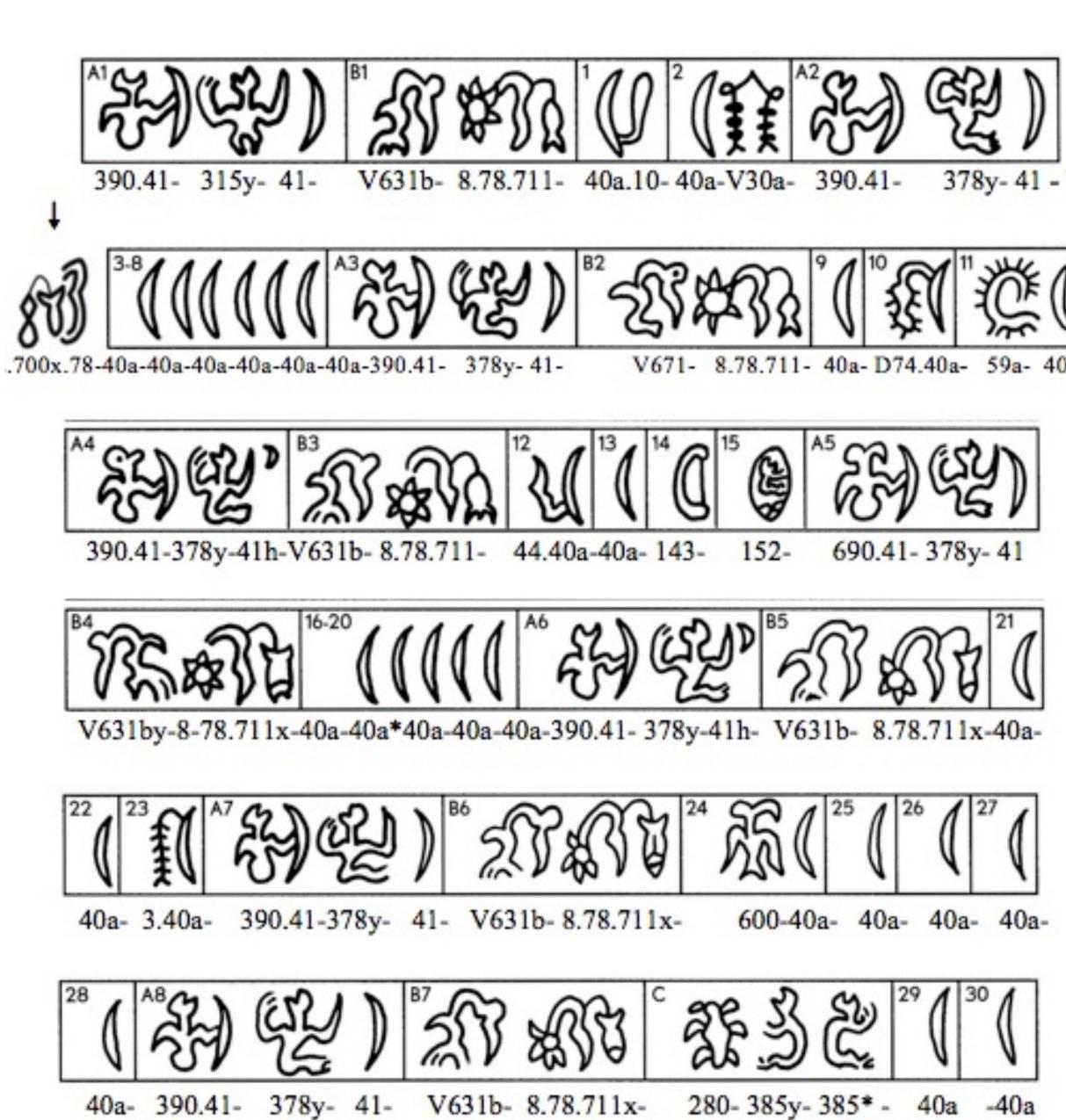


Figure 5. The "Lunar Calendar" on tablet "Mamari" (Ca6 – Ca9). Original coding is of Barthel (1958, p. 51); amended coding as applied here is after Guy (1990, p. 136). The only exemption to Guy's (1990) amendment is code number /44/ (cell 12), left as said at first by Barthel. The calendar design is found at Robinson (2002, p. 236) and Brookman (2007); another calendaric arrangement is available at CEIPP (2005). As readers may well notice, the trigram /2.700x.78/ is added at the beginning of Line 7 (\rightarrow Ca7 [= Cr7]). Barthel's (1958, Tafel "Mamari" Ca 1 - Ca 7) tracings, Guy's (1990) illustration, and subsequent duplications of the "Lunar Calendar" fail to make it clear; in all probability, because it is on the bevelled edge of the tablet and most photographs do not show it. Trigram /2.700x.78/ is preceded in turn by a "sleeping bird" glyph /V631b/ (equally missing in Barthel, 1958, Guy, 1990, and later duplicates), traced otherwise in Fischer (1997, p. 414, RR 2a6), and in Horley (2011, p. 22, Figure 3, Ca6-7, II). Taken in whole, the newly added glyphs seem to be a variant realization of the "group separator" /V631b-8.78.711/.

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There are twelve (12) apparent rongorongo-like glyphs on "EISA".²

A possible preliminary "normalization" / linearization of the EISA "text" is:

$$/?/ - /53^2 / \% - /41 / \% - /380 / \% - /22 / \% - /660 [= 670] / \% - /152 / \% - /44? / \% - /700 / \% - /700^2 / \% - /280 / \% - / V19 / \%.$$

Another possibility (beginning with /380/ $\stackrel{3}{\approx}$ – and "reading" from left to right and from bottom-to-top to top-to-bottom repeatedly) is:

Figure 6. An obscure glyph, listed as /?/ above, on "EISA" resembling a "flying creature" / "diving wings"⁴.



² At this time, any suggestion regarding additional rongorongo-like symbols hiding in the area beneath the paper label (conveying the "identity" and provenance of the artifact, see Figure 2) is undecided. The owner of the artifact does not want to attempt the removal of the label.

³ Regarding the /380/ glyph (the "sitting man", mostly in conjunction with assorted glyphic affixes) \rightarrow it could serve as a "delimiter" in various contexts, introducing the next chunk of text / chant... and also it may have other meanings in other contexts (the list-like texts Ia, Ta, Gv, for instance).

⁴ The latter is a nickname suggested by Gordon Berthin.

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An "Early Script"?

Hampering not only analysis of "EISA" specifically, but a full understanding of rongorongo more generally, is the possibility that rongorongo is an "early script"; that is, a script in an early developmental stage. The rongorongo script may not have corresponded to a spoken syllable-by-syllable. phonetically, word-by-word or language (Compounding the issue, the exact language that gave rise to the rongorongo script is still elusive, although it was presumably an ancient language spoken on Easter Island which ultimately gave rise to the historically known language of the Rapanui; the island was first discovered by Europeans in 1722.) Information in an "early script" is communicated not so much by representing the intricacy of a language in detail and specific one-to-one correlations between the written and oral words, but rather through certain specific words, symbols, and pictographs serving as mnemonic devices; metaphorical allusions; homonymy; and other pictorial and semantic indicators.

To fully understand such an "early script", it is necessary to have insights into the cultural and historical context of the script. Without such a context, it may be very difficult or virtually impossible to decipher an "early script". Another way of expressing this is that in many respects "early scripts" can be viewed, from a modern perspective, as incomplete. The scribe assumed that the reader understood and could correctly interpret contexts and allusions without every nuance literally being spelled out. Add to this that in an "early script" the way things are recorded or written have not necessarily been standardized and systematized. And in the case of a poorly understood culture where much in the way of indigenous traditions and social nuances has been lost or contaminated (such as is the case with Easter Island), traditions and nuances necessary for a full understanding of an "early script", the obstacles faced by modern interpretive scholars are significant. These factors must be taken into account if progress is to be made in understanding "early scripts". In turn, the analysis of "early scripts" provides insights into both the developmental stages that led to more "advanced" scripts and the fundamental operational pathways of the human mind. As a corollary, we conclude that in the light of past and current rongorongo research, hypotheses should not go by unquestioned and should be critically assessed within the available evidence. The glyphs on "EISA" constitute part of this evidence.





513 (9) (0

280

b 29

290 85

Figure 7. Elongated / ellipsoidal artifacts in the guise of sea-bird eggs, of tahonga(s), or gourd-like fruits, were apparently manufactured on Easter Island more often than some may realize. This indigenous portable object collected *circa* 1815–1816 by Otto von Kotzebüe (= Kotzebue) or a member of his crew when he visited Easter Island aboard the Russian vessel "Rurick" was subsequently passed down through his descendants and a related family until it was sold in 1990 to a private collector. This premissionary object is made of "wood" or some kind of carved plant material, and it is hollowed out so that it forms a small "container" that at one point held miscellaneous bird bones. So, in a sense, it might be thought of as an artificial "egg". The symbol on side (a) appears to be a very stylized Makemake face, with side (b) portraying a strangely shaped "sea turtle"-like design. In our view of the matter, either symbol rather than rendering service to the authentic rongorongo script appears to fit in an iconographic context. Intuitively, however, one cannot neglect the fact that "Make-make"like glyph /513/ (plus, variants) and "sea-turtle"-like glyphs of class /280/ and /290/ are part of the rongorongo sign inventory (Barthel, 1958). Size estimated at approximately 10 cm in maximum length (currently, May 2020, the anonymous owner is out of contact due to the COVID-19 pandemic).

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Figure 8. The "bird"-like painted sign on "EISA" as contrasted with glyphs /660/ and /670/ in Barthel's coding (Sign form plate 7 – Reference index numbers 600–699 in Grundlagen..., 1958). While it is evident that the glyph preserves its relationship to the natural referent (i.e. a flying life-form), the conveyable meaning is not strictly restrained univocally; various instances of early pictorial-like scripts or modern systems endorse such a statement (cf. Houston, 2004; Sproat, 2013, pp. 14–17).

Glyphic strings from the *rongorongo* corpus that deal with "bird"-like glyph /670/, the variability of the glyphic material, and the individuality of each pre-missionary hand. In the case of strings $Hr4 \cdot Pr4 \cdot Qr4$, the past scribal experience was called on to restore the missing glyphs, such as they appear on Cb4 (= Cv4), Cb2 (= Cv2), and Ab4. The symbol "\right" points at # /670/ and its professed variants. Coding marked in blue stands for "delimiters", used for parsing the flow of glyphs according to specific chunks of texts.



"Great Santiago" tablet, Hr4

"Great St. Petersburg" tablet, Pr4

"Small St. Petersburg" tablet, Qr4

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Expanding the Rongorongo Corpus

The fact that "EISA" may post-date 1864 – the chronological boundary marking the arrival of Christianity to Easter Island and the "ending" of the classical scribal tradition – does not diminish its status as a carrier of *rongorongo* signs. "EISA", evidently, cannot be equated with the pre-missionary long texts appearing on the skillfully carved *rongorongo* objects; yet, it is an item for inclusion in a special sub-corpus tackling the post-missionary pieces.

Until recently, the *rongorongo* corpus has been relatively static, with the known and "accepted" texts limited to just over two dozen items (Barthel, 1958; Fischer, 1997). Our research has included bringing additional pieces from Easter Island bearing *rongorongo* signs and sequences from the late pre-missionary to early post-missionary period, circa 1860s to 1880s, to the attention of interested scholars. In addition to the "Sacred Amulet from Easter Island", described herein, we have documented the "Rangitoki bark-cloth fragment" (collected on Easter Island in March 1869; Schoch and Melka, 2019; Schoch and Melka, 2020) and the "San Diego Tablet" (possibly dating to the circa 1860s or shortly thereafter; see Melka and Schoch, 2020). Here we wish to express the conviction and hope that these "newly unveiled" artifacts, and, possibly, future items that may come to light, will aid researchers in their studies of the *rongorongo* script.

Figure 9. The *Rangitoki* bark-cloth fragment. Overall length of the fragment is approximately 15.5 cm.



Figure 10. The *San Diego* Tablet. Overall length of the wooden tablet is approximately 16.7 cm.



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Categorization of newly discovered Rapanui-made artifacts, based on their ethnographic provenance and epigraphic validity

Epigraphic significance?	Pre-tourism provenance? [= pre-missionary]	Artifact utility
No epigraphic interest (does not bear a rongorongo inscription or is a modern tourist item, reproduction, artwork, or other object with rongorongo-like glyphs in imitation of, or inspired by, those found on genuine pre-missionary pieces as published in the modern literature)	No pre-tourist provenance	Of interest primarily to ethnographers and historians considering post-missionary / post-tourist Rapanui culture and Easter Island history
Valid and original (not previously known) rongorongo inscription, glyph, or collection of glyphs, created through and informed by genuine indigenous knowledge of rongorongo practices (not through familiarity with the modern literature on rongorongo) • Copy of an ancient rongorongo inscription that is not known otherwise		A valuable / heuristic epigraphic artifact
No epigraphic interest (does not bear a rongorongo inscription)	Pre-tourist provenance	A valuable ethnographic artifact
Valid and original (not previously known) rongorongo inscription • A copy or a "reinterpretation" or a "paraphrase" of a previously known rongorongo inscription • A single rongorongo glyph or collection of glyphs	Pre-tourist provenance	Most valuable to both ethnographers and epigraphers

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References

Barthel, Thomas S. (1958). *Grundlagen zur Entzifferung der Osterinselschrift*. Abhandlungen aus dem Gebiet der Auslandskunde 64, Reihe B. Völkerkunde, Kulturgeschichte und Sprachen, 36. Hamburg: Cram, de Gruyter & Co.

Brookman, David Y. (2007). Easter Island Home Page. Easter Island's Rongorongo Script. http://www.netaxs.com (accessed 21 February 2008); see https://web.archive.org/web/20070830125104/http://www.netaxs.com/~trance/mamari.html (accessed 29 May 2020) and https://web.archive.org/web/20070810225655/http://www.netaxs.com/~trance/rapanui.html (accessed 29 May 2020).

CEIPP [Cercle d'Etudes sur l'Ile de Paques et la Polynesie, Paris, France.] (2005). The Rongorongo of Easter Island: The Lunar Calendar on Tablet C (Mamari). http://kohaumotu.org/rongorongo_org/rosetta/lunar.html (accessed 24 April 2019).

Fischer, Steven R. (1997). Rongorongo: The Easter Island Script, History, Traditions, Texts. Oxford: Oxford University Press.

Gelb, Ignace J. (1963 [1952]). A Study of Writing. (2nd ed.). Chicago, IL: University of Chicago Press.

Guy, Jacques B. M. (1990). The lunar calendar of Tablet Mamari. Journal de la Société des Océanistes (Paris), No. 91 (1990-2), pp. 135–149.

Horley, Paul (2011). Lunar calendar in rongorongo texts and rock art of Easter Island. Journal de la Société des Océanistes (Paris), No. 132 (2011-1), pp. 17–38. doi:10.4000/jso.6314.

Houston, Stephen D. (2004). The Archaeology of Communication Technologies. Annual Review of Anthropology, Vol. 33, pp. 223–250.

Melka, Tomi S., and Robert M. Schoch (2020). Exploring a mysterious tablet from Easter Island: the issues of authenticity and falsifiability in rongorongo studies. *Cryptologia*. doi.org/10.1080/01611194.2019.1706065.

Moorhouse, Alfred C. (1946). Writing and the Alphabet. Volume III in the series Past and Present: Studies in the History of Civilisation. London: Cobbett Press.

Robinson, Andrew (2002). Lost Languages: The Enigma of the World's Undeciphered Scripts. A Peter N. Nevraumont Book. London: BCA. New York: McGraw-Hill.

Schoch, Robert M., and Tomi S. Melka (2019). The *Ranjitoki* (Rangitoki) Bark-cloth Piece: A Newly Recognized *rongorongo* Fragment from Easter Island. *Asian and African Studies* (Bratislava), Vol. 28, No. 2, pp. 113–148 and 413–417 (Figures 1–7).

Schoch, Robert M., and Tomi S. Melka (2020). The *Ranjitoki* (Rangitoki) Fragment: Further Analysis of a Short *rongorongo* Sequence on Bark-cloth from Easter Island. *Asian and African Studies* (Bratislava), Vol. 29, No. 1, pp. 26–41 and 113–118 (Figures 1–9).

Sproat, Richard W. (2013). Corpora and Statistical Analysis of Non-Linguistic Symbol Systems. http://rws.xoba.com/monograph.pdf (accessed 15 February 2014).

Thomson, William J. (1891). Te Pito te Henua, or Easter Island. Report of the United States National Museum for the Year Ending June 30, 1889. Annual Reports of the Smithsonian Institution for 1889. Washington: Smithsonian Institution, pp. 447–552.

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