Proposal to encode the Divehi script in Unicode

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1 Introduction

This is a proposal to encode the 'Divehi' block in Unicode. It supersedes the following documents:

- L2/09-191: Preliminary Proposal to Encode the Dhivehi Script in ISO/IEC 10646
- L2/10-213: Preliminary Proposal to Encode Dhives Akuru in ISO/IEC 10646

This document is a complete revision of L2/10-213 and contains substantial changes:

- Assignment of new identifier for the script block and character names
- Revised encoding model and repertoire for vowel letters
- Renewed analysis of vowel signs, nasalization signs, and gemination marks
- Expansion of consonant repertoire to include aspirated consonants and additional letters
- Separation of the vowel-silencing and conjunct control functions of virama into two characters
- Expanded details on types of consonant conjuncts and inclusion of examples
- General revision and improvement of representative glyphs
- Inclusion of data for Indic syllabic and positional categories
- Additional attestations and specimens of usage

2 Background

The proposed Unicode block for 'Divehi' provides an encoding for a script used in Maldives that is known indigenously as *divehi akuru*, or "islanders' letters". The *divehi akuru* was used from the 9th–20th centuries for recording Dhivehi (ISO 639-3: div), an Insular Indo-Aryan language, which is also known as 'Maldivian'. The *divehi* script (hereafter, Divehi) is a left to right alpha-syllabic writing system descended from Brahmi through Grantha. It is related most closely to the medieval form of the Sinhala script (Fritz 2002: 6); and it shares characteristics with the Tulu, or Tigalari, script (Geiger 1919: 151). A comparison of Divehi and Sinhala is given in figures 50–51, and a comparison with other scripts is shown in figure 52.

The earliest epigraphical record from Maldives is a coral stone block from the 6th–8th centuries, which was unearthed on the island of Landū. Its inscription, however, is in a form of Grantha. A distinctive Divehi script first appears on inscriptions on two statues (IC 009, IC 010; see figures 5–6) unearthed on Māle, with

Vajrayana Buddhist text and features, which have been dated to the 9th–10th centuries (Gippert 2014: 112). Very few records of early Divehi have been preserved apart from these statues. The majority of sources were destroyed deliberately during the conversion of Maldives from Buddism to Islam in the 12th century.

As a result, a consistent palaeographical record for Divehi begins in the 12th century. From this time Divehi was used as an official script by Maldivian rulers, starting with copper plate grants, known as $l\bar{o}m\bar{a}f\bar{a}nu$, which were issued for the building and maintenance of mosques. The earliest records are the $G\bar{a}mu$ $L\bar{o}m\bar{a}f\bar{a}nu$ and $Isd\bar{u}$ $L\bar{o}m\bar{a}f\bar{a}nu$, which were issued in 1194 during the reign of the king Gaḍanādītya. This ruler issued another in 1195, which is known as the $Dambid\bar{u}$ $L\bar{o}m\bar{a}f\bar{a}nu$ (see figure 7). A fourth plate, the $Kudahuv\bar{a}du$ $L\bar{o}m\bar{a}f\bar{a}nu$, is dated to 1237–8 and was produced during the reign of the queen Rārādesvara. The script began to evolve during the 14th century, as is apparent from the style used for the Bodugalu Miskit $L\bar{o}m\bar{a}f\bar{a}nu$, issued during the reign of queen Rādābarrna in 1357. Three other $l\bar{o}m\bar{a}f\bar{a}nu$ have been preserved, bringing the total to eight. They are identified by scholars using the names of the islands upon which they were found, and are numbered as L1 through L8. Specimens of L3 and L6–L8 are given in figures 7, 8–10.

By the 16th century, usage of $l\bar{o}m\bar{a}f\bar{a}nu$ had given way to paper documents and wooden boards known, respectively, as fatkolu and $fil\bar{a}$ fatkolu. These official decrees are produced in a form of Divehi that is considered a modern style (see figures 11–12). The first fatkolu is known as the $Kolufu\acute{s}i$ Fatkolu, issued during the reign of Muhammad Bodu Takurufanu (1573–1585). Several fatkolu were produced over the next two centuries. The latest is the $Havodd\bar{a}$ Fatkolu, which was produced during the second half of the 18th century. Thirteen fatkolu are preserved at the present; they are identified as F1–F13.

The script was also used for writing dynastic chronicles, known as *rādavaļi*, in the late 18th century. Of the three extant chronicles, two are in the Thaana script and one is in Divehi. Other Divehi records include stone epitaphs from the 16th–18th century; wood engravings in the Hukuru Miskit and Galolu Bau Miskit on Māle; and inscribed pottery, such as a lacquer jar from Tuļādū. The first modern book written in the script, a work by Bodufenvalhuge Sidi titled *Divehi Akuru*, was commissioned by the prime minister Ibrahim Nasir and published by the government of Maldives in 1959 (see figures 13–25).

When the early $l\bar{o}m\bar{a}f\bar{a}nu$ were rediscovered by European colonial officials in the 19th century, it became apparent that their script and language differed from the prevailing forms of *divehi akuru* and the Dhivehi language. These plates were unintelligible to contemporary Maldivians. The British scholar H. C. P. Bell coined the term 'evēla akuru', literally the "script of that time" in Dhivehi, or the "ancient script", for classifying the archaic style on these $l\bar{o}m\bar{a}f\bar{a}nu$ (1919: 149). He used the term 'dives akuru', "islanders' letters", for the prevalent style. Although they were neologisms, the terms were convenient for periodizing Divehi palaeography. Some scholars continue to refer to the script of the 12th–14th cnturies as 'evēla akuru', and the style after the 14th century as either 'dives akuru' or 'divehi akuru' proper.

Divehi records exhibit linguistic and palaeographic diversity. The early $l\bar{o}m\bar{a}f\bar{a}nu$ contain marginal and occasional intralinear text in a script of the Nagari family, which bears some similarity to Nandinagari. Later plates contain Arabic text in the Arabic script. The *fatkoļu* also contain interspersed text in the Arabic language and script.

Beginning in the early 18th century, another script began to appear alongside Divehi. This new script, known as *tāna akuru*, or 'Tāna' and 'Thaana', is a right to left script consisting originally of 18 letters, which appear to be derived from the digits of both the Divehi and Arabic scripts (cf. Prinsep 1836: 794; Wilson 1841: 42). From the 1700s until 1870, both Divehi and Thaana were used for official purposes (Mohamed 1999: 29). But, by the turn of the 19th century, Thaana had completely replaced Divehi as the regular script for writing the Dhivehi language.

Despite the near obsolescene of Divehi in the 20th century, individual Maldivian users and both native and non-native scholars continued to express interest in the script. The Royal Asiatic Society of Sri Lanka published translations of the *Isdū Lōmāfānu* (Maniku and Wijayawardhana 1986) and *Dambidū Lōmāfānu*. The National Centre for Linguistic and Historical Research (NCLHR) in Māle published *Dhivehi Writing Systems* (1999) by Naseema Mohamed. But, native Maldivian scholarship on Divehi has also declined. New information and studies of Divehi materials is made possible by the meticulous work on Divehi palaeography and epigraphy (see Gippert 2003, 2004, 2013, 2014), Dhivehi language and linguistics (see Fritz 2002), and translations of Maldivian texts (see Romero-Frias 2003, 2012) performed by scholars outside of Maldives.

At present, the Divehi script is not only extinct, but the very existence of it and its record is threatened. A few months after I first began working on this encoding in 2009, the president of Maldives, Mohammed Nasheed, held a cabinet meeting underwater in scuba gear in October to raise awareness of rising sea levels (*Daily Mail* 2009). But, the ocean is not the only physical threat to the island nation. During the political turmoil in February 2012 criminals burglarized the National Museum and vandalized thirty Buddhist artifacts, some dating back to the 6th century (*New York Times* 2012). The two statues, IC 009 and IC 010, mentioned at the outset of this section were demolished (Gippert 2014: 111–112). They now exist only in the photographic record. While material objects cannot be replaced, this Unicode encoding for Divehi may serve the secondary objective of preserving the palaeographical and linguistic heritage of Maldives through digital technologies.

3 Approach to the encoding

3.1 Unification

The 'Divehi' block provides a unified encoding for *evēla akuru* and *divehi akuru*. Although there are differences in character repertoire, letterforms, and orthography, these two scripts are identical in terms of structure and typology. They represent major palaeographic styles in the historical development of a Brahmi-based script used in Maldives. For this reason, a single Unicode encoding is appropriate and suitable for representing both styles.

3.2 Character repertoire

Divehi has a nearly complete character repertoire that aligns with the basic Brahmi inventory. The broadest repertoire occurs in *evēla akuru* records. Over time, the repertoire was gradually reduced by the removal of letters that did not correspond to phonemes of the evolving Dhivehi language. The emergence of the Thaana script also resulted in truncation of the repertoire. By the time Sidi wrote *Divehi Akuru* in 1959, the modern orthography used 25 Divehi letters aligned with the Thaana repertoire (see section 5.10).

The modification of the base repertoire resulted in the displacement of various letters. The greatest change to the repertoire was the dropping of letters for aspirated consonants owing to the absence of aspirated sounds in modern Dhivehi. Only kha and dha were retained. The unassigned aspirate letters were, in turn, used as variants for their unaspirated counterparts. Nasal letters were replaced by either the dental na, or in the case of clusters, by a generic sign. The trend of assimilation occurred also with sibilants: the palatal $\dot{s}a$ and retroflex $\dot{s}a$ were replaced with the dental sa. Likewise, sound changes involving transformation of palatals to dentals resulted in the dropping of several palatal letters.

Unfortunately, there is no $varnam\bar{a}l\bar{a}$, or traditional script inventory, in the epigraphical record that illustrates the original repertoire, nor any indigenous documentation that describes the changes to the script. The first charts of *divehi akuru* were compiled and published by European scholars in the 19th century, cf. Christopher (figure 47), Geiger (figures 26–27, 48). However, in many cases the European inventories of *divehi akuru* were conducted from the perspective of Thaana, and the published repertoires focused on comparisons with Thaana. These types of sources, therefore, do not provide a true sense of the original character inventory.

A legitimate and accurate character inventory can only be compiled by analyzing the letters and signs of the extant records. Fortunately, such an effort has been made. The most complete inventory has been offered by Jost Gippert (2013), who analyzed each akşara in the available $l\bar{o}m\bar{a}f\bar{a}nu$ and fatkolu. His charts are reproduced here in figures 1–2. However, as complete as it is in its historical survey, Gippert's table does not include all Divehi sources, some of which contain distinctive letters not shown in the table. For instance, Sidi's monograph shows a modern form of ya and an alternate form of na.

All distinctive characters attested across the available sources have been identified in terms of their palaeographic value in accordance with the character-glyph model used for Brahmi-based scripts in the Unicode Standard. Variant forms are not encoded independently and are to be managed through the selection of fonts. The proposed repertoire enable the complete representation of all extant text in the Divehi script and is a superset of all particular orthographic styles.

3.3 Representative glyphs

In the absence of a standard for evēla akuru or dives akuru, the representative glyphs assigned to the proposed characters are normalizations of letterforms used across the sources. The aim is to provide glyphs that can be used for representing both the earliest and latest records in a way that depicts the identity of each character separate from style.

3.4 Script identifier

The identifier 'Divehi' has been assigned to the Unicode block. It is derived from the indigenous name *divehi akuru* "islanders' letters" (Thaana: رَوْعُ مُرْمُعُ). The name *divehi akuru* has various spellings in English: 'Divehi Akuru', 'Dives Akuru', 'Dhivehi Akuru', 'Dhives Akuru'. The names containing 'Dhivehi' and 'Dhives' are variants of 'Divehi' and 'Dives', which are the result of an idiosyncractic romanization scheme used in Maldives in the 1980s. In this system, the letter 'dh' is used for the dental stop, while 'd' for the retroflex stops; the h does not indicate aspiration, as in the conventional transliteration of Brahmi-based scripts. Although the previous proposal (L2/10-213) used 'Dhives Akuru', it has become clear since that time that 'Dives Akuru' and 'Divehi Akuru' are preferred in scholarly materials, both by western and Maldivian scholars (eg. Gippert 2013, 2014; Mohamed 1999: 21, see figure 36; Romero-Frias 2003, see figures 3–4).

The descriptor 'Akuru' is used in the Dhivehi language for referring to writing systems: *divehi akuru*, *tāna akuru*, *latin akuru*. It is identical to the terms *akṣara*, *lipi*, etc. that are used in other South Asian languages for 'letter' or 'script'. Usage of such labels is redundant within an English context, for instance, a 'Divehi Akuru letter' means a 'Divehi letter letter'. Moreover, such 'script' labels are not used for identifying script blocks in the Unicode Standard. A suitable English name can be obtained by eliminating the '*akuru*' label. Applying this rule to the Dhivehi names for the three scripts given above yields the following bare names 'Divehi', 'Tana', 'Latin'. These are distinctive names used in English. However, dropping the 'script' label from 'Dives Akuru' yields 'Dives', which is not used in English as a proper noun. On the other hand, 'Divehi' has a history of usage in English as a proper noun.

'Divehi' is the most suitable English identifier for the script in the international Unicode standard. It follows the naming convention for other Brahmi-based scripts in Unicode. Also, it provides a meaningful taxonomic label for grouping *evēla akuru* and *dives akuru* as styles of a single script. The name assists in clear identification of character names, eg. 'DIVEHI LETTER KA', which would translate into Dhivehi as 'divehi akuru ka' (as opposed to the onomastically and semantically redundant *'DIVEHI AKURU LETTER KA'). The identifier 'Divehi' also distinguishes between the script and the 'Dhivehi' language on account of official spelling, but also on account of context, as Unicode is a standard for writing systems, not languages. Furthermore, it uniquely distinguishes the Unicode encodings for the two Maldivian scripts used for writing Dhivehi: 'Divehi' and 'Thaana'.

4 Proposed character repertoire

The proposed repertoire contains 71 characters. The code chart and names list follow page 8.

4.1 Vowel letters

There are two methods for representing independent vowels. Both are attested across the corpus and both appear concurrently in some records:

	а	ā	i	ī	и	\bar{u}	e	ai	0	аи
'type 1'	હ્યુ	(જુ	ર્જી	ર્જી	٦	1	ಖ	ಶಿಖ	ఒ	బ)
'type 2'	න	<i>ବ</i>)	න	ಖ	গ্ৰ	ಖೆ	೩೨೧	88S	8D)	શ્ચ

The 'type 1' forms are the original distinctive, palaeographic forms. The 'type 2' forms are consonant-vowel syllables comprised of a vowel carrier and dependent vowel signs. Following Bell (1930: 568), 'type 1' refers to the forms used in Male in the central atoll, while 'type 2' refers to the forms used in Addu in the southernmost atoll. The distribution suggests regional preferences. However, there are no rules specifying the contexts of usage for either set, and both are used interchangably within the same document. Therefore, it is necessary for the encoding model to support representation of both types.

In the modern script, the letter \mathfrak{D} represents the vowel a. But, palaeographically it is the letter ya. Likely on account of the phonological shift of initial ya to da in Old Dhivehi (Gippert 2013), \mathfrak{D} was no longer needed for ya and was reassigned as a vowel carrier. As a result, the letter \mathfrak{D} came to represent the independent and initial vowel a; however, it continued to function as ya in cluster-final position, as evidenced by its participation in conjuncts. In the later script, \mathfrak{D} was used solely for representing vowel letters and its association with ya was entirely dropped. The modern usage of ya as a vowel-carrier is shown in figure 13, where \mathfrak{D} is transcribed in Thaana as $\hat{A}a$. This figure shows a related development: the letter \mathfrak{D} is transcribed as Thaana \hat{A} ya. It appears this letter was introduced for ya to replace \mathfrak{D} .

In order to accommodate the complete representation of vowels, as well as the forms of ya, the following encoding model has been adopted:

- 1. Encode the 'type 1' set as the representative independent vowel letters.
- 2. Encode as YA, maintaining its original palaeographic identity as a consonant. This will enable it to function as a base for combining dependent vowel signs for expressing 'type 2' forms (see section 5.1). It will also permit the letter to participate in conjuncts and in *sukun*-letter combinations.
- 3. The alternate ω ya has been proposed for encoding as the letter YYA.

Accordingly, the proposed repertoire contains the following 10 independent vowel letters:

Glyph	Character name	Major variants	Latin	Thaana
દ્ભ	DIVEHI LETTER A		a	'n
(જિ	DIVEHI LETTER AA		\bar{a}	Ž
§	DIVEHI LETTER I		i	ý
ર્જી	DIVEHI LETTER II	3	$ar{l}$	Ş
٦	DIVEHI LETTER U	උ	u	Ž
1	DIVEHI LETTER UU		\bar{u}	" ^
వ	DIVEHI LETTER E	ച, കു, യ	e	Ś
శివ	DIVEHI LETTER AI	9೨), ೫೩, ೫೩	$ai, ar{e}$	%
ఒ	DIVEHI LETTER O	ສາ, ສາ, ໝ	0	ž
ఓ)	DIVEHI LETTER AU	M), ಶಿಖ	au, \bar{o}	С Л

Notes on the vowel letters:

- The vowel sign at and vowel sign at are used for both diphthongs /ai/ and /au/ in early records, and for the long vowels /e:/ and /o:/ in later records.
- Letters corresponding to the Brahmi vocalic $\it r, \bar r, \it l, \bar l$ are not attested.

4.2 Dependent vowels signs

There are 9 dependent vowel signs:

Glyph	Character name	Major variants	Latin	Thaana
ା	DIVEHI VOWEL SIGN AA	ୢ	ā	័
್ರ	DIVEHI VOWEL SIGN I		i	્ર
3	DIVEHI VOWEL SIGN II	ૈં, ુ	ī	્ર
્	DIVEHI VOWEL SIGN U	ુ∕, ુ, ી, ૄ	и	ំ
્ર	DIVEHI VOWEL SIGN UU	്പ	\bar{u}	"
७ ः	DIVEHI VOWEL SIGN E	9 0	e	်
99 0	DIVEHI VOWEL SIGN AI		$ai, ar{e}$	~
১)	DIVEHI VOWEL SIGN O		0	~

⁸ ्र	DIVEHI VOWEL SIGN AU	au, \bar{o}	ે
•			

Notes on the vowel signs:

• The following are two-part vowel signs:

character	glyph	decomposition
VOWEL SIGN O	%)	>> VOWEL SIGN E + ○) VOWEL SIGN AA
VOWEL SIGN AU	৽ૄ	>> vowel sign e + ○ \ vowel sign u

- Letters corresponding to the Brahmi vocalic $\it r, \it \bar r, \it l, \it \bar l$ are not attested.

4.3 Consonants

There are 35 consonant letters:

Glyph	Character name	Major variants	Latin	Thaana
®	DIVEHI LETTER KA	®	ka	ν
೭	DIVEHI LETTER KHA	3	kha	
હ	DIVEHI LETTER GA	9	ga	Ś
ಌ	DIVEHI LETTER GHA	%	gha	
3	DIVEHI LETTER NGA		'nа	سر
ಶ	DIVEHI LETTER CA	≈ , 800	ca	Ś
ર્જી	DIVEHI LETTER CHA		cha	
જ્	DIVEHI LETTER JA	Z e)	ja	تح
B	DIVEHI LETTER NYA		ña	ŕ
と	DIVEHI LETTER TTA	2	ţa	é
ъ	DIVEHI LETTER TTHA	ઢ	ṭha	
స్తు	DIVEHI LETTER DDA	బ, ఫ	ḍа	έ
ಶ್ರ	DIVEHI LETTER DDHA		ḍhа	
භ	DIVEHI LETTER NNA	8	ņа	É
8	DIVEHI LETTER TA		ta	Ś
6	DIVEHI LETTER THA		tha	_

3	DIVEHI LETTER DA	3, 3	da	ک رُ
ത	DIVEHI LETTER DHA	ک	dha	_
ဘ	DIVEHI LETTER NA		na	œ
v	DIVEHI LETTER PA	ಲ, ಉ, ಎ	pa, fa	ź
2)	DIVEHI LETTER PHA	2)	pha	Ź.
ข	DIVEHI LETTER BA	v,v, a	ba	ώ
か	DIVEHI LETTER BHA	か	bha	_
જ	DIVEHI LETTER MA	S	та	ź
න	DIVEHI LETTER YA	<i>ක</i> ' න	ya, a	'n
ω	DIVEHI LETTER YYA		ya	'n
δ	DIVEHI LETTER RA	В	ra	ź
ಲ	DIVEHI LETTER LA	3	la	ź
જ	DIVEHI LETTER VA	ુ , જ	va	ģ
బ్	DIVEHI LETTER SHA	8	śa	ŕ
28	DIVEHI LETTER SSA	જ	șа	_
بع	DIVEHI LETTER SA		sa	ئر
∾	DIVEHI LETTER HA	∾	ha	ز
3	DIVEHI LETTER LLA	ટ્ર , રૂ	<u>ļ</u> a	نو ُ
ത	DIVEHI LETTER ZA	೭	za	É

Each consonant letter possesses the inherent vowel a. This inherent vowel is silenced using the sign halanta in order to produce a bare consonant. Consonant clusters are rendered as conjuncts; however, geminated consonants may be indicated using special forms.

Notes on the consonant letters:

- NGA The letter 3 historically represents the velar nasal NGA, but it was adapted for use as a generic nasalization mark. It is encoded as a letter in order to enable its behavior as a nasal mark using the conjunct model (see section 5.5).
- *JHA A distinctive letter for the palatal aspirate *jha* and has not been identified. Space has been reserved for it in the code block at the appropriate position.
- NNA The form 8 is used for the retroflex nasal *na* in place of the representative form 5 in Sidi (see figure 13). The letter is certainly related to Thaana 2; but the nature of the connection is unknown. In

terms of this proposal, $\mathbf{\mathcal{E}}$ is classified as a glyphic variant. However, if concurrent usage of it and $\mathbf{\mathcal{S}}$ occurs, then it may be encoded as an alternate form.

- YA / YYA As explained in the discussion of the encoding model for vowel letters, these letters have been encoded separately in order to accommodate old and new values for the letter *ya*.
- ZA The representative form on for ZA is based upon that used in Sidi (see figure (see figure 13)). A variant form $\mathfrak L$ is shown by Geiger (figure 27), which bears some similarity to the form shown by Gippert (figure 2). Although on and $\mathfrak L$ are distincive, it is not clear if they are true alternates. At present, $\mathfrak L$ is to be considered a glyphic variant.

4.4 Nasalization signs

There are two distinctive nasalization signs:

Glyph	Character name	Major variants	Latin	Thaana
ఄ	DIVEHI SIGN ANUSVARA		m	س, س
ੱ	DIVEHI SIGN CANDRABINDU	ំ	m	س ,س

4.5 Gemination mark

The following mark is used for indicating doubled consonants:

Glyph	Character name	Major variants	Latin	Thaana
3 0	DIVEHI GEMINATION MARK			

4.6 Halanta & Virama

The *halanta* and *virama* are proposed for separate encoding:

Gl	ph Character name	Major variants	Latin	Thaana
୍⁄	DIVEHI SIGN HALANTA	_	_	ំ
<u> </u>	DIVEHI VIRAMA	_	_	

The Divehi sign of is used for silencing the inherent vowel, similar to the *halanta / virama* in other Brahmibased scripts. However, it also represents other features. In *evēla akuru* records, it is sometimes used for the vowel sign u. When combined with certain letters in *dives akuru*, it represents a glottal stop or gemination of nasal consonants (see section 5.2). In order to simplify the representation of *halanta*, its function is separated from *virama*, with which it is usually merged in other scripts. This establishes of HALANTA as a basic vowel-silencing sign parallel to of U+07B0 THAANA SIGN SUKUN, which will be practical for users of Divehi, who are also generally users of Thaana.

The conjunct forming function is retained in the \(\bar{\textsq} \) VIRAMA. This is a control character that is used only for producing conjuncts. It does not suppress the inherent vowel and does not interact with the preceding character in rendered output. It is represented in the code chart as \(\bar{\textsq} \) in order to indicate that it is a special character.

4.7 Digits

The script has a full set of digits:

Glyph	Character name	Major variants	Latin	Thaana
o	DIVEHI DIGIT ZERO		0	
כ	DIVEHI DIGIT ONE		1	
3	DIVEHI DIGIT TWO		2	
3	DIVEHI DIGIT THREE		3	
5	DIVEHI DIGIT FOUR		4	
D	DIVEHI DIGIT FIVE		5	
5	DIVEHI DIGIT SIX		6	
?	DIVEHI DIGIT SEVEN		7	
4	DIVEHI DIGIT EIGHT		8	
હ	DIVEHI DIGIT NINE		9	

4.8 Punctuation

The following sign of punctuation is used in the script:

Glyph	Character name	Major variants	Latin	Thaana
11	DIVEHI SECTION MARK	II	•	

5 Encoded Representation

5.1 Alternate representations of vowels

The 'type 2' set of vowel letters is represented as shown below (see also figure 26). The interactions between the base consonant and dependent vowel signs is described in section 5.4.

Vowel	'type 1'	'type 2'	Encoded sequence for 'type 2'
a	હ્યુ	<u></u>	< ୬ YA>
ā	^ଝ ନ୍ତ)	ବ୍ଦ)	<ଷ୍ଠ ya, ା vowel sign aa>
i	శ్ర	න	<る ya, り vowel sign i>
$ar{l}$	જુ	<u>ತ</u> ಾ	<ବ୍ଧ ya, ്ರ vowel sign ii>
u	٦	গ্ৰ	<ବ୍ଧ YA, ୍ର vowel sign u>
\bar{u}	1	ತ್ತು	<એ YA, ્રી VOWEL SIGN UU>
e	ಖ	೫೨೦	<ଷ୍ଠ YA, ୬୦ VOWEL SIGN E>
ai	శివా	₩Ð	<ବ୍ଧ YA, ୭୭୦ VOWEL SIGN AI>
0	ఒ	% ೨೧)	<ଷ୍ଠ YA, ୬ା VOWEL SIGN O>
au	బ)	গ্র	<৩ ya, গ ্ vowel sign au>

5.2 Halanta

The sign \(\sqrt{}\) HALANTA combines with a consonant letter to indicate the absence of the inherent vowel /a/. It is written as a ligature with the base and is positioned to the right of the letter. In some cases, the shape of the consonant is modified.

$$k$$
 \mathfrak{GY} $<\mathfrak{G}$ KA, \checkmark SIGN HALANTA>
 t \checkmark $<\mathfrak{T}$ TTA, \checkmark SIGN HALANTA>
 t \mathfrak{S} \mathfrak{S} \mathfrak{S} \mathfrak{S} \mathfrak{S} SIGN HALANTA>
 \mathfrak{S} SIGN HALANTA>

According to Mohamed (1999: 27, reproduced here in figure 42), in *dives akuru* the HALANTA is used with certain letters for representing special features of Dhivehi. Mohammed provides very brief details about these '*sukun* letters', shown below, which are named according to corresponding Thaana names. They can be represented a combination of the respective letter and the HALANTA:

	Glyph	Sequence	Function	Thaana
alifu sukūn	્	<२ ya, √ halanta>	word-final glottal stop /?/	° A
sīnu sukūn	E	<⊱ SA,	vowel-less sibilant	بْ
nūnu sukūn	n	<™ NA, ✓ HALANTA>	nasal gemination	سُّ
tā sukūn	86	<७ ta, √ halanta>	/y/ off-glide	, S
śaviyani sukūn	v	<‰ sha, √ halanta>	glottal stop; dative suffix	مر *

5.3 Consonant conjuncts

Consonant clusters are represented as conjuncts in Divehi. The majority of conjuncts consist of clusters of two consonants, but conjuncts with up to three consonants are attested. In encoded text, conjuncts are produced by placing the $\boxed{\bigcirc}$ VIRAMA after each bare consonant in a cluster. The combining character for an accompanying vowel sign is placed after the last letter in the cluster.

Conjuncts are rendered as ligatures and as 'touching' forms. Therefore, a particular cluster may have more than one conjunct representation, eg. kta occurs as both 99 and 99, nna occurs as both 72 and 32. Both types of conjuncts may be used interchangably and are orthographic variants. As such, there is no requirement at present to distinguish between the two in plain text. The choice of which conjunct type to display should be determined either by the source text being reproduced, or in the case of new content, by the typographic preferences of the user. Ideally, a Divehi font would contain glyphs for both types, which could be selected as stylistic sets.

The letter δ RA presents an exception to the above. It exhibits special behavior when it occurs in initial and final positions in a cluster.

'Touching' form A conjunct may be produced by joining the regular forms of letters linearly at their adjacent edges, generally without modification:

kta	<i>®</i> ®	<ੴ KA, 📮 VIRAMA, ૭ TA>
nta	ക	<♡ na, [] virama, & ta>
nna	ဘာ	<♡ NA, [] VIRAMA, ♡ NA>
mma	88	<% ma, [□] virama, % ma>
spa	فحس	<りSA, [] VIRAMA, もPA>
lla	33	<3 lla, [♀] virama, 3 lla>

Ligature Consonants may be combined into a single distinctive ligature. In such representations, the constituent glyphs are modified in order to produce the ligature.

Halanta forms Conjuncts are also represented by marking the first consonant with halanta.

The letter y_A When the letter \mathfrak{D} y_A is the last member of a cluster, it forms a ligature with the preceding consonant. In such positions, y_a is written as \mathfrak{D} , which be considered a post-base form.

The letter RA The letter δ RA takes special forms when it occurs in conjuncts. It is written as \hat{i} repha when C_1 in a cluster. The repha is placed above the following letter, or in the case of multi-letter clusters, it is placed above the last letter.

When non-initial, RA is written as () ra-kāra. The ra-kāra attaches to the right edge of the preceding letter

and curves fully around the letter to the top left edge. In the case of multi-letter clusters, it attaches to the last letter and its curve spans the entire conjunct.

5.4 Consonant-vowel combinations

Combinations of a consonant and dependent vowel sign are rendered following the pattern shown in section 5.1 for the 'type-2' independent vowels. Certain vowel signs have contextual forms when combined with certain consonants. Shown below are examples with other consonants and consonant clusters.

Vowel sign AA Written to the right of the base, detached from the letter.

In some records, the sign is extended below the base, similar to vowel sign i, but it remains detached.

Vowel sign 1 Written to the right of the base. If a letter has a round stroke at the right edge, then the sign attaches to the curve. For letters with terminals at the right edge, the sign attaches to the final point of the terminal.

When written with conjunct medial ra, the curve of VOWEL SIGN I extends below the ra- $k\bar{a}ra$:

Vowel sign II Behaves like vowel sign i.

In some *evēla akuru* records, the vowel sign ii is written above the letter using the form \circ . This form is a glyphic variant for the representive form.

Vowel sign U The vowel sign U is rendered using three contextual forms, which are determined by the shape of the base letter. For most letters, the representative form \mathcal{L} is used:

For letters with a terminal at the right edge, the form is used \(\gamma \) most letters, the form is used:

In old records, the sign is written as \checkmark , which resembles the HALANTA. Additional research is required in order to determine if there is a requirement to encode this sign as an alternate form.

Letters with curves at the right edge form a ligature with the vowel sign:

Vowel sign UU The sign attaches to the right edge of a letter.

Vowel sign E Written to the left of the base.

Vowel sign AI Written to the left of the base.

Vowel sign o Written to the left and right of the base. When occurring with a consonant cluster, the left and right elements of the sign are rendered before the first and last letters, respectively.

In records where the elongated form of VOWEL SIGN AA is used, the right-side element of VOWEL SIGN O is similarly elongated:

Vowel sign AU Written to the left and right of the base. The right-side element, which is based upon \(\text{VOWEL SIGN U}, \) ligates with the base and takes the appropriate contextual form. When occurring with a consonant cluster, the left and right elements of the sign are rendered before the first and last letters, respectively.

5.5 Nasalization

Nasalization in Divehi is indicated in two ways:

1. Post-vocalic nasalization Vowel nasalization is indicated using the signs CANDRABINDU and ANUSVARA, as follows:

2. Pre-nasalized stop The element \circ is used as a sign for indicating prenasalized stops in Dhivehi. It attaches to the left edge of a letter. Palaeographically, this sign is the cluster-initial form of 3 NGA. It represents the velar nasal by default, but also functions as a generic homorganic nasal marker, ie. it assumes the value of the nasal belonging to the same class as the consonant that it precedes. When used as a generic nasal marker, the NGA forms a ligature with the following consonant, and is represented in encoded text as a conjunct.

A similar, if not identical, element is used for indicating gemination. As discussed in the section below, they can both be represented using NGA in a conjunct context. However, it It is possible that the prenasal sign is a distinctive mark. Additional research is required to determine if a separate 'pre-nasal sign' should be encoded separate from NGA.

5.6 Gemination

Doubled, or geminated, consonants are indicated in Divehi records in two ways: 1) duplicated letters expressed as conjuncts; 2) above-base combining signs and post-base signs. However, the method using signs may appear distinctive, but the resulting forms can be traced back palaeographically to conjuncts and secondary forms of consonants used in conjunct ligatures. This may be explained by the lack of usage of certain conjunct forms in the later script, which presented an opportunity for reuse. Some examples of geminated forms are discussed below, as well as their recommended encoded representations.

- Doubling letters using conjuncts, such as & ssa.
- The element \Im is used for indicating gemination in \Im *nna* and \Im *tta*, but palaeographically they represent the clusters *ntha* and *ttha*, respectively. The glyph \Im represents a form of Tha used in conjuncts. As the letter \Im Tha had fallen out of use in *dives akuru*, it appears that conjuncts with the letter were reused for indicating duplication of the first letter in the conjunct. Such forms are to be represented in encoded text using the conjunct model. It is impractical to analyze the cluster-medial form \Im of *tha* as a distinctive gemination sign.

• The element \mathcal{Y} is used for marking gemination in cases such as \mathcal{Y} ppa. This element can appear with an open or a tight loop. Palaeographically, it is a post-base form of the letter \mathcal{Y} \mathcal{Y} \mathcal{Y} , eg. \mathcal{Y} pya. As the Dhivehi language does not have -ya clusters, the post-base form appears to have been repurposed for gemination. Such forms are to be represented in encoded text using the conjunct model. It is impractical to analyze the cluster-final form \mathcal{Y} of ya as a distinctive gemination sign.

• The element $\stackrel{3}{\circ}$ is written above the letter to be doubled, either joined to the left edge: $\stackrel{3}{\circ}$ gga; or detached: $\stackrel{3}{\circ}$ gga. This element may have originally represented the velar nasal 3 NGA in cluster-initial position, eg. $\stackrel{3}{\circ}$ nga. In modern dives akuru, as attested in Sidi (1959), the sign is written detached above the letter, eg. the form $\stackrel{3}{\circ}$ gga, shown above. While it appears to be derived from the cluster-initial form of NGA, the form shown in Sidi is a modern evolution that may be considered a distinctive character. Its disconnected placement also differs from the ligating behavior of cluster-initial NGA. The detached sign $\stackrel{3}{\circ}$ is, therefore, encoded as a the distinctive character GEMINATION MARK. Forms that use a connected $\stackrel{3}{\circ}$ are to be represented in encoded text as conjuncts with cluster-initial NGA. It is impractical to analyze the connected form of $\stackrel{3}{\circ}$ as a distinctive gemination sign.

5.6.1 Nukta

The ONUKTA is used for representing new sounds. It is written beneath a letter whose base value most closely approximates the foreign sound.

5.7 Line-breaking

Formal rules for line-breaking do not exist. Hyphenation and other continuation marks are not used. A word may be broken along orthographic syllables at any position at the end of a line. It is important that the components of two-part vowel signs be kept together with the base, for example, the left-side element should not be separated from the syllable at the end of line.

5.8 Numeration system

Some *lōmāfānu* are numbered in the margins using a numeration system based upon letters. The values are as follows (Bell 1930: 559):

value	letter		value	letter		value	letter	
1	જ	ma	4	প্ত	ta	7	ಉ	ņа
2	v	pa	5	ಲ	la	8	ક્ષ	sa
3	ത	dha	6	P	ga	9	رچ	ḍа

5.9 Collation

The default sort order for the script is to be based upon the Brahmi pattern:

The following characters have secondary weights:

° ANUSVARA, ° CANDRABINDU, ONUKTA, ONUKTA, GEMINATION MARK

5.10 'Modern' repertoire for Divehi

The modern Divehi ('D') orthography contains the following letters, which are aligned with the inventory and order of Thaana ('T')

D	T	name	D	T	name
~	/	haa	و)	laamu
న	بر	shaviyani	ര	5	gaafu
\circ	سر	noonu	~	ح	gnaviyani
δ	х	raa	೯	, _	seenu
ข	ø	baa	رچ	٤	daviyani
3	بو	lhaviyani	ത	٤	zaviyani
®	ν	kaafu	ಒ	æ	taviyani
જુ	Л	alifu	න	מ	yaa
જ	9	vaavu	ب	<i>3</i> .	paviyani
જ	2	теети	જ્	کے	javiyani
v	3	faafu	ಶ	Ś	chaviyani
ઝ	ک ر	dhaalu	ಉ	ટ	naa
প্ত	ø	thaa			

The vowel signs are:

D	T	name	D	T	name
	6	abafili	િલ	్	ebefili
ା	ో	aabaafili	୧୧୧	ో	eybeyfili
್ರ	्र	ibifili	%)	ే	obofili
<u></u> 3	ূ	eebeefili	৽ႃ	క	oaboafili
্	ৈ	ubufili	्र	ి	sukun
া	ి	ooboofili			

The modern orthography can be represented using the proposed repertoire.

6 Character Data

6.1 Unicode character data: UnicodeData.txt

```
11B00; DIVEHI LETTER A; Lo; 0; L;;;;; N;;;;;
11B01; DIVEHI LETTER AA; Lo; 0; L; ; ; ; ; N; ; ; ;
11B02; DIVEHI LETTER I; Lo; 0; L;;;;; N;;;;
11B03; DIVEHI LETTER II; Lo; 0; L;;;;; N;;;;
11B04; DIVEHI LETTER U; Lo; 0; L;;;;; N;;;;
11B05; DIVEHI LETTER UU; Lo; 0; L;;;;; N;;;;;
11B06; DIVEHI LETTER E; Lo; 0; L;;;;; N;;;;
11B07; DIVEHI LETTER AI; Lo; 0; L;;;;; N;;;;;
11B08; DIVEHI LETTER O; Lo; 0; L; ; ; ; ; N; ; ; ;
11B09; DIVEHI LETTER AU; Lo; 0; L;;;;; N;;;;
11B0A; DIVEHI LETTER KA; Lo; 0; L;;;;; N;;;;;
11B0B; DIVEHI LETTER KHA; Lo; 0; L;;;;; N;;;;
11BOC; DIVEHI LETTER GA; Lo; 0; L;;;;; N;;;;;
11B0D; DIVEHI LETTER GHA; Lo; 0; L;;;;; N;;;;
11BOE; DIVEHI LETTER NGA; Lo; 0; L;;;;; N;;;;;
11B0F; DIVEHI LETTER CA; Lo; 0; L;;;;; N;;;;;
11B10; DIVEHI LETTER CHA; Lo; 0; L;;;;; N;;;;;
11B11; DIVEHI LETTER JA; Lo; 0; L;;;;; N;;;;
11B12; DIVEHI LETTER JHA; Lo; 0; L;;;;; N;;;;
11B13; DIVEHI LETTER NYA; Lo; 0; L;;;;; N;;;;;
11B14; DIVEHI LETTER TTA; Lo; 0; L;;;;; N;;;;;
11B15; DIVEHI LETTER TTHA; Lo; 0; L;;;;; N;;;;;
11B16; DIVEHI LETTER DDA; Lo; 0; L;;;;; N;;;;
11B17; DIVEHI LETTER DDHA; Lo; 0; L;;;;; N;;;;
11B18; DIVEHI LETTER NNA; Lo; 0; L;;;;; N;;;;
11B19; DIVEHI LETTER TA; Lo; 0; L;;;;; N;;;;
11B1A; DIVEHI LETTER THA; Lo; 0; L;;;;; N;;;;
11B1B; DIVEHI LETTER DA; Lo; 0; L;;;;; N;;;;
11B1C; DIVEHI LETTER DHA; Lo; 0; L;;;;; N;;;;
11B1D; DIVEHI LETTER NA; Lo; 0; L;;;;; N;;;;
11B1E; DIVEHI LETTER PA; Lo; 0; L;;;;; N;;;;;
11B1F; DIVEHI LETTER PHA; Lo; 0; L;;;;; N;;;;
11B20; DIVEHI LETTER BA; Lo; 0; L;;;;; N;;;;
11B21; DIVEHI LETTER BHA; Lo; 0; L;;;;; N;;;;
11B22; DIVEHI LETTER MA; Lo; 0; L;;;;; N;;;;
11B23; DIVEHI LETTER YA; Lo; 0; L;;;;; N;;;;
11B24; DIVEHI LETTER YYA; Lo; 0; L;;;;; N;;;;
11B25; DIVEHI LETTER RA; Lo; 0; L;;;;; N;;;;;
11B26; DIVEHI LETTER LA; Lo; 0; L;;;;; N;;;;;
11B27; DIVEHI LETTER VA; Lo; 0; L;;;;; N;;;;
11B28; DIVEHI LETTER SHA; Lo; 0; L;;;;; N;;;;
11B29; DIVEHI LETTER SSA; Lo; 0; L;;;;; N;;;;;
11B2A; DIVEHI LETTER SA; Lo; 0; L;;;;; N;;;;
11B2B; DIVEHI LETTER HA; Lo; 0; L;;;;; N;;;;;
11B2C; DIVEHI LETTER LLA; Lo; 0; L;;;;; N;;;;
11B2D; DIVEHI LETTER ZA; Lo; 0; L;;;;; N;;;;;
11B2E; DIVEHI VOWEL SIGN AA; Mc; 0; L;;;;; N;;;;
11B2F; DIVEHI VOWEL SIGN I; Mc; 0; L; ;; ;; N; ;; ;;
11B30; DIVEHI VOWEL SIGN II; Mc; 0; L; ; ; ; ; N; ; ; ;
11B31; DIVEHI VOWEL SIGN U; Mc; 0; L;;;;; N;;;;;
11B32; DIVEHI VOWEL SIGN UU; Mc; 0; L;;;;; N;;;;
11B33; DIVEHI VOWEL SIGN E; Mc; 0; L; ;; ;; N; ;; ;;
11B34; DIVEHI VOWEL SIGN AI; Mc; 0; L; 11B29 11B26;;;; N;;;;;
11B35; DIVEHI VOWEL SIGN O; Mc; 0; L; 11B29 11B28; ;;; N;;;;;
11B36; DIVEHI VOWEL SIGN AU; Mc; 0; L; 11B29 11B04;;;; N;;;;;
11B37; DIVEHI SIGN ANUSVARA; Mn; 0; NSM;;;;; N;;;;
```

```
11B38; DIVEHI SIGN CANDRABINDU; Mn; 0; NSM; ; ; ; ; N; ; ; ;
11B39; DIVEHI SIGN NUKTA; Mn; 7; NSM; ;; ;; N; ;; ;;
11B3A; DIVEHI SIGN HALANTA; Mc; 9; L;;;;; N;;;;
11B3B; DIVEHI VIRAMA; Mn; 9; NSM; ; ; ; ; N; ; ; ;
11B3C; DIVEHI SECTION MARK; Po; 0; L;;;;; N;;;;
11B3D; DIVEHI GEMINATION MARK; Mn; 0; NSM;;;;; N;;;;
11B50; DIVEHI DIGIT ZERO; Nd; 0; L;; 0; 0; 0; N;;;;;
11B51; DIVEHI DIGIT ONE; Nd; 0; L;; 1; 1; 1; N;;;;;
11B52; DIVEHI DIGIT TWO; Nd; 0; L; ; 2; 2; 2; N; ; ; ;
11B53; DIVEHI DIGIT THREE; Nd; 0; L; ; 3; 3; 3; N; ; ; ; ;
11B54; DIVEHI DIGIT FOUR; Nd; 0; L; ; 4; 4; 4; N; ; ; ;
11B55; DIVEHI DIGIT FIVE; Nd; 0; L; ; 5; 5; 5; N; ; ; ;
11B56; DIVEHI DIGIT SIX; Nd; 0; L; ; 6; 6; 6; N; ; ; ;
11B57; DIVEHI DIGIT SEVEN; Nd; 0; L;; 7; 7; 7; N;;;;
11B58; DIVEHI DIGIT EIGHT; Nd; 0; L; ; 8; 8; 8; N; ; ; ;
11B59; DIVEHI DIGIT NINE; Nd; 0; L; ; 9; 9; 9; N; ; ; ; ;
```

6.1.1 Linebreak data: LineBreak.txt

```
11B00..11B09;AL # DIVEHI LETTER A..DIVEHI LETTER AU

11B0A..11B2D;AL # DIVEHI LETTER KA..DIVEHI LETTER ZA

11B2E..11B36;CM # DIVEHI VOWEL SIGN AA..DIVEHI VOWEL SIGN OO

11B37..11B3A;CM # DIVEHI SIGN ANUSVARA..DIVEHI SIGN HALANTA

11B3B;CM # DIVEHI VIRAMA

11B3C;BA # DIVEHI SECTION MARK

11B3D;CM # DIVEHI GEMINATION MARK

11B50..11B59; NU # DIVEHI DIGIT ZERO..DIVEHI DIGIT NINE
```

6.1.2 Indic syllabic categories: IndicSyllabicCategory.txt

```
# Indic Syllabic Category=Bindu
11B37..11B38 ; Bindu
                                # Mn [2] DIVEHI SIGN ANUSVARA..DIVEHI SIGN CANDRABINDU
# Indic Syllabic Category=Nukta
            ; Nukta
                                # Mn
                                         DIVEHI SIGN NUKTA
# Indic Syllabic Category=Pure Killer
11B3A
            ; Pure Killer
                                # Mn
                                           DIVEHI SIGN HALANTA
# Indic Syllabic Category=Invisible Stacker
11B3B
            ; Invisible Stacker # Mn
                                           DIVEHI VIRAMA
# Indic Syllabic Category=Vowel Independent
11B00..11B09; Vowel Independent # Lo [10] DIVEHI LETTER A..DIVEHI LETTER AU
# Indic Syllabic Category=Vowel Dependent
11B2E...11B36 ; Vowel Dependent # Mc [3] DIVEHI VOWEL SIGN AA..DIVEHI VOWEL SIGN AU
# Indic Syllabic Category=Consonant
11B0A..11B2D; Consonant # Lo [35] DIVEHI LETTER KA..DIVEHI LETTER ZA
```

6.1.3 Indic positional categories: IndicPositionalCategory.txt

```
# Indic Positional Category=Right
11B2E..11B32 ; Right
                             # Mc
                                    [5] DIVEHI VOWEL SIGN AA..DIVEHI VOWEL SIGN UU
11B3A
            ; Right
                             # Mc
                                        DIVEHI SIGN HALANTA
# Indic Positional Category=Left
11B33..11B34 ; Left
                             # Mc
                                    [2] DIVEHI VOWEL SIGN E..DIVEHI VOWEL SIGN AI
# Indic_Positional_Category=Left_And_Right
11B35..11B36 ; Left_And_Right # Mc
                                   [2] DIVEHI VOWEL SIGN O..DIVEHI VOWEL SIGN AU
# Indic_Positional_Category=Top
11B37..11B38 ; Top
                             # Mn [2] DIVEHI SIGN ANUSVARA..DIVEHI SIGN CANDRABINDU
11B3D
            ; Top
                             # Mn
                                        DIVEHI GEMINATION MARK
# Indic Positional Category=Bottom
11B39
            ; Bottom # Mn
                                        DIVEHI SIGN NUKTA
```

7 References

- Bell, H[arry]. C[harles]. P[urvis]. 1919. "The Old and Modern Maldivian Alphabets". In "Máldivian Linguistic Studies". *Journal of the Ceylon Branch of the Royal Asiatic Society*. Vol. xxvII Extra Number. Appendix C, pp. 149–167.
- ——. 1929. "Excerpta Máldiviana, No. 8 Mulaku Atol: Koļu-Furi Island". *Journal of the Ceylon Branch of the Royal Asiatic Society*, vol. xxxi, no. 82, pp. 400–415.
- . 1930. "Excerpta Máldiviana, No. 9 Lómáfánu". *Journal of the Ceylon Branch of the Royal Asiatic Society*, vol. xxxi, no. 83, pp. 539–578
- בּעלֵי " [= Bodufenvalhuge Sidi]. 1959. בְּפֶּׁרְ תُעֹשׁ [= Divehi Akuru]. מֹמֶפֶׁת ׁ מֹתְ [= evvana bai ('volume ı')]. Male.
- Daily Mail. "Maldives government highlights the impact of climate change... by meeting underwater." October 20, 2009. http://www.dailymail.co.uk/news/article-1221021/Maldives-underwater-cabinet-meeting-held-highlight-impact-climate-change.html

- Fritz, Sonja. 2002. *The Dhivehi Language: A Descriptive and Historical Grammar of Maldivian and its Dialects*. Beiträge zur Südasienforschung, Südasien-Institut, Universität Heidelberg, Band 191. Würzburg: Ergon Verlag.
- Geiger, Wilhelm. 1919. "Máldivian Linguistic Studies". *Journal of the Ceylon Branch of the Royal Asiatic Society*. Vol. XXVII Extra Number. Translated from the German by J. C. White; edited by H. C. P. Bell. Colombo: H. C. Cottle.
- Gippert, Jost. 2003. "Early New Persian as A Medium of Spreading Islam." *Persian Origins Judaeo-Persian and the Emergence of New Persian*, pp. 31–48. Collected Papers of the Symposium, Göttingen 1999. Edited by Ludwig Paul. Wiesbaden: Harrassowitz Verlag.
- ——. 2004. "A Glimpse into the Buddhist Past of the Maldives; I. An Early Prakrit Inscription." *Wiener Zeitschrift für die Kunde Südasiens* [Vienna Journal of South Asian Studies], vol. 48 (2004), pp. 81–109.
- ———. 2013. "An Outline of the History of Maldivian Writing". *Grammatica et verba: Glamor and verve*. Studies in South Asian, historical, and Indo-European linguistics in honor of Hans Henrich Hock on the occasion of his seventy-fifth birthday, pp. 81–98, edited by Shu-Fen Chen and Benjamin Slade. Beech Stave Press.
- . 2014. "A Glimpse into the Buddhist Past of the Maldives: II. Two Sanskrit Inscriptions." *Wiener Zeitschrift für die Kunde Südasiens* [Vienna Journal of South Asian Studies], vol. 55 (2013–2014), pp. 111-144
- Mohamed, Naseema. 1999. *Divehi Writing Systems*. Male: National Centre for Linguistic and Historical Research.
- New York Times. "Vandalism at Maldives Museum Stirs Fears of Extremism." Vikas Bajaj, February 13, 2012. http://www.nytimes.com/2012/02/14/world/asia/political-turmoil-threatens-archaeological-treasures-in-maldives.html
- Pandey, Anshuman. 2009. "Preliminary Proposal to Encode the Dhivehi Script in ISO/IEC 10646." L2/09-191. http://www.unicode.org/L2/L2009/09191-dhivehi.pdf
- ——. 2010. "Preliminary Proposal to Encode Dhives Akuru in ISO/IEC 10646." N3848 L2/10-213. http://www.unicode.org/L2/L2010/10213-dhivesakuru.pdf
- Prinsep, James. 1836. "Note on the Maldive Alphabet". *Journal of the Royal Asiatic Society of Bengal*, vol. 5, p. 794.
- Romero-Frias, Xavier [ed]. 2003. בְּפֶּׁע מֹעֹל [= Divehi Akuru]. מֻנֶּפֶׁע מֹעַל [= evvana bai ('volume ı')]. Reprint of first edition of 1959 by Bodufenvalhuge Sidi. Edited with introduction and appendices. Trivandrum: Nova Ethnographia Indica.
- ——. 2012. Folk Tales of Maldives. Nordic Institute of Asian Studies: Copenhagen.
- Wikimedia Commons. "Coat of Arms of the Maldives". http://en.wikipedia.org/wiki/File:Coat_of_Arms_of_Maldives.svg

Wikipedia. "צֹישׁתְשִׁבֶּנֶ לְבֶּבֶּׁשׁׁתְיּ" [= Dambidū Lōmāfānu]. http://dv.wikipedia.org/wiki/ פֿיִתִשִּי (פֿרָנִינִייִ בּרַנִּיִּעָּייִ בּרַנְּבַּיִּעָּייִ בּרַנְּיִּעָּייִ י

Wilson, John. 1841. "Vocabulary of the Maldivian Language, Compiled by Lieut. W. Christopher, I. N. Communicated to the Bombay Branch of the Royal Asiatic Society". *Journal of the Royal Asiatic Society of Great Britain and Ireland*, vol. 6, pp. 42-76.

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	11B0	11B1	11B2	11B3	11B4	11B5
0	&	26 11B10	1 1B20	<u>3</u>		O 11B50
1	& (3)	11811	11B21	11B31		7
2	%		%	11B32		3
3	3 11B03	7	Q 11B23	9 0		3
4	11804	ك 11B14	11B24	99		11B54
5	11805	11815	ک	9)		5
6	જ	11B16	11B26	၁		5
7	11B06 9 Q	ಶ್ರ	જ	৽		စ
8	11B07 2	11B17 5	11B27	11B37 W		11857
9	11B08 2	11B18	11B28 28	11B38		11858
Α	11809	11B19	11B29	11B39		11B59
В	11B0A 2	11B1A 3	11B2A	11B3A		
С	11B0B	11B1B	11B2B	11B3B		
	11B0C	11B1C	11B2C	11B3C 3		
D	11B0D	11B1D	11B2D	11B3D		
Ε	3 11B0E	11B1E	11B2E			
F	2) 11B0F	11B1F	<u>)</u>			

This block unifies Evela Akuru and Dives Akuru.

Independent vowels

11B00	જિ	DIVEHI LETTER A
11B01	લ્છે	DIVEHI LETTER AA
11B02	જી	DIVEHI LETTER I
11B03	જી	DIVEHI LETTER II
11B04	٦	DIVEHI LETTER U
11B05	1	DIVEHI LETTER UU
11B06	ສັ	DIVEHI LETTER E
11B07	ಶಿ	DIVEHI LETTER AI
		 also used for ee
11B08	ಒ	DIVEHI LETTER O
11B09	ಒ)	DIVEHI LETTER AU
		 also used for oo

Consonants

```
11B0A  
DIVEHI LETTER KA

11B0B  
DIVEHI LETTER KHA

11B0C  
DIVEHI LETTER GA

11B0D  
DIVEHI LETTER GHA

11B0E  
DIVEHI LETTER NGA

• also represents pre-nasal or gemination mark when initial in a conjunct

11B0F  
DIVEHI LETTER CA

11B10  
DIVEHI LETTER CHA

11B11  
DIVEHI LETTER JA

- reserved>
```

- 11B12 <a href="mailto
- 11B1B 3 DIVEHI LETTER DA 11B1C ∞ DIVEHI LETTER DHA 11B1D ∽ DIVEHI LETTER NA
- 11B1E O DIVEHI LETTER PA 11B1F O DIVEHI LETTER PHA
- 11B20 2 DIVEHILETTER BA
- 11B21 🥹 DIVEHI LETTER BHA 11B22 🞖 DIVEHI LETTER MA
- 11B23 © DIVEHI LETTER YA
 - also used for representing independent and initial vowels
 - also represents gemination when final in a conjunct

11B24 w DIVEHI LETTER YYA
11B25 o DIVEHI LETTER RA
11B26 w DIVEHI LETTER LA
11B27 % DIVEHI LETTER VA
11B28 ‰ DIVEHI LETTER SHA
11B29 № DIVEHI LETTER SSA
11B2A ₺ DIVEHI LETTER SA
11B2B ♡ DIVEHI LETTER HA

11B2C 3 DIVEHI LETTER LLA 11B2D 60 DIVEHI LETTER ZA

Dependent vowel signs

```
11B2E OJ DIVEHI VOWEL SIGN AA
11B2F OJ DIVEHI VOWEL SIGN I
11B30 OJ DIVEHI VOWEL SIGN II
11B31 OJ DIVEHI VOWEL SIGN U
11B32 OJ DIVEHI VOWEL SIGN UU
11B33 DIVEHI VOWEL SIGN E
```

11B34 >>> DIVEHI VOWEL SIGN AI
• also used for ee

11B35 >>> DIVEHI VOWEL SIGN O
≡ 11B33 >>> 11B2E >>>

11B36 >>> DIVEHI VOWEL SIGN AU
≡ 11B33 >>> 11B31 >>>
• also used for oo

Nasalization signs

11B37 ° DIVEHI SIGN ANUSVARA 11B38 ° DIVEHI SIGN CANDRABINDU

Nukta

11B39 • DIVEHI SIGN NUKTA

• used for extending the alphabet

Halanta

11B3A of DIVEHI SIGN HALANTA

= sukun

- silences the inherent vowel
- also used for vowel sign u

Virama

11B3B 📮 DIVEHI VIRAMA

• used for producing conjuncts

Punctuation

11B3C " DIVEHI SECTION MARK

Gemination mark

11B3D ³ DIVEHI GEMINATION MARK

Digits

```
11B50 •
        DIVEHI DIGIT ZERO
11B51 > DIVEHI DIGIT ONE
11B52 3
         DIVEHI DIGIT TWO
11B53
         DIVEHI DIGIT THREE
11B54 🖍
         DIVEHI DIGIT FOUR
11B55 த
         DIVEHI DIGIT FIVE
11B56 s
         DIVEHI DIGIT SIX
11B57 የ
         DIVEHI DIGIT SEVEN
11B58
      ♦ DIVEHI DIGIT EIGHT
11B59 & DIVEHI DIGIT NINE
```

Skt.	Dhiv.	PI	SI	Li-3	L4	L5	L6	L7	L8	Fı	F2	Fı	058	F ₃	F4	MM	F5	F6	F7	F8	F9	F13	F1153
а	а	4	80	180	20	7	300 B					200	250										
ka	١,	1	O	B	B	B	B	3	8	Ð	3)	3	3	8	Ø	3	Ø	Ø	3	Ø	99	છ	<i>®</i>
$k^h a$	} ka	2		ಶ																			
ga	1	0	0	6	5	9	9	b		り	Ь	ح	િ	5	ه	(2	છ	હ	P	\mathfrak{L}	ந	6	8
g^ha	} ga		V	ల్లు		\$																	
'nа	(na) (gem.)			7	3	3	٦	3	3	21	3	3	7	3	າ	3	3	3	3	5	3	3	
ca	١,	⊲		ಶ	り																		
c^ba	} ha, sa	8		25	I																		
ja) ,	2		દ	6																		
j^ba	da																						
ña	(nya)			ල																			
ţa	1 .	<	<u></u>	0	0	υ	υ	ય	"	v	2	S	ಬ	S	S	2	3	2	5	3	3	3	20
$t^h a$	} ṭa	d																					
ḍа	\ 1	4		20	2)	22	ટર	න		w	20	ಶಾ	رړه	2)	21	ري	2)	رچ	3	S,	رچه	3 .0	הלים
d^ba	} da			\$																			
ņa	ņa	T	9	ව	5)	9	80	ற		Ð	9	9	ಳ	න	න	ಶ	ಬ	3	9	\mathcal{D}	7	ಳು	es)
ta	ta	9	70)	Ø	න	D	9	ь	9	Ø	B	8	9	Э	8	9	B	Ø	9	39	<u>.</u>	Ð	Ø
t^ha	(gem.)		10	8	6	6	ফ	6		Ø		હ		ර	6	6	6	6	G		c	Ø	6
da	J	یے ا	3	3	3	3	3						63	(<u>S</u>	િ								
d^ha	} da		W	تعة	ω	w	700	מפוס	997	w	20	ow	67.EZ	യ	معاه	ne	െ	യാ	as)	ores	கூ	െ	രുമാ
na	na	I	$\gamma\gamma$	প্ত	ŋ	か	ッ	ッ	ゥ	Ŋ	${\mathfrak D}$	න	3	2	\mathfrak{I}	\mathcal{D}	\mathfrak{D}	\boldsymbol{v}	\mathfrak{D}	\mathfrak{v}	Ð	3	B
-ta)	2	2	と	2	ッ	ッ	n	حه	v	2	n	•	<i>م</i>	8	م	~	n	ഹ	n	~	ر	000
pa	} pa																		~				
$p^{h}a$	J			3																			
ba	} ba		2		V	v	שי	ಌ	Q	a	w	2	W	ಶ	ov	00	က	€	L	ov	שט	൜	63)
$b^b a$	s va	ط		B																			
111 C	ana a	77	2	\mathbf{s}	\mathcal{S}	P	v	${\cal S}$	હ	ಶ	V	S	೭	ಶ	જ	E	S	2	N	\boldsymbol{z}	${\bf S}$	9	Z
ma	ma									જ								ஒ					

Figure 1: Inventory of Divehi letters A, KA .. MA across various *lōmāfānu* and *fatkoļu* (from Gippert 2013: Table 1). Continued in figure 2.

Skt.	Dhiv.	PΙ	SI	LI-3	L4	L_5	L6	L7	L8	Fı	F2	F	1058	F ₃	F4	MM	F5	F6	F7	F8	F9	F13	F1153
уа	(y)a	Ш	W	æ	a)	w	8)	න	စ	a	æ	ച	D	a)	Ø)	2	அ	യ	82)	<i>0</i>	رووس	a)	മ
ra	ra	1	J	0	\mathcal{O}	Г	४	δ	δ	ø	O	Ø	Q	O	Ø	9	O	O	Ŏ	3	ð	Ø	0
la	la	า	O	O	೬	ربع	ಶ	e	e	v	ø	e	e	0	છ	2	Ø	e	ಲ	v	e)	ட	0)
		۵	5	5	\mathcal{D}	と	চ	જ	જુ		3	ಶ	ટ	ಶ	ಶ	S	ફ	ø,	S	Z	જ	શુ	Ŋ
va	va									r								יבנט					
śa)			E	40	ক	ゃ																
<u>s</u> a	1		18	දින	28	38	B			•\$		285		288	781	185							
sa	ha, sa	77	2	ى	\sim	80	Ø	દ્દુ	హ	ىي	Ev	ديع	Le	ಕ್ಷ	હૃ	<u>ل</u> م	J	رع	3	E,	E	ಒ	Co?
ha)	40	7	\supset	\neg	\supset	ゥ	\$	か	~ Y	\mathcal{D}	w	3	5	25	3	જી	₹Y)	3	w	פינ	ஒ	פני
1	1		Z	ઢ	ટ	\mathcal{D}	ফ	2		ъ	3	ટ		જ	ಶ	જુ	3		2	3	\$	3	
ļa	ļa												30					3>					30
	za												رو										

Figure 2: Inventory of Divehi letters ya .. za across various *lōmāfānu* and *fatkoļu* (from Gippert 2013: Table 1). Continued from figure 1.

Early Divehi Akuru (Evela Akuru)

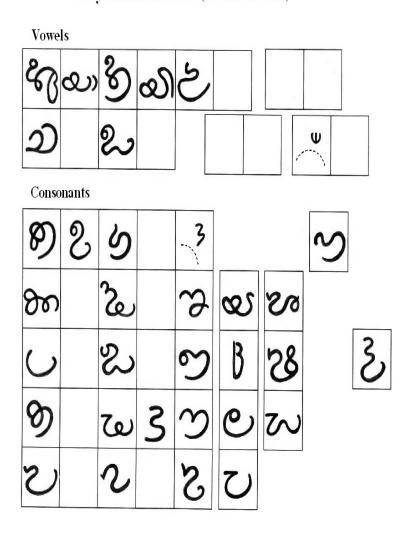


Figure 3: Chart of 'Early Divehi Akuru' (from Romero-Frias 2003).

Latter Divehi Akuru (Divehi Akuru)



Figure 4: Chart of 'Later Divehi Akuru' (from Romero-Frias 2003).



Figure 5: IC 009: a Vajrayana statue from Māle (from Gippert 2013: figures 1, 3). The inscription has been traced in color by Gippert.



Figure 6: IC 010: a Vajrayana statue from Māle (from Gippert 2013: figures 2, 4). The inscription has been traced in color by Gippert.





Figure 7: L3: 'Dambidū Lōmāfānu'. Plates 1, 2 of 16. Image from Wikimedia Commons.



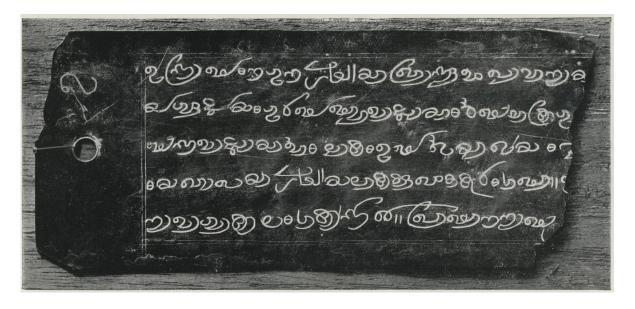


Figure 8: L6: Single plate. From Bell 1930: Plate I, "Lómáfánu No. 1".

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Spage on your our mode of y (on) sell you so we will any and of the spage of the s

Figure 9: L7: Single plate. From Bell 1930: Plate II, "Lómáfánu No. 2".



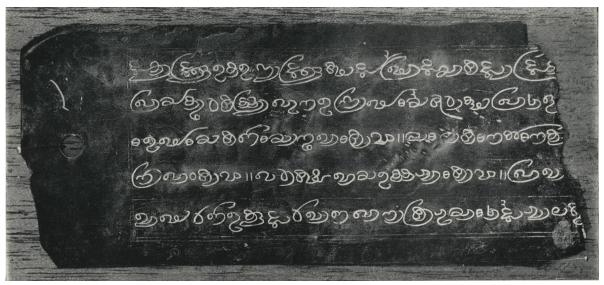


Figure 10: L8: Single plate (fragment). From Bell 1930: Plate III, IV, "Lómáfánu No. 3".

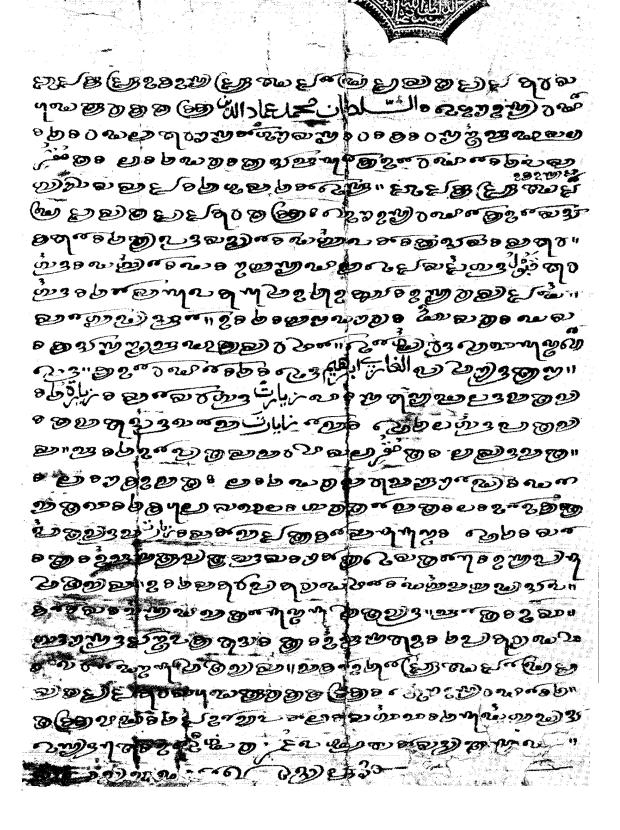
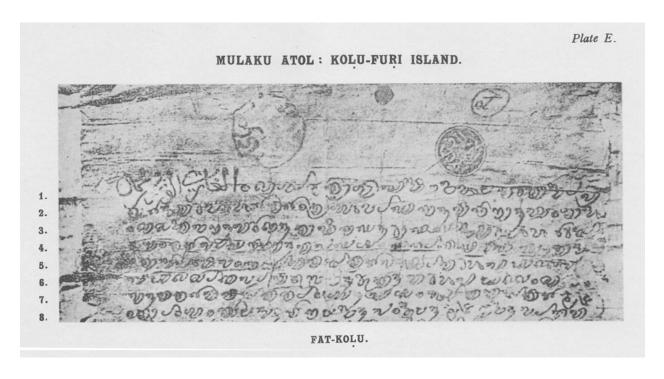


Figure 11: A fatkolu of Muhammad Imaduddin (from Mohamed 1999: 30).



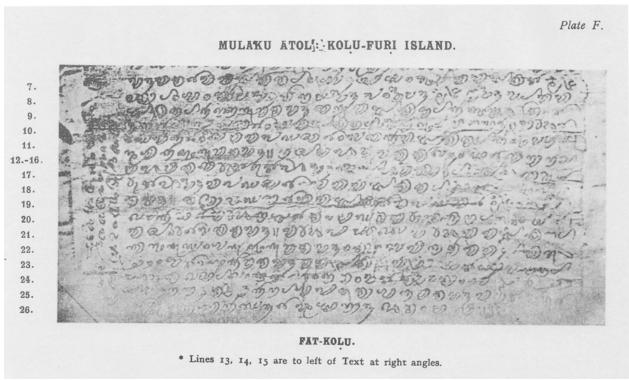


Figure 12: A fatkoļu (from Bell 1929: Plate E and Plate F).



Figure 13: Modern *divehi akuru* orthography: Basic consonant letters (from Sidi 1959: 4). The sort order follows that of Thaana.



Figure 14: Modern *divehi akuru* orthography: Consonant vowel combination with vowel sign i (from Sidi 1959: 5). The sort order follows that of Thaana.

Figure 15: Modern *divehi akuru* orthography: Consonant vowel combination with vowel sign u (from Sidi 1959: 6). The sort order follows that of Thaana.

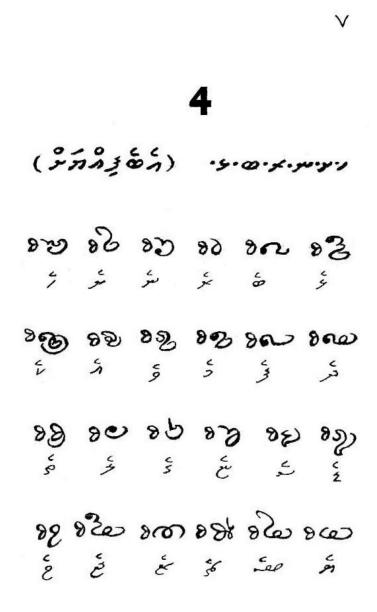


Figure 16: Modern *divehi akuru* orthography: Consonant vowel combination with vowel sign E (from Sidi 1959: 7). The sort order follows that of Thaana.

٨ ر د دو . سو ، پو . چه . چه .

Figure 17: Modern *divehi akuru* orthography: Consonant vowel combination with vowel sign o (from Sidi 1959: 8). The sort order follows that of Thaana.

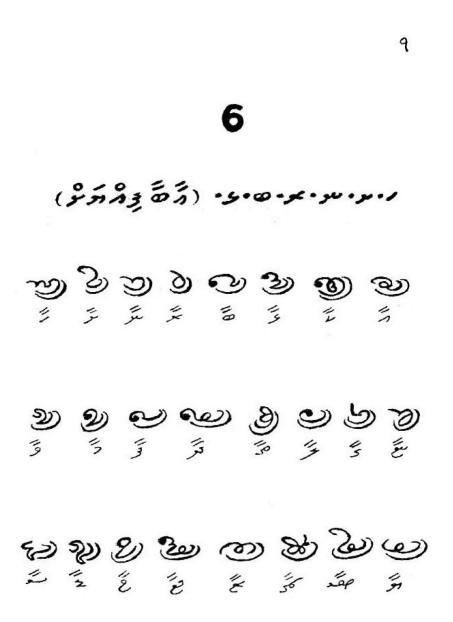


Figure 18: Modern *divehi akuru* orthography: Consonant vowel combination with VOWEL SIGN AA (from Sidi 1959: 9). The sort order follows that of Thaana.

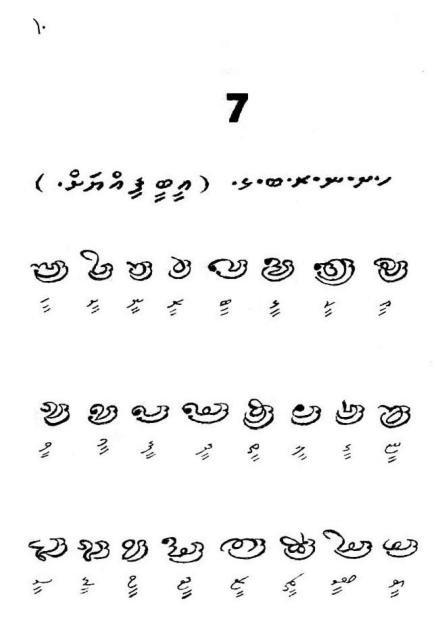


Figure 19: Modern *divehi akuru* orthography: Consonant vowel combination with VOWEL SIGN II (from Sidi 1959: 10). The sort order follows that of Thaana.



Figure 20: Modern *divehi akuru* orthography: Consonant vowel combination with vowel sign uu (from Sidi 1959: 11). The sort order follows that of Thaana.



Figure 21: Modern *divehi akuru* orthography: Consonant vowel combination with VOWEL SIGN AI (from Sidi 1959: 12). The sort order follows that of Thaana.



Figure 22: Modern *divehi akuru* orthography: Consonant vowel combination with vowel sign AU (from Sidi 1959: 13). The sort order follows that of Thaana.



Figure 23: Modern *divehi akuru* orthography: Various characters (from Sidi 1959: 14). The sort order follows that of Thaana.

Figure 24: Modern divehi akuru text (from Sidi 1959: 15).

Figure 25: Modern divehi akuru text (from Sidi 1959: 16).

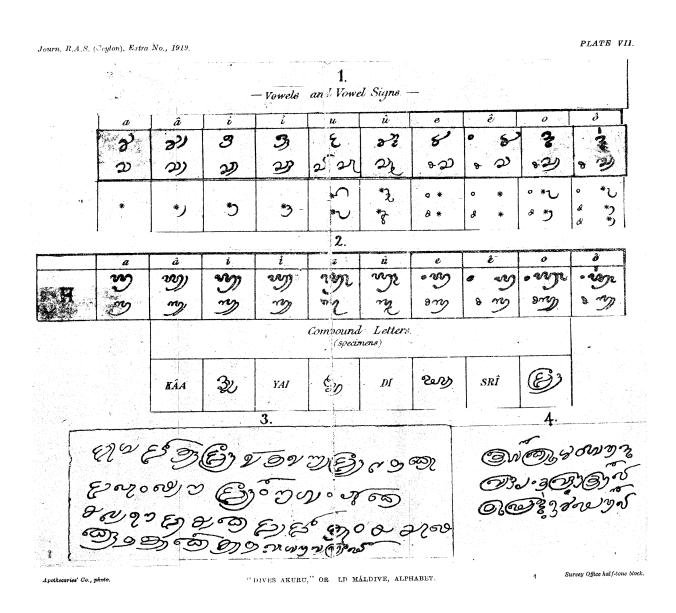


Figure 26: Wilhelm Geiger's table showing vowel letters, 2) consonant-vowel combinations for *ha*, 3) and 4) specimens of '*dives akuru*' (1919: Plate VII).

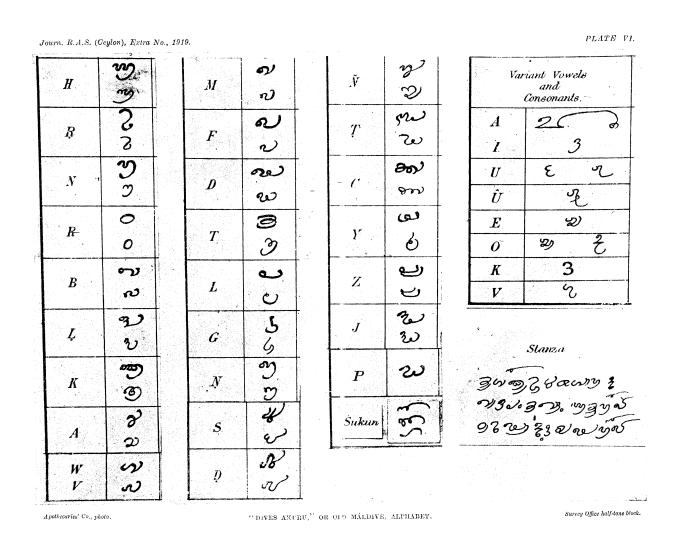


Figure 27: Wilhelm Geiger's chart comparing 'dives akuru' and 'evēla akuru' (1919: Plate VI).

Eveyla Akuru

'Eveyla Akuru' is the system of writing used in Maldives in the 12th century AD and possibly some centuries earlier. Early 'Eveyla Akuru' writing has been found on madrepore stelae, tentatively dated to *circa* 9th - 10th century AD. The later 'Eveyla Akuru' is found in copperplate writings of the late 12th century, i.e. 1194/1195, called *loamaafaanu*, official records of land grants awarded to mosques built by ruling sultans after the conversion to Islam. These later scripts have been deciphered and their transliteration gives us a guide to ancient Divehi writing and language.

All ancient scripts were called 'Dives Akuru' or 'Divehi Akuru', literally meaning 'scripts of island people', by Maldivians. When H. C. P. Bell visited Maldives in 1922, he styled this particular ancient script, 'Eveyla Akuru' for convenient distinguishment from its' later variant called Dives Akuru (Bell. 1922). Eveyla means 'ancient' in the Divehi language. (The word e means 'that' and veyla is time or period; thus together eveyla means 'that time', or 'ancient'). Eveyla Akuru, therefore simply means 'ancient letters' and the name has remained until the present time.

The Eveyla script in this book dates back to 1194/1195 AD, and is taken from copperplate grants of the twelfth century as well as from the work done by the late Divehi scholar, Ali Najeeb. The script in general bears a strong resemblance to the old Grantha, Vatteluttu and Sinhala Elu scripts and the present day Malayalam script. This leads to the conjecture that the old Eveyla script could be a direct descendent from the Southern scripts of the Indian subcontinent.

The close resemblance of this script to the Sinhala Elu script of the 10th to the 12th century AD, has been remarked by many writers. According to M. W. Sugathapala de Silva, Wilhelm Geiger, who studied Eveyla Akuru, said that the affinity was 'not so much with Medieval Sinhalese as to the Tulu of the Malabar District of Southern India, which lie opposite the Laccadive and Maldive Islands, or doubtless, even more nearly to an older Grantha type of Tulu-Malayalam, or Arya Eluttu'.

The system of writing in Eveyla Akuru is syllabic in structure. Letters are written from left to right, spacing of words is not observed and the writing is broken off at the end of a line. As a result, the line may end or begin in the middle of a word.

The letters represent two categories of sounds, vowels and consonants. In the initial position vowels are represented in general by separate letters. Non-initially, they are shown by vowel-strokes or *fili*. A fili may occur in front of, after, above or below a consonant. When a consonant is written separately,

Figure 28: Description of evēla akuru (from Mohamed 1999: 11).

without a fili and unattached to another letter, it symbolizes the consonant sound with the inherent vowel sound a.

The vowel symbols used in Eveyla Akuru are listed with their corresponding phonological values in TABLE NO 1. (Maniku, Wijewardene, 1986) These symbols were generally used in the initial position of words, and fili (vowel strokes) were used in non-initial positions.

OWEL SYMBOLS
Sound
a
a
ā
ā
i
i
u
e or ē
o or ö

Figure 29: Description of evēla akuru (from Mohamed 1999: 12).

The following 'fili' (vowel strokes) are used to represent vowel sounds (Najeeb, Shafeeq, 1993).

TABLE NO.2. FILI (VOWEL STROKES)

TABLE NO.2, FILI (VOWEL STROKES)		
Fili	Sound	Example	Transliteration
)	ā	ම ා	kā
)	i	8)	ki
3	ī	833	ki
	u	<u></u>	ku
C	u	Ø	ku
ľ	u	کرا	fu, pu
2	u	R	ru
=7	ū	Z	fū, pū
9	e	જ	ke
9	ë	9 D	ke
99	ai	છુલ	kai
))	o	s Bu	ko
9 >	-	ෟමා	ko

Figure 30: Description of evēla akuru (from Mohamed 1999: 13).

The consonant symbols in Eveyla Akuru along with their phonological values are listed below (Maniku, Wijewardene 1986, Najeeb, Shafeeq 1993).

TABLE NO.3. CONSONANT	SYMBOLS.
Letter	Sound
\sim	h
J	s or ţ
7)	n
<u> </u>	ņ
В	r
ン	b
Ł	ļ.
8	k
<u>හ</u>	kh (aspirate)
ಖ	a
30	a
۲	V
2	m
<u>ی</u> کوح	f, p
کع	d.

14

Figure 31: Description of evēla akuru (from Mohamed 1999: 14).

TABLE NO. 3 CONTINUED

Letter	Sound
می	d
_{کی} کی	d
(S)	t
\circ	1
6	g
w	S
30 30	sh or s'
S	sh or s'
ぴ	sh
w	dh (aspirate)
で8 ~W ~W	t or tt
پ	у

In the transliteration and translation work done by the Maldivian scholars, the late Ali Najeeb and Ahmed Shafeeq, the letter ω was given the phonological value s' and the letter ω the value t.

In the transliteration and the translation of the *Isdhoo* and *Dhambidhoo* Loamaafaanus by Maldivian scholar Hassan Ahmed Maniku and Sri Lankan Professors C. D. Wijewardana and J. B. Dissanayeke, the letter ω was given the phonological value of t and ω was transliterated as tt.

Figure 32: Description of evēla akuru (from Mohamed 1999: 5).

The phonological value s in Divehi is said by linguists to have evolved from the t of earlier times (Cain, 1996). In modern Divehi, the words incorporating the symbol ω in the copperplate writings of the 12^{th} century are used with the phonological value s' and not with the t value.

The team of scholars who deciphered the *Isdhoo Loamaafaanu* in 1986 concluded that there were the following aspirate letters in the document (TABLE NO. 4).

TABLE NO.4	
S	kh
re	dh

They also concluded that the symbol \mathfrak{D} was used for both a and y. Three sibilants corresponding to palatal s, cerebral sh and dental s in Sanskrit were also found in the document, but it is likely that they were pronounced alike. These are given in TABLE NO. 5

TABLE NO.5	
ಬ	sh or s´
W	sh
W	S

In their work, Ali Najeeb and Ahmed Shafeeq gave both and the phonological value sh.

Dental and cerebral n existed in Divehi until the 20^{th} century and different letters were used for these sounds. The Southern atolls still differentiate between these sounds, but standard Divehi only has the symbol for dental n.

The symbol \supseteq was used for f and p although in latter centuries, p was represented in Dives Akuru by \supseteq , the same symbol with a dot below the letter.

Since research on the Eveyla Akuru writing system in the *loamaafaanus* is continuing, it is likely that more symbols which are not included here may be discovered. The symbols represented here are those included in published works.

Figure 33: Description of evēla akuru (from Mohamed 1999: 16).

In the writing system, the following consonantal strokes are used: -

1- This stroke indicates that the inherent vowel in the letter is deleted.

It corresponds to the sukun 'o' in the Tana script.

This is used to indicate that the consonant to which it is attached is doubled.

3- This stroke shows that the consonant to which it is attached is preceded by a nasal consonant.

This sign placed above the letters, indicates that the consonant cluster to which it is attached has the consonant 'r' as its first sound.

Doubling of the consonant (t) is usually by attaching the symbol to the bottom of the letter.

The most frequent way of writing a double consonant is by writing them close together so that they touch one another.

In the case of \mathfrak{I} (n) one letter is placed slightly higher than the other.

Figure 34: Description of evēla akuru (from Mohamed 1999: 17).

When two consonants are written touching one another, the fili denoting the vowel 9 (e) is placed in front of the cluster.

Similarly, in the case of the vowel o, two components of the fili, \mathcal{I} and \mathcal{I} , are placed on either side of the cluster.

$$e.g.: \underbrace{3}_{2} \underbrace{3}_{2} \underbrace{2}_{2} \underbrace{2}$$

Dissimilar consonant clusters are also written in the same way, placing the two consonant symbols together, touching one another.

In such clusters, the fili for the vowels e and o are attached in the same way as for two consonant clusters. The symbol \nearrow is used to denote the final ya in a consonant cluster.

Similarly the symbol attached to the lower part of the letter is used to mark the final ra of a letter.

In some instances, conjoint symbols comprising the components of the two letters are employed to write dissimilar consonant clusters.

After the conversion of Maldives to Islam, it became clear that Eveyla Akuru had shortcomings when Arabic words had to be written in official documentation. This probably led to the formation of new symbols and modifications in the writing system, which eventually led to the gradual evolution of its successor, *Dives Akuru*.

Figure 35: Description of evēla akuru (from Mohamed 1999: 18).

Dives Akuru

The ancient Eveyla Akuru found in the twelfth century copperplates and on the coral-stone relics, evolved into the more advanced *Dives Akuru* over a period of about two hundred years.

A copperplate grant of 1357 AD, called 'Bodugalu Miskit Loamaafaanu' and written in the sixteenth year of Sultana Rehendi Khadeeja's reign, is the earliest example of this script. This copper-plate grant showed distinct changes in the characters seen in the earlier copperplates, indicating the beginning of the Eveyla script's evolution into the later style called 'Dives Akuru' (Bell. 1922).

The examples of Dives Akuru found in this book date back to the late eighteenth century. They are taken mainly from the book 'Divehi Akuru' written by As-sayyid Hussain ibn Mohamed Al-Husaini, known to Maldivians as Bodufenvalhuge Seedi, a celebrated Maldivian scholar, poet and author of the mid-twentieth century. His book, 'Divehi Akuru', revived interest in this script among Maldivian scholars and paved the way for the transliteration of existing old documents written in Dives Akuru.

Some of the other materials used in this book are taken from a booklet called 'Dives Akuru', compiled by the late Ali Najeeb and Ahmed Shafeeq for Maldivian students of this script.

The best examples of Dives Akuru can be seen in the inscriptions in the beautiful Hukuru Miskit (Friday Mosque) in Male', on tombstones, and in some finely written official land grants inscribed on parchment. This script was extensively used for official documentation until the beginning of the eighteenth century. From 1705 A.D onwards, official documents were written in Tana and Dives Akuru, but after 1780 the Dives Akuru script fell into disuse, it's place taken by the Tana script.

Some features of Eveyla Akuru have been retained in the Dives script. As in the earlier Eveyla Akuru, Dives Akuru also represents two categories of sounds, vowels and consonants. It is also written from left to right and consonant characters standing on their own have the inherent a sound. However, many modifications have been made to the shape of letters and new symbols have been incorporated into the alphabet, to represent new sounds. These are the symbols for z, j, and c: In Dives Akuru p is represented by and f is shown by f, the same letter, but without the dot below. A new symbol was also formed to express the palatal n.

Vowel symbols and diacritics on consonants are used to represent vowels and new symbols have been formed to represent doubling and joining of consonants.

Figure 36: Description of dives akuru (from Mohamed 1999: 21).

The Alphabet

Given below are the vowel symbols. (TABLE NO. 6)

Т	A	BL	Æ	N	n	6

Vowel	Sound
ည	а
عر)	ā
ಖ	i
3	i
ಸ್ರ	i
L	u
ਦ	ū
32)	е
<i>w</i>	e
3 D	ë
99 2)	ē
92)	o
w	0
າລາ	<u>-</u> 0
محی	<u></u>

Figure 37: Description of dives akuru (from Mohamed 1999: 22).

In Dives Akuru, the following *fili* (vowel strokes) are used to represent vowel sounds. (TABLE NO. 7).

TABLE NO.7. FILI (VOWEL STROKES)

TABLE NO.7. FILT (VOWEL STROKES).			
Fili	Sound	Example	Transliteration
)	ā	B)	kā
)	i	S	ki
3	i	S	 ki
٤	u	ිතු <i>ස</i>	ku
2	u	w	du
ط	ū	Ø	ku .
3	e	\$ <u>\$</u>	ke
33	- e	મ્રજે	ke .
9	ë	9 D	ke
3)	o	ෳ්මා	ko
9)	ō	ෳලි)	kō

The consonant symbols of Dives Akuru, along with their phonological values are listed in TABLE NO. 8. Here the existing consonant symbols from Eveyla Akuru have been modified and new symbols to represent sound values for z, j and c have been introduced. Also, the symbol which stood for both p and f sounds,

Figure 38: Description of dives akuru (from Mohamed 1999: 23).

was given to f and the same symbol with a dot added below was given to the value p. A new symbol for the palatal \tilde{n} was also introduced.

TABLE NO.8. CONSONANT SYMBOLS.		
Letter	Sound	
\sim	h	
S	ś	
ツ	n	
n	n	
Q	r	
0	r	
<i>?</i>	ь	
シ	ь	
3	į.	
? ? ? >> >>	k	
<u>&</u>	k	
<u>A</u>	k	

Figure 39: Description of dives akuru (from Mohamed 1999: 24).

TABLE NO. 8 CONTINUED		
Letter	Sound	
3	kh (aspirate k)	
N	а	
20	а	
50	V	
න න	V	
S	m	
2	f	
	d	
2 3 3	d	
53	d	
9	t	
e	1	
2	1	
7	g	

25

Figure 40: Description of dives akuru (from Mohamed 1999: 25).

TARI	E NO	8	CONTINUED

TABLE NO. 8 CONTINUED	T
Letter	Sound
5	g
<u></u>	g
3)	ñ
5 5 9 2 2	s
فه	sh
8	sh
2)	ģ
ನ್	ģ
0	z
8 20 20 20 20 20	ţ
ى	у
ئ	р
3.	j
3w 3r	c
284	С
· · · · · · · · · · · · · · · · · · ·	

Figure 41: Description of dives akuru (from Mohamed 1999: 26).

'Sukun' or deleting the inherent vowel sound in the word.

Sukun was used in Dives Akuru with a special diacritic symbol, to indicate deletion of the inherent a vowel sound of the letter in the written word. In these instances the symbol was placed on the upper right hand side of the letter. e.g.,

In Dives Akuru as well as in the Tana script there are five letters which became special 'sukun letters'. These had different symbols. They are the following:

TABLE NO. 9. SUKUN.	
Letter	Sukun symbol
ڪ (a)	2
(ś)	V
೨೨ (n)	m
£) (s)	£
Ø (t)	84

The \Im sukun \ast and the \Im sukun \ast show glottal stops. The \Im sukun \ast represents a double nasal sound and the \Im sukun \Im is pronounced as a vowel-less S sibilant. The \Im sukun \Im represents a S offglide on the vowel preceding the sukun.

Doubling letters.

In the later Dives script, doubling of letters was represented not by two symbols written together, but by writing three different diacritics.

Figure 42: Description of dives akuru (from Mohamed 1999: 27).

These were changeable and any one of the three could be used in a given situation. (TABLE NO. 10)

TABLE NO.10. DOUBLING LETTERS.

Sign	Example	Transliteration	Meaning
Y	ンノソ	bappa	father
3	232)	bappa	father
m	22	bappa	father

In Dives Akuru, as also in the earlier Eveyla Akuru, we find that in many instances more than one symbol is used to represent the same consonant sound.

TABLE NO.11.

TABLE NO.11.	
Sound	Symbols
d	బ,న,న
1	3,0
g	9,5,9
sh	8,46
С	8, Ex
k	જ, <i>ે</i> , જે
ġ	カ、2)

Figure 43: Description of dives akuru (from Mohamed 1999: 28).

It may be that the same phonological value was given to more than one consonant symbol. It could also mean that the phonological values of some of these symbols had earlier variations. Over time, sound changes having taken place, aspirate sounds were lost and dental and cerebral sounds began to be pronounced alike, but the different symbols were retained.

When the consonants $\partial(r)$ and $\partial(v)$ are written in a word where the consonants have to be joined to the consonant before them, (when the fili for the first consonant is u, or when the inherent a vowel sound of the consonant is deleted), the shape of both consonant letters undergo modification: -

e.g.: If \mathcal{O} (v) is the consonant to be joined for example, to \mathcal{O} (s), then the modification is

If \supset (r) is the second consonant to be joined, the shape of the \supset (r) changes to \subset \supset as in: -

In Dives Akuru, diphthongs are represented by the addition of an i or u at the end of the vowel glide.

These symbols are written as independent vowels.

From the early years of the eighteenth century until about 1870 AD, Dives Akuru and Tana Akuru were used together for official documentation. But at the end of this period, Dives Akuru was superseded by Tana.

Figure 44: Description of dives akuru (from Mohamed 1999: 29).

TABLE	NO.12 (THE 7	ĀNA ALP	НАВЕТ)		
No.	Arabic numeral	Letter	Transliteration	Modern name	Old name*
1	١	1	h	hā	haviyani
2	۲	ىر	ś	śaviyani	śaviyani
3	٣	ייע	n	nunu	naviyani
4	44	بو	r	rā	raviyani
5	٥	ø	b	ba	baviyani
6	٦	ب	ļ	ļaviyani	ļaviyani
7	v	r	k	kāfu	kaviyani
8	٨	1	a	alifu	aviyani
9	٩	9	v	vavu	vaviyani
No.	Divehi numeral	Letter	Transliteration	Modern name	Old name
1	2	2	m	meemu	maviyani
2	3	3	f	fafu	faviyani
3	÷	حر	d	dálu	daviyani
4	50	ح	t	tā	taviyani
5	カ	7	1	lamu	laviyani**
6	5	S	g	gafu	gaviyani
7	ح	۳	ñ	ñaviyani	ñaviyani

^{*} Old names are taken from W.Geiger's Maldivian Linguistic Studies (1919).

Figure 45: Comparison of Divehi and Arabic digits and Thaana letters (from Mohamed 1999: 32).

^{**} Not included by Geiger-

TABL	E NC). 12	\mathbf{c})NT	INUED

IABL	E NO. 12 CONT	INUED			
No.	Divehi numeral	Letter	Transliteration	Modern name	Old name
8	>	,_	S	seenu	saviyani
9	~	2	ģ	d aviyani	d aviyani
		E	Z	zaviyani	zaviyani
		ع	/ ţ	ţaviyani	ţaviyani
		ת	y	yā	yaviyani
		3.	р	paviyani	paviyani
		ع	j	javiyani	javiyani
		محح	С	chaviyani	chaviyani

Figure 46: Comparison of Divehi and Arabic digits and Thaana letters (from Mohamed 1999: 33).

MALDIVE ALPHABET.

Aucient form.	Modern form.	Name.	Value.	REMARKS.
≃	Į	havieni	h	The ordinary aspirate.
2	ئو	rhavieni	rh	Like Rh in Rhine. With the sokun (°), it takes the sound of the following consonant. When final, it is silent. Its ancient sound was shri.
3	سر	navieni	n	As in English. When final, sometimes like ng.
0	عر	ravieni	r	As in English.
5	ىھ	bavieni	b	As in English. All vowels except o, coming before b, take the sound of m. (?)
2	ラ	<i>l</i> avieni	l	L with the tongue reverting to the palate.
@	y	kavieni	k	As in English.
ج	n	avieni	a	Takes the sound of the vowel joined to it. With the sokun it is sounded like g.
S	9	wavieni	w	Like the English w or v.
22	>	mavicui	m	As in English.
೭	3	favieni	f	Like the English f; but sometimes inter- changed with the aspirate h.
ع	3	davieni	d	The dental d, as in dew.
3	50	tavieni	t	The dental t. The sokun gives this letter the short sound of i.
ر <i>ن</i>	9	lámu	1	As in English; sometimes it is liquid, as in million.
5	.5	gavieni	g	As in guard. It is always hard.
\simeq	2	navieni	n	As in English. Sometimes it is liquid, as in minion.
ε	-	savieni	s	As in English; never like s.
2	2	davieni	d	With the tongue reverted to the palate; like the Sanskrit cerebral d.

Figure 47: Willmott Christopher's chart of Maldivian scripts showing Divehi (left) and Thaana (right) letters (Wilson 1841: 44).

Journ. R.A.S. (Ceylon), Extra No., 1919.

PLATE II.

	Name.	Value	Maldi moder		Sinhalese			
	mavieni	ò.						
38 31	fayicai		<i>''</i>	92 2	8	1	.	٠٤
	davienj	ď	3	201	Ž	a	1	`^
	tavieni		50	3	3		<i>−D</i> :	*
	lāmu	1	9	ല	e	8	g, .	1
	gavieni	8	5	S	S	J	V):-	CEN
	ņavieni	ņ	2	ಲ	ፊት	18	\	3/V
	savieni	s .	,	3	is		3)	
	đavieni	đ	2	2	۵	ď	;	52
	havieni	h	\$	∞	27	£1.	6	~
	rhavieni	rh	y	2		ch;	9	3~
	navieni	n	سر	3	27)	6 6	N	**
	ravieni	r	70	0	0 .	2	Ġ.	
	bavieni	ь	ره	7	as	. W.		, .
	lavieni	. 1	フ	2	2	Persian.	Arabic,	1
	kavieni	k	V	9	ඨා	ă.	₹ -	~
	avieni	a į	Ŋ	2	2,3	Borrowed	Consonants	(3) \$

Note. (1) The Maldive alphabet is taken from Christopher's list, carefully compared with his facsimile of a Maldive letter. (J. R. A. S. Vol. VI.)

Note. (2) The Sinhalese letters are taken from a photograph of the inscription of Nissanka Malla (A. D. 1191.) discovered at Anurādhapura in 1874.

Note. (3) The vowel signs are called fili, or severally. aba, ābā, ibi, ībi, ebe, ēbē, nbu, ībā, obo and ōbō, fili:

"Only six consonants can take the sokun (6) over them, and consequently these only can terminate a syllable; they are a. q. n. rh, s. & t. and in this case with the exception of s, their sounds receive some modification: a becomes of q or n sometimes take the sound of ng: t is sounded like a very short it and rh mercity takes the sound of the following consonant, giving an emphasis to the synable it terminates: but when rh terminates the word it is silent, and appears wholly unnecessary, except for the following it causes, but the natives cannot understand writing without it. "Christopher in J. R. A. S. VI. 45. There is no inherent vowel 'a'; accordingly every consonant has either a vowel sign or the sokun: in the latter case, if the consonant cannot take the sokun, it is changed to one which can. The initial vowels are formed by the quasi consonant 'a' with the appropriate vowel sign, and the second of two vowels following a consonant is expressed in the same way, thus 'gai' is written 'g' with the vowel sign 'a' followed by the quasi consonant 'a' with the sign 'i'.

Apothecaries' Co., photo.

Survey Office Full-tone block.

Figure 48: Wilhelm Geiger's charts of Maldivian scripts (1919: Plate II).

MALEDIVISCH.

Alt	Neu	Wert	Alt	Neu	Wert	Alt	Neu	Wert	Alt	Neu	Wert
\simeq	5	h	2	ン	1	2)		m	$ \mathcal{S} $	3	R
2	٧	th	(3)	ע	k	೭	3	ph	అ	2	n
3	٣	ň	2	ກ	a	ع (ع	7	dh	8	-	s
0	۶	r	ري	9	w	3	50	t	56	ع	đ
ح	ه	b				0	9	1			

Fremde Zeichen:

$$Vokale:$$

$$(a, " \bar{a}, \bar{b}, e, " \bar{e}, i, " i, " o, " \bar{o}, " u, " \bar{u}, " vokallos.$$

Malediven, oder richtiger Malayadiba sind die Inseln von Malabar (Malaya). Die Bewohner derselben besitzen zwei Schriften, deren eine, von J. PRINSEP im Journal of the Asiatic Society of Bengal Vol. V veröffentlichte, aus den arabischen Zahlzeichen besteht, auch die Vokalzeichen sind den arabischen nachgebildet; die Schrift wird von links nach rechts geschrieben.

Figure 49: Chart showing some characters from 'old' and 'new' forms of Maldivian writing (from Faulmann 1880: 155). The 'old' forms are *evēla akuru* and the 'new' are *dives akuru* proper.



Figure 50: Comparison of Divehi and Sinhala vowel letters.

	Divehi	Sinhala		Divehi	Sinhala
KA	®	ක	DHA	ത	۵
КНА	2	බ	NA	\circ	න
GA	હ	ဖ	PA	n	ප
GHA	ಬ	ස	РНА	2)	එ
NGA	3	ඩ	BA	ข	බ
CA	り	ච	ВНА	か	භ
СНА	જી	ඡ	MA	જ	<u></u>
JA	જ્	ජ	YA	න	ය
JHA	_	ಜಾ	RA	δ	ර
NYA	8	\$	LA	ಲ	C
TTA	て	0	VA	જ	ව
ТТНА	ઢ	ඨ	SHA	న	ශ
DDA	رچ	చి	SSA	28	ෂ
DDHA	ల్రు	చి	SA	في	ස
NNA	ಉ	©	НА	3	හ
TA		ත	LLA	3	E
THA	6	ಲ	FA	_	တ
DA	3	ę	ZA	ത	_

Figure 51: Comparison of Divehi and Sinhala consonants.

Transliteration	Tāna modern	Asoka Brahmi 3rd C. BC	Vatteluttu 8th C. AD	Vatteluttu 10th C. AD	Pala 10th C. AD	Grantha 8th C. AD	Eveyla 12th C. AD	Sinhala Elu 10th C. AD	Dives 18th C. AD	Malayalam modern	Devanagari modern
ha	1	کر			Z	\sim	~	\mathcal{S}	₽	2	ह
śa	س	1			₹ \$	S	ಬ'್ತಿ		S	ഗ	হা
na	سر		ر ع	b		h	3	か	ف ي ال	\mathcal{C}	न
ņa	سر	I	3	on		ണ	3	m	භ	ണ	ग्
ra	بر	I I	1	1		\$ W 13-	で の の の の の の の れ ん ん	Ū	00	O	ह म ग र ब
ba	•	0				2	5	\sim	ಬ	ബ	ब
ļa	٠		\sim	9		Ŋ	3	کا ک	වි ළු ලි ක බ න න 2 හා	2	
ka	~	+	ス	Ť	み	\$	8	a	◎	\$	8 क ख प्र
kha	~	1					ನಿ		ಣ	ഖ	ख
a	1	K	71	-2	311	30	28,00	と ろの	ಇ	180	ग्र
va	و	الا الا	\mathcal{D}	27		5	つ	2	ည	വ വ	व
ma	,	R	29	छ	円	223	2	ટ	S	0	म
fa	,						رم		2		
da	قر	4				~3 B @ S	25, 25 80 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	3	S	ß	द
dha	قر	(ω	w			ω	ध
ta	می	7	3	P		あ	8)	හ	9	ത	त
la	•	V	೪	Ø	M	@	0	S 08	0,0	ಲ	त ल
ga	5	Λ				5)	S	S	୬ ୬ ୬	လ	ग अ
ña	سے	n	છ	3_					න	લ છે	ञ
sa	••	れ し			स्र	ひ	20	ಬ	(£)	m	स ड
фа	ŧ	4				20	کع	ಬ	એ હ	w	ड
za	E								9		
ţa	2	6	C	<		5	U,W	U	\mathcal{C}^{2}	S	ट
ya	n	1	Q	W	ਧ	3	7	w	w	ω	य
pa	2	し	2	U		V	2	v	ب	2	प
ja	2	2				2			ಒ	3	ज
С	sk	9	প	J		ಒ			ಶ್ರಿ,೩५	25	च
sha	مفد	E				28	B		لخر	SA	व

Figure 52: Comparison of 'Evela Akuru' and 'Dives Akuru' with other southern Brahmi-based scripts (from Mohamed 1999: Table no. 16).



Coat of arms of Maldives (from Wikimedia Commons). The Arabic text on the scroll reads: *al-dawlat al-maḥaldībiyat* "State of the Mahal Dibiyat".



A version of the coat of arms of Maldives in which the Arabic text *al-dawlat al-maḥaldībiyat* "State of the Mahal Dibiyat" is replaced with *divehi rājje* "Republic of Maldives" in the Divehi script. According to Xavier Romero-Frias (personal communication, 2011), the modified coat of arms was proposed by a Member of the Parliament in Māle in 1997–1998 with the rationale that the Divehi version would better represent Maldivian culture. The proposal was rejected on the grounds that Arabic reflects the Muslim character of the country.

Figure 53: A proposed coat of arms of Maldives with Divehi text. Image courtesy of Xavier Romero-Frias.