L2/18-016
2018-01-16

Proposal to encode Dives Akuru in Unicode

Anshuman Pandey
pandey@umich.edu

January 16, 2018

1 Introduction

1.1 Proposal history

This is a proposal to encode 'Dives Akuru' 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
- L2/17-292: Proposal to encode Dives Akuru in Unicode
- L2/17-417R: Proposal to encode Dives Akuru in Unicode

It is a revision of L2/17-417R and contains the following changes:

- Renaming of 𑤚 YA to -A in preference of usage over palaeographic identity (§ 3.2)
- Renaming of 𑤛 YYA to YA to align the letter's name with its semantic value
- Assignment of the non-initial conjunct glyph ◌𑤛 for *-ya* to 𑤛 YA
- Extension of VIRAMA to produce 'semi-conjuncts' of a consonant letter + vowel letter (§ 4.4)

This revision incorporates comments provided by the UTC Script Ad Hoc Committee in:

- L2/17-384: Recommendations to UTC #153 October 2017 on Script Proposals

This proposal has been reviewed by the following experts:

- Prof. Dr. Jost Gippert (Goethe-Universität Frankfurt am Main)

1.2 Background

The 'Dives 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'. It is known indigenously as *dives akuru* and *divehi akuru*, both of which have the meaning of "islanders' letters". The script is written from left to right and is alpha-syllabic in structure. It is descended from Brahmi through Grantha, and it is related most closely to the medieval form of the Sinhala script (Fritz 2002: 6), and shares characteristics with the Tigalari (Tulu) script (Geiger 1919: 151). A comparison of Dives Akuru and Sinhala is given in figures 75–76, and a comparison with other scripts is shown in figure 78.

The earliest epigraphical record from Maldives is a coral stone block from the island of Landū that is dated to the 6th–8th centuries. Its inscription, however, is in a form of Grantha. A distinctive Dives Akuru first appears on two statues unearthed on Māle (see fig. 26–27). These statues (IC 009, IC 010) exhibit Vajrayana Buddhist inscriptions and features, and have been dated to the 9th–10th centuries (Gippert 2014: 112). Very few ancient Maldivian records have been preserved apart from these, as numerous objects were destroyed deliberately during the conversion of Maldives from Buddhism to Islam in the 12th century.

As a result, a consistent palaeographical record for Dives Akuru begins in the 12th century. From this time Dives Akuru was used as an official script by Maldivian rulers, starting with copper plate grants, known as *lōmāfānu*, which were issued for the building and maintenance of mosques. The earliest records are the *Gāmu Lōmāfānu* and *Isdū Lōmāfānu*, which were issued in 1194 during the reign of the king Gaganāditya. This ruler issued another in 1195, which is known as the *Daṁbidū Lōmāfānu* (see fig. 28). A fourth plate, the *Kudahuvādu Lōmāfānu*, is dated to 1237–8 and was produced during the reign of the queen Rāarādesvara. The script began to evolve during the 14th century, as is apparent from the style used for the *Boḍugalu Miskit Lōmāfānu*, issued during the reign of queen Rādaābarnna in 1357. A total of eight *lōmāfānu* have been reported, although three are no longer preserved at present. 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 fig. 28, 29–31.

By the 16th century, usage of *lōmāfānu* had given way to paper documents known as *fatkoḷu*. Some records were inscribed on wooden boards and are known as *fīlā fatkoḷu*. These official decrees are in a form of Dives Akuru that is more calligraphic and stylized than the type used on *lōmāfānu*. The earliest preserved paper document is the *Koḷufuśi Faṭkoḷu*, issued during the time of Muhammad Bodu Takurufanu (1573–1585). Several *fatkoḷu* were produced over the next two centuries, the latest being the *Havoḍḍā Fatkoḷu* from the second half of the 18th century. Thirteen *fatkoḷu* have been made accessible for scholarly investigation; they are identified as F1–F13 (see specimens of F1 and F6 in fig. 32 and 33).

The script was also used for writing dynastic chronicles, known as *rādavaḷi*, in the late 18th century. Of the three extant chronicles, two are in the Thaana script and one is in Dives Akuru. Other records include stone epitaphs from the 16th–18th century; wood engravings in the Hukuru Miskit and Galoḷu Bau Miskit on Māle; and inscribed pottery, such as a lacquer jar from Tuḷādū (see fig. 35). 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 fig. 36–48).

When the early *lōmāfānu* were rediscovered by European colonial officials in the 19th century, it became apparent that the script and language on these records differed from the prevailing forms of *dives 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, for classifying the older style (1919: 149). He used the term '*dives akuru*', "islanders' letters"', for the contemporary style.

Although they are neologisms, the terms are convenient for periodizing Maldivian palaeography: the style used during the 12th–14th centuries is '*evēla akuru*', and that used after the 14th century is '*dives akuru*' or '*divehi akuru*' proper.

Dives Akuru records exhibit linguistic and palaeographic diversity. The early *lōmāfāṇu* contain seals and occasional intralinear text in a script of the Nagari family, which bears some similarity to Nandinagari. Later plates contain Arabic text and script. Several *fatkoḷu* contain a significant amount of Arabic text.

Beginning in the early 18th century, another script began to appear alongside Dives Akuru. This new script, known as *tāna akuru*, or 'Tāna' and 'Thaana', is a right to left script consisting originally of 18 letters (for early scholarship on Thaana see Prinsep 1836: 794; Wilson 1841: 42). These 18 letters appear to be derived from the digits 1–9 of both the Dives Akuru and Arabic scripts (Gippert 2013: 97). From the 1700s until 1870, both Dives Akuru and Thaana were used for official purposes (Naseema 1999: 29). But, by the turn of the 19th century, Thaana had completely replaced Dives Akuru as the regular script for Dhivehi.

Despite the obsolescene of Dives Akuru by the 20th century, individual users and scholars continue to study and use the script. The Royal Asiatic Society of Sri Lanka published translations of the *Isdū Lōmāfāṇu* (Maniku and Wijayawardhana 1986) and *Daṁbidū Lōmāfāṇu*. The National Centre for Linguistic and Historical Research (NCLHR) in Māle published *Dhivehi Writing Systems* (1999) by Naseema Mohamed. But, native Maldivian scholarship on Dives Akuru has also declined. New information and studies of Dives Akuru is made possible by the meticulous work on 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, Dives Akuru 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 Vajrayana statute IC 009 mentioned at the outset of this section was demolished (Gippert, personal communication, October 2017). It now exists only through photographic records. While material objects cannot be replaced, it is hoped that this proposed Unicode encoding for Dives Akuru may assist in preserving the palaeographical and linguistic heritage of Maldives through digital technologies.

1.3 Overview of sources consulted

The proposed encoding for Dives Akuru is informed foremost by primary sources. Digitized images of these materials were made available to the proposal author courtesy of Jost Gippert and the TITUS (Thesaurus Indogermanischer Text- und Sprachmaterialien) Project. Secondary sources from the 19th century to the present have been used to supplement the primary materials and to expand the repertoire with characters not found in the historical documents. The following materials have been used and are referred to throughout the proposal using the abbreviation in the 'ID' column.

Statuary:

ID	Designation	Issuer	Year
IC 009	—	—	9th c.
IC 010	—	—	9th c.

Copper-plate documents (*lōmāfānu*):

ID	Designation	Issuer	Year
L1	*Gāmu Lōmāfānu*	Gaganāditya	1194
L2	*Isdū Lōmāfānu*	Gaganāditya	1194
L3	*Daṁbidū Lōmāfānu*	Gaganāditya	1195
L4	*Kudahuvādu Lōmāfānu*	Rāarādesvara	1237
L5	*Boḍugalu Miskit Lōmāfānu*	Rādaābarnna	1357
L6	Bell No. 1	unknown	unknown
L7	Bell No. 2	unknown	unknown
L8	Bell No. 3	unknown	unknown

Paper and wood documents (*faṭkoḷu*):

ID	Designation	Issuer	Year
F1	*Koḷufuśi Faṭkoḷu*	Muhammad Bodu Takurufanu	1573–1585
F2	*Hasan Pāṭinā Faṭkoḷu*	unspecified	1627
F1058	‘Fatkoḷu of A.H. 1058’	unspecified	1648
F3	*Gan Faṭkoḷu*	Ibrahim Iskander I	1652
F4	*Bā Miskit Faṭkoḷu*	Ibrahim Iskander I	1652
F5	*Gāmu Faṭkoḷu*	Muhammad	1696
F6	*Hannamidu Faṭkoḷu*	Muhammad Imaduddin	1711
F7	*Isseri Faṭkoḷu*	Muzaffar Muhammad Imaduddin II	1711
F8	*Kaňḍūdū Faṭkoḷu*	Ibrahim Iskander II	1721–50
F1153	‘Fatkoḷu of A.H. 1153’	unspecified	1740
F9	*Kuramati Faṭkoḷu*	Ibrahim Iskander II	not given
F10	*Kuḍahuvadū Faṭkoḷu*	Ibrahim Iskander II	not given
F11	*Diamingli Faṭkoḷu*	Ibrahim Iskander II	1751
F12	*Tinadū Faṭkoḷu*	Ibrahim Iskander II	late 18th c.
F13	*Havoḍḍā Fatkoḷu*	unspecified	late 18th c.

Other primary documents:

ID	Author	Title	Year
HMK	Hajji Muhammad Kalegafanu	untitled	1927

Secondary sources:

The following secondary sources have been interpreted as primary sources:

ID	Author	Title	Year
G	Wilhelm Geiger	'Máldivian Linguistic Studies'	1919
S	Bodufenvalhuge Sidi	*Divehi Akuru*	1959
N	Naseema Mohamed	*Divehi Writing Systems*	1999

2 Approach to the encoding

2.1 Scope

This proposal seeks to define a character encoding for Dives Akuru in *The Unicode Standard* and the associated *Universal Coded Character Set* (ISO/IEC 10646). It is a technical implementation for the script that will support its usage and representation in software and digital content. It is not an orthographic or typographic standard.

2.2 Script identifier

The identifier 'Dives Akuru' is a compound of *dives* "islander's" + *akuru* "script". The term *dives* is an older attributive form of *divehi*, itself a compound of **divu-vesi* < *dipa-vāsi* < Sanskrit *dvipa-vāsin*, and carries the connotation of 'Maldivian'. The term *akuru* is derived from *akara* < *akhara* < Sanskrit *akṣara*, and has the meaning of 'letter' or 'script'.

The name is spelled variously in English: 'Divehi Akuru', 'Dives Akuru', 'Dhivehi Akuru', 'Dhives Akuru'. The terms 'Dhivehi' and 'Dhives' are variant spellings of 'Divehi' and 'Dives', which are the result of an idiosyncractic romanization scheme used in Maldives in the 1980s. In this system '*dh*' is used for the dental stop and '*d*' for the retroflex stop; the '*h*' does not indicate aspiration as in the conventional transliteration of Brahmi-based scripts. Although an earlier proposal (L2/10-213) referred to the script as 'Dhives Akuru', it has become clear since that time that 'Dives Akuru' and 'Divehi Akuru' are the spellings preferred in both western and Maldivian scholarship (eg. Gippert 2013, 2014; Naseema 1999: 21, see fig. 61; Romero-Frias 2003, see fig. 51–52). 'Dives' is an older attributive form that is no longer used today, but it was grammatically valid when it was coined. 'Dives Akuru' has been selected as it is the well-known name for the script in modern Maldives.

2.3 Unification

The 'Dives Akuru' block provides a unified encoding for *evēla akuru* and *dives akuru*. These two styles are major developmental phases of a single script. While there are some differences in the repertoire, letterforms, and orthography, they have the same basic structure and typology. A single Unicode encoding is practical for representing both styles.

2.4 Character repertoire

Dives Akuru 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.

Such linguistic changes resulted in the displacement of several letters of the base repertoire. The greatest modification was the dropping of nearly the entire palatal series in *dives akuru*, which resulted from the transformation of palatal sounds to dentals in Dhivehi. This was followed by the elimination of letters for aspirated consonants, leaving only *kha* and *dha*. The unassigned aspirate letters were 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 *śa* and retroflex *ṣa* were replaced with the dental *sa*. Another change was the reassignment of the letter *ya* as a secondary form of independent *a* and as a vowel carrier.

Unfortunately, there is no *varṇamālā*, or traditional script inventory, in the palaeographical record or any indigenous documentation that describes the changes to the script. The first charts of *dives akuru* were compiled and published by European scholars in the 19th century, cf. Christopher (in Wilson 1841; see fig. 72), Geiger (1919; see fig. 49–50, 73). While these charts provide a glimpse into the script at that time, the provenance of the letterforms is unclear. In many cases the European inventories of *dives 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 by Jost Gippert (2013), who diligently analyzed each *akṣara* in the available *lōmāfānu* and *fatkoḷu* to present a complete inventory of signs. One of his published charts is provided here in fig. 1–2.

Other sources show characters not used in the available textitlōmāfānu and *fatkoḷu*. One of these is the the latest published work in Dives Akuru, *Divehi Akuru* by Sidi (1959). The style of writing and the letterforms correspond to those in *fatkoḷu*. It shows a new letter for *ya*, which has also been identified on a personal document of Hajji Muhammad Kalegafanu, dated to 1927. However, it presents a curious case as it represents a Thaana-oriented view of Dives Akuru. In addition to presenting a repertoire that aligns with Thaana, it shows a new form of *ṇa*, based upon the corresponding Thaana letter, which is unattested in other sources. Sidi's work may be considered an attempt to inventorize what was known about the script in the 1950s. This attempt, however, was conducted without direct reference to any of the *lōmāfānu* and *fatkoḷu*. Moreover, the sources upon which Sidi based his work are not specified. Thus, despite its importance in preserving Dives Akuru in the 20th century, its usage for understanding the evolution of the script and, in particular, the character repertoire must be handled with some caution.

The proposed repertoire has been prepared after consulting the primary and secondary sources enumerated in § 1.3. All distinctive characters attested in 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 enables the complete representation of all extant text in Dives Akuru, both *evēla akuru* and the proper *dives akuru*, and is a superset of all orthographic styles.

2.5 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 in *lōmāfānu* and *fatkoḷu*. There are several stylistic differences in the scripts used in these two classes of sources, ranging from the shapes of letters and signs to the degree of calligraphy.

In terms of letterforms, the major stylistic tendencies observed in the sources are: hooked vs looped initial strokes, ie. 𑤂 and 𑤃 for *ma*; turned initial strokes, ie. 𑤅 and 𑤆 for *va*; open vs closed strokes, ie. 𑤉 and 𑤈 for *ka*; 𑤍 and 𑤌 for *ta*; lifted terminal strokes, ie. 𑤓 and 𑤔 for *ḍa*. There are also variations in letterforms between *evēla akuru* or *dives akuru*, ie. 𑤀 and 𑤁 for *i*; 𑤏 and 𑤎 for *u*; 𑤖 and 𑤗 for *ra*. There also appear to be idiosyncracies, eg. a 'new' form 𑤒 of 𑤐 *ṇa* borrowed from Thaana, but found in only one source; various forms of *za*, indicating attempts to define a letter a foreign sound.

The glyphs used here aim to provide for the distinctive representation and to depict the identity of each Dives Akuru character. The glyphs are not intended to be typographically aesthetic. The display of styles of particular sources may be achieved through custom fonts.

2.6 Character names

Character names are based upon the convention used for Brahmi-based scripts in Unicode. Consonant letters have been assigned names corresponding to their palaeographic values.

In this document, character names in italics refer to transliterations, while names in small capitals refer to proposed Unicode characters, eg. 𑤉 is *ka* and DIVES AKURU LETTER KA. For sake of brevity the script identifier 'DIVES AKURU' and character descriptors, eg. 'LETTER' or 'SIGN', are dropped when refering to proposed characters, eg. DIVES AKURU LETTER KA may be referred to as KA. Characters of other scripts are designated by their full Unicode names.

2.7 Note on variant forms

Variant forms for several consonant letters are used in later documents (see fig. 64–66, 68). In some cases, one consonant is represented using more than one letter. For example, gemination of an unaspirated consonant may be indicated using a conjunct of the letters for the respective unaspirated conjunct and the aspirated counterpart. Secondly, an aspirated letter may be used for the corresponding unaspirated consonant in order to avoid repetitive usage of the unaspirated letter. These practices emerged from the removal of aspirate letters, but the retention of the letters as alternate forms in later styles of the script. All variants are treated as glyphic variants and are to be managed through fonts designed for a specific style used in a source document. In order to manage the usage of multiple letters for a single consonant in late Dives Akuru styles, the respective letters should be used as needed despite the character name, eg. DHA may be used for *da* in addition to DA, etc. Such usage is meaningful only at the graphical level; the underlying character semantics will remain underchanged.

3 Proposed Repetoire

The proposed repertoire contains 69 characters. The code chart and names list follow page 34.

3.1 Vowel letters

Two sets of characters are used for representing independent vowels in the primary materials:

	a	*ā*	*i*	*u*	*e*	*o*
'type 1'	𑋀	𑋁	𑋂	𑋃	𑋄	𑋅
'type 2'	𑋐	𑋐𑋩	𑋐𑋪	𑋐𑋫, 𑋐𑋬	𑋐𑋨	𑋐𑋩𑋨, 𑋐𑋨

The 'type 1' forms are distinctive letters. The 'type 2' forms are orthographic syllables of 𑋐 and dependent vowel signs, where 𑋐 represents the vowel *a* when used in isolation and a vowel carrier when combined with a vowel sign. Both types are used interchangably and appear concurrently in several documents (see fig. 3–7). There are no rules that specify the contexts of usage for either set. Therefore, it is necessary to support representation of both types.

The 𑋐 is palaeographically the letter *ya*. The usage of *ya* for representing independent and initial vowels likely resulted from the shift in Old Dhivehi of word-initial *ya* to *da* (Gippert 13: 84–85). The semi-vowel attributes of 𑋐 made it suitable for reassignment as a vowel carrier. The reassignment of 𑋐 as a vowel-like letter and its loss of the value *ya* necessitated employment of another letter for representing syllable-initial *ya* in new linguistic contexts. This need was met by using 𑋑 for *ya*. This letter occurs repeated in the early 20th century document HMK (see fig. 34). It is also shown in S, where it is transcribed in Thaana as ﬠ *ya*, and the 𑋐 as ﬡ *a* (fig. 36).

In addition to the letters shown above, secondary sources show letters for vowels such as *ī*, *ū*, *ē*, and *ō*. These are not attested in the available primary materials. It is possible that they may have been used in documents that have not been preserved, or they may be later developments. As these letters appear in script charts, it is practical to encode those that are distinctive in order to provide the most complete repertoire. Distinctive letters for the Brahmi vocalic *r̥*, *r̥̄*, *l̥*, *l̥̄* are not attested.

The following encoding model enables the complete representation of vowel letters and all contexts of *ya*:

1. The 'type 1' set are defined as independent vowel letters.
2. The 𑋐 is encoded as -A, and defined as a consonant that functions as a vowel carrier (see § 3.2).
3. The 𑋑 is encoded as the consonant letter YA and is to be used for non-initial *ya* in conjuncts.
4. Letters for *ī* and *ū* are encoded as per distinctive attestations in secondary materials.
5. Space is reserved for letters for *ē*, *ai*, *ō*, and *au*, which are not attested distinctively in the sources.

Accordingly, the proposed repertoire contains the following 8 independent vowel letters. The representation of the 'type 2' forms is described in § 4.1.

Glyph	Character name	Major variants	Latin	Thaana
𑤀	DIVES AKURU LETTER A		*a*	ހ
𑤁	DIVES AKURU LETTER AA		*ā*	ށ
𑤂	DIVES AKURU LETTER I	𑤃	*i*	ނ
𑤄	DIVES AKURU LETTER II	𑤅	*ī*	ރ
𑤆	DIVES AKURU LETTER U	𑤇	*u*	ބ
𑤈	DIVES AKURU LETTER UU	𑤉, 𑤊	*ū*	ޅ
𑤋	DIVES AKURU LETTER E		*e*	ކ
𑤌	DIVES AKURU LETTER O	𑤍, 𑤎	*o*	ވ

Notes on the proposed vowel letters:

- I The 𑤂 occurs in *fatkoḷu* as the glyphic variant 𑤃 (see fig. 4).

- II The letter II does not occur in primary sources. It is shown in G as 𑤅, which is a more cursive variant of 𑤃 I used in *fatkoḷu* with the addition of the 𑤄 VOWEL SIGN II. The representative glyph 𑤄 for II is based upon 𑤂 I with a looped final stroke that is reflective of VOWEL SIGN II.

- U The 𑤆 occurs in *fatkoḷu* as 𑤇 (see fig. 5). This form is a glyphic variant that reflects the calligraphic style used in later paper documents.

- UU The UU does not occur in primary materials. It is shown as 𑤊 in S and as 𑤉 in G (see fig. 5). G also shows the 'type 2' form 𑤆𑤈 produced using the 𑤈 VOWEL SIGN UU. The former two appear to be based upon the later variant 𑤇 of 𑤆 U modified by a curl. In 𑤊 the curl is at the terminal, while in 𑤉 it intersects the primary stroke. As 𑤇 is a rigid form of 𑤆, 𑤊 may be considered a less sinuous version of a hypothetical 𑤈. The 𑤈 has been selected as the representative glyph for UU on account of its congruence with 𑤆 U.

- E The letter 𑤋 has the stylistic variant 𑤏 in some L (see fig. 6). L. In various sources, the origin stroke of 𑤋 is turned or extended at obtuse angles, ie. 𑤐 in S (see fig. 46). N shows 𑤋 as being used for representing the Dhivehi long vowel *ē* (see fig. 59), but such usage in unattested in the primary sources.

- O The letter O has the distinctive form 𑤌, which occurs in L and IC (see fig. 7). In later sources it is represented using the 'type 2' form 𑤀𑤍 and the compound 𑤍 <𑤋 E, 𑤍 VOWEL SIGN AA> (see § 4.1). The secondary sources show some variants. N shows a stylized form of 𑤍 as well as 𑤀𑤐 for O (fig. 62). The latter is a 'type 2' form written with a calligraphic variant 𑤐 of 𑤍 VOWEL SIGN AA. S shows the form 𑤎 (see fig. 46). It does not occur in other sources, and appears to be a stylized form of 𑤍 in which the origin stroke of 𑤋 is turned, eg. the variant 𑤐 in S, and its tail is fused with 𑤍, cf. the related form in N. An idiosyncratic and unclear form 𑤒 for O is shown in G, which bears some resemblace to the representative glyph 𑤌 when rotated 90° counter-clockwise.

Given below are notes on vowel letters that are shown in the secondary materials, but which are not proposed for encoding at present for the reasons stated:

- *EE Although G and N show letters for the Dhivehi long vowel *ē*, a distinctive letter for this vowel does not occur in the primary materials. The forms in G are identical to the letter 𑤆 and 'type 2' form 𑤶𑤆 for *e* (see fig. 6). N gives 𑤆 E as the letter used in Evela Akuru (see fig. 59), and 𑤶𑤆 and 𑤶𑤶𑤆 as used in Dives Akuru (see fig. 62). The 𑤶𑤆 is the 'type 2' form also shown for *e*, while 𑤶𑤶𑤆 is the 'type 2' form with 𑤶𑤶◌ VOWEL SIGN AI. These forms are found only in N. These may be represented using character sequences (see § 4.1). The inclusion of *ē* by G and N suggests an analysis of Dives Akuru vowels from a Thaana perspective.

- *AI Neither a distinctive letter nor a 'type 2' form for the diphthong *ai* occurs in the available primary sources. However, a dependent form 𑤶𑤶◌ is attested and has been proposed for encoding as 𑤶𑤶◌ VOWEL SIGN AI (see § 3.3). Therefore, the 𑤶𑤶𑤆 given by N for *ē* would technically be a 'type 2' form for *ai*. A space has been reserved for the letter *ai* in the event that a distinctive form is identified.

- *OO G, S, and N show letters used for representing the Dhivehi long vowel *ō*. However, a distinctive letter for this vowel does not occur in the primary materials, so the provenance of the following letters is unknown. G gives the same form 𑤷 for *o* and *ō*. N shows 𑤶𑤉𑤃 and 𑤆𑤉. These are the conventional 'type 2' form of *o* and a stylized form of the compound 𑤆𑤃 for *o* in which the ◌𑤃 VOWEL SIGN AA is written with the calligraphic variant ◌𑤉, eg. 𑤆𑤉. A somewhat distinctive letter 𑤋𑤉 for *ō* occurs in S (see fig. 46). It resembles the S variant 𑤋 for *o*. It may be analyzed as *o* + the dependent sign for *ā*, where the 𑤋 *o* is interpreted as a distinctive letter instead of as a stylized rendering of the compound 𑤆𑤃 (and, therefore, at a base level it would be the compound 𑤆𑤃𑤃). The 𑤋𑤉 could be encoded as a letter, but it occurs only in S and its provenance is unknown. Theoretically, as other forms of *ō* are based upon *o*, the 𑤋𑤉 could be normalized as 𑤄𑤃 <O, VOWEL SIGN AA> and rendered using a font style.

- *AU Neither a distinctive letter nor a 'type 2' form for the diphthong *au* occurs in the available primary sources. Space has been reserved for it in case it is identified.

3.2 Vowel carrier

Glyph	Character name	Major variants	Latin	Thaana
𑤆	DIVES AKURU LETTER -A		*'a*, *ya*	ހ, ހ

The letter 𑤆 has multiple functions. It represents the syllable *ya* on the two extant 10th century statues. However, when changes in the Dhivehi language resulted in the shift of syllable-initial *ya* to *da*, the letter 𑤆 lost its value of *ya* and was reassigned as a vowel carrier. As a result, in all other records, namely *lōmāfānu* and *fatkoḷu*, the 𑤆 represents *a* by default or inherits the value of the attached vowel sign. In later *fatkoḷu*, the vowel letter *a* is represented generally using 𑤆 instead of the letter 𑤀 A.

The 𑤆 is defined as a letter that can represent 1) the vowel letter *a*; 2) a carrier for 'type 2' forms of independent vowels; and 3) syllable-initial *ya*. It can participate in consonant conjuncts as *ya* when C_1, eg. 𑤆𑤉 *yya* (see § 4.3.3). But does not occur in conjuncts in non-initial positions; non-initial *ya* is represented using the post-base form ◌𑤉 of 𑤊 YA. The 𑤆 can also occur in semi-conjuncts of a consonant + vowel letter, eg. 𑤢𑤆 *n='i* (see § 4.4).

The analysis of 𑤀 as a letter for *a* and a vowel-carrier instead of its palaeographic identity as *ya* conform to Maldivian scholars' interpretations of the value and function of the letter (see fig 53, fig 62). In current Maldivian analysis 𑤀 is equated with ﬠ U+0787 THAANA LETTER ALIFU, which possesses the same properties.

The letter 𑤀 has been assigned the name -A. It conveys the primary vocalic value of the letter and denotes its function as a vowel carrier. The name also corresponds to scholarly transliterations of 𑤀 as *'a*, as well as *'i*, *'u*, etc., when it carries the respective vowel signs (not *ya*, *yi*, *yu*, etc.).

3.3 Dependent vowel signs

Eight dependent vowel signs are proposed for encoding:

Glyph	Character name	Major variants	Latin	Thaana
𑤀𑤉	DIVES AKURU VOWEL SIGN AA		*ā*	◌ް
𑤀𑤊	DIVES AKURU VOWEL SIGN I		*i*	◌ި
𑤀𑤋	DIVES AKURU VOWEL SIGN II		*ī*	◌ީ
𑤀𑤌	DIVES AKURU VOWEL SIGN U	𑤀𑤍 𑤀𑤎	*u*	◌ު
𑤀𑤏	DIVES AKURU VOWEL SIGN UU	𑤀𑤐 𑤀𑤑 𑤀𑤒	*ū*	◌ޫ
𑤁𑤀	DIVES AKURU VOWEL SIGN E	𑤁𑤀 𑤆𑤀	*e*	◌ެ
𑤁𑤁𑤀	DIVES AKURU VOWEL SIGN AI	𑤁𑤁𑤀	*ai*	◌ޭ
𑤁𑤀𑤉	DIVES AKURU VOWEL SIGN O		*o*	◌ޮ

Details on the combining behavior of vowel signs is given in § 4.5. Notes on the signs are given below:

- VOWEL SIGN AA The stroke of 𑤀𑤉 is often elongated beneath the base as 𑤀𑤏 in later documents and may appear to connect to the base in some cases (see fig. 8). This elongation is a glyphic variation and a style of calligraphic writing.

- VOWEL SIGN I The sign 𑤀𑤊 is often elongated as 𑤀𑤎 in later documents as a result of calligraphic writing (see fig. 9). It is a glyphic variant pertaining to the style of a particular document.

- VOWEL SIGN II The sign 𑤀𑤋 is conventionally written attached to the top-right edge or terminal of the base with the body of the sign written to the right. The position of the body is rotated as 𑤀𑤍 in some sources (L1, L4). In later documents it is written as 𑤀𑤏, which is a calligraphic form. These are glyphic variants pertaining to the styles of a particular document. See fig. 9 for specimens.

- VOWEL SIGN U The conventional form of the VOWEL SIGN U is 𑤀𑤌. It may be written slightly angled 𑤀𑤎 or with a crimp 𑤀𑤍. When written with letters with round strokes at the right edge, the 𑤀𑤌 takes the contextual form 𑤀𑤍, ie. 𑤞𑤌 *dhu* and 𑤟 *ku*. The usage of the contextual form is to be considered the default for such letters (see list in § 4.5). There are some stylistic differences, shown in fig. 10:

	L1–L5	L6	L7	L8	F1–F4	F5	F6	F7–F8	F9–F10	F11–F12	F13	F1058	F1153	S	G
-u	◌𑤶	◌𑤶	◌𑤶	◌𑤶	◌𑤶	◌𑤶	◌𑤶	◌𑤶	◌𑤶	◌𑤿	◌𑤶	◌𑤶	◌𑥂	◌𑤿	◌𑤿
-ū	◌𑤷	—	◌𑤷	—	◌𑤷	◌𑤽	◌𑤷	◌𑤽	—	—	◌𑤽	◌𑤷	◌𑥃	◌𑥂	◌𑤾

In F1153 the form ◌𑥂 is used, which is similar to the form of VOWEL SIGN UU in F11 and F12. It appears that the contextual form ◌𑤿 was used as the default sign and applied to all letters.

As is evident from the distibution of the signs, only one form of VOWEL SIGN U (and its contextual variants) is used within a source. Concurrent usage of variants does not occur. The ◌𑤿 and ◌𑥂 may be treated as considered glyphic variants, and are stylized developments of the conventional ◌𑤶 form belonging to calligraphic styles used in the respective documents. These stylistic forms are to be managed using fonts designed for the calligraphic style of particular sources.

The dependent *u* is represented in L using the alternate form ◌𑤹. This sign is not a glyphic variant, but the ◌𑤹 HALANTA (see § 4.2).

- VOWEL SIGN UU The conventional form of the VOWEL SIGN UU is ◌𑤷. It may be written slightly angled ◌𑤽 or with a crimp ◌𑥃. There are some stylistic differences in the shape of the sign, as shown above. The variant ◌𑤽 occurs in F5, F7, F8, F13. It appears to be derived from the angled ◌𑤽 form with the loop moved to the left, cf. the form ◌𑤾 in G. The ◌𑥃 used in F1153 is based upon ◌𑤽 with the addition of a looped terminal. These glyphic variants appear to be stylized developments of the conventional ◌𑤷 form belonging to calligraphic styles used in the respective documents.

- VOWEL SIGN E The representative form 𑤯◌ appears as 𑤮◌ in later documents. A corruption of this sign into a circle is observed in some documents. A reversed form 𑤦◌ of 𑤮◌ occurs in F12. See specimens in fig. 11.

- VOWEL SIGN AI The representation of the sign 𑤯𑤯◌ contains two instances of 𑤯◌ VOWEL SIGN E. See specimens in fig. 11.

- VOWEL SIGN O The 𑤯◌𑤰 is a two-part vowel sign, with a decomposition of 𑤯◌ VOWEL SIGN E + ◌𑤰 VOWEL SIGN AA. See specimens in fig. 12. The right-side element ◌𑤰 is often elongated beneath the base as ◌𑤱 in later documents and may appear to connect to the base, eg. 𑤯◌𑤱. This occurs in documents where the VOWEL SIGN AA is also elongated in calligraphic writing.

Notes on other vowel signs that are not proposed for encoding at this time:

- *VOWEL SIGN VOCALIC R The sign ◌𑤲 may have been used for the Sanskrit vocalic *ṛ* in L1 (see fig. 18). The syllable has been glossed as *pṛ*, but it may also be *pru*. Additional research is required to determine the actual value of the syllable and how to represent it.

- *VOWEL SIGN EE A distinctive sign for the Dhivehi long vowel *ē* is not attested. As shown by N, this vowel may be represented using 𑤯◌ VOWEL SIGN E and 𑤯𑤯◌ VOWEL SIGN AI (see fig. 63). Space has been reserved for the vowel sign if it is identified later.

- *VOWEL SIGN OO A distinctive sign for the Dhivehi long vowel *ō* is not attested. In the secondary materials, 𑤯◌𑤰 is used for both *o* and *ō*. In S, the sign 𑤯◌𑤱 used for *ō* is identical to that for *o* (see fig. 45). It is a glyphic variant of 𑤯◌𑤰 VOWEL SIGN O, in which the ◌𑤰 appears to connect to the base

in some cases (see fig. 12). N appears to show a distinction between the signs 𑤵◌𑤸 *o* and 𑤵◌𑤰 *ō*, which align with the letters 𑤉 *o* and 𑤸 *ō* of the same source (see fig. 63), in which the right-side element in *o* connects to the base, eg. 𑤌𑤸 *ko* and 𑤌𑤸 *ō*. However, the connecting element in *o* appears to be unintentional, eg. the example 𑤟𑤸𑤥𑤦𑤽𑤦𑤵 *noramme* in N (see fig. 59). G shows 𑤵◌𑤴, 𑤵◌𑤸, and 𑤵◌𑤰 for '*ô*', of which the first two are also shown for '*o*'. While seemingly distinctive, the 𑤵◌𑤴 does not occur in other sources and its provenance is unknown. The element ◌𑤴 resembles the sign for *u* in G, which is a contextual and later glyphic variant of ◌𑤳 VOWEL SIGN U. Theoretically, the 𑤵◌𑤴 in G would be normalized as 𑤵◌𑤳, which follows the structure of signs for the diphthong *au* in other southern Brahmi-based scripts. But, a sign for either *ō* or *au* is not proposed for encoding at present. Space has been reserved for a potential *VOWEL SIGN OO. The 𑤵◌𑤰 VOWEL SIGN O may be used as necessary.

- *VOWEL SIGN AU Space has been reserved for a vowel sign for the diphthong *au*.

3.4 Consonants

There are 34 consonant letters:

Glyph	Character name	Major Variants	Latin	Thaana
𑤌	DIVES AKURU LETTER KA	𑤌	*ka*	ކަ
𑤍	DIVES AKURU LETTER KHA		*kha*	—
𑤎	DIVES AKURU LETTER GA		*ga*	ގަ
𑤏	DIVES AKURU LETTER GHA		*gha*	—
𑤐	DIVES AKURU LETTER NGA		*ṅa*	ސ
𑤑	DIVES AKURU LETTER CA	𑤑	*ca*	ޗަ
𑤒	DIVES AKURU LETTER CHA		*cha*	—
𑤓	DIVES AKURU LETTER JA	𑤓	*ja*	ޖަ
𑤕	DIVES AKURU LETTER NYA		*ña*	ޏަ
𑤖	DIVES AKURU LETTER TTA		*ṭa*	ޓަ
𑤘	DIVES AKURU LETTER DDA		*ḍa*	ޑަ
𑤙	DIVES AKURU LETTER DDHA		*ḍha*	—
𑤚	DIVES AKURU LETTER NNA	𑤚	*ṇa*	ޏަ
𑤛	DIVES AKURU LETTER TA		*ta*	ތަ
𑤜	DIVES AKURU LETTER THA		*tha*	—
𑤝	DIVES AKURU LETTER DA	𑤝 𑤝	*da*	ދަ
𑤞	DIVES AKURU LETTER DHA		*dha*	—

𑤌	DIVES AKURU LETTER NA		*na*	سَ
𑤍	DIVES AKURU LETTER PA		*pa*, *fa*	فَ
𑤎	DIVES AKURU LETTER PHA		*pha*	ڤَ
𑤏	DIVES AKURU LETTER BA		*ba*	ھَ
𑤐	DIVES AKURU LETTER BHA		*bha*	—
𑤑	DIVES AKURU LETTER MA		*ma*	حَ
𑤒	DIVES AKURU LETTER YYA		*ya*	ہَ
𑤓	DIVES AKURU LETTER RA	𑤶	*ra*	ىَ
𑤔	DIVES AKURU LETTER LA	𑤷	*la*	خَ
𑤕	DIVES AKURU LETTER VA		*va*	وَ
𑤖	DIVES AKURU LETTER SHA		*śa*	سَ
𑤗	DIVES AKURU LETTER SSA		*ṣa*	—
𑤘	DIVES AKURU LETTER SA		*sa*	سَ
𑤙	DIVES AKURU LETTER HA		*ha*	رَ
𑤚	DIVES AKURU LETTER LLA		*ḷa*	ۏَ
𑤛	DIVES AKURU LETTER ZA	𑤺, 𑤻	*za*	عَ

Each consonant letter possesses the inherent vowel *a*. The inherent vowel is silenced using the sign HALANTA to indicate a bare consonant. Consonant clusters are rendered as conjuncts (see § 4.3).

3.4.1 Notes on consonant letters

- KA The variant form 𑤃 occurs alongside the conventional 𑤄 in some sources. Given its shape, it may be suitable for encoding as a distinctive alternate after additional research has been performed.

- CA The variant forms 𑤈 and 𑤉 are shown in S and N, respectively. They are not attested in the available primary sources and their provenance is unknown. They differ from the representative form 𑤇 and resemble *halanta* forms of 𑤆 TA, ie. 𑤆𑥀.

- NGA The representative glyph for the letter has been abstracted from its cluster-initial form in conjuncts (see fig. 15).

- JA The variant form 𑤋 of 𑤊 is shown in S. It is a glyphic variant in a later style of the script.

- *JHA A distinctive letter for the palatal aspirate *jha* and has not been identified. Space has been reserved for it.

- TTA The letter TTA is shown as in S. This is the conjunct *ṭṭa*, which is interpreted as the letter *ṭa* in some cases (see fig. 57).

- *TTHA A distinctive letter for the retroflex aspirate *ṭha* does not occur in the souces. Space has been reserved for it.

- NNA The conventional form of NNA is . However, in Sidi the retroflex nasal *ṇa* is represented using in place of (see fig. 36). The letter is clearly related to ޱ naviyani (= U+07B1 THAANA LETTER NAA, but, Sidi's rationale for its usage is unclear. This does not occur in the primary sources. For purposes of the encoding, is classified as a glyphic variant. However, if concurrent usage of it and occurs, then it may be encoded as an alternate form.

- YA The letter YA does not occur in L or F, but occurs in HMK in the word *rupiyā* 'rupee' (see fig. 17, 34). It is also shown in S and N. The origin of this letter is unknown. It appears to have been introduced for writing syllable-initial *ya*. It resembles ය U+0DBA SINHALA LETTER YAYANNA (= *ya*). It is possible that it is based upon -A, which is palaeographically the letter *ya*, or a variant form. For example, it is possible to interpret as a variant of with the origin stroke extends downward instead of extending to the right. Whatever its origin, the is distinct from and the two occur together in HMK and S, and represent different values.

  When used in non-initial position in conjuncts, YA is rendered using the post-base form (see § 4.3.3). Palaeographically, the may be analyzed as a modified form of (-A). It may also be interpreted as a modification of in which the left half is truncated, leaving a post-base form. In any case, the association of with is not mandatory, and it may be suitably defined as a conjunct-specific form of the letter YA, ie. . There is no requirement to produce the regular form of in non-initial position in a conjunct. To be sure, non-initial *ya* is uniformly represented in conjuncts using the post-base form, not the regular letter as in a 'touching' conjunct. Therefore, it is suitable to produce using non-initial YA.

- RA The letter RA underwent a simplification from the form used in early *lōmāfānu* (L1–L4) to the used in later sources (L5–L8) and in all *fatkoḷu*. The later form has been selected as the representative glyph on account of its more prevalent occurrence in the sources.

  The RA takes the form *repha* when initial in a conjunct and the shape *ra-kāra* in cluster-final position.

- ZA The representative form for ZA is based upon the form used in F1058 (see fig. 19). This letter has a few variants. The form is used by Sidi (see fig. 36). It occurs only in that source. Geiger shows the form (figure 50), which bears some resemblance to the representative glyph. While and are distinctive, their provenance is unknown. Additional research is required to determine their suitablity for encoding as alternate forms.

3.5 Prefixed nasal sign

The following character is used for indicating a cluster-initial nasal consonant:

Glyph	Character name	Variants	Latin	Thaana
3	DIVES AKURU PREFIXED NASAL SIGN		*ň*	ނ, ން

The sign ◌𑤾 ligates with the following letter (see § 4.7). The glyph is placed within a dashed box in the code chart to indicate its special behavior. The character is derived from the cluster-initial form of the letter 𑤃 NGA, which was extended for use as a generic sign for a homorganic nasal. As shown clearly in fig. 15, the form of the PREFIXED NASAL SIGN differs from that of cluster-initial NGA.

3.6 Nasalization signs

There are two distinctive nasalization signs (see fig. 13 and § 4.6):

Glyph	Character name	Variants	Latin	Thaana
◌𑤰	DIVES AKURU SIGN ANUSVARA		*ṃ*	ސް, ހް
◌𑤱	DIVES AKURU SIGN CANDRABINDU	◌𑤲	*m̐*, *m̀*	ސ̃, ހ̃

3.7 Nukta

The following sign is used for representing new sounds (see § 4.9):

Glyph	Character name	Variants	Latin	Thaana
◌𑤽	DIVES AKURU SIGN NUKTA			

This character does not exist in the primary materials. It is described by N as being a new addition to the script (see fig. 61).

3.8 Halanta

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

Glyph	Character name	Variants	Latin	Thaana
◌𑤿	DIVES AKURU SIGN HALANTA	—	—	◌ް

The sign ◌𑤿 is used for silencing the inherent vowel, similar to the VIRAMA in other Brahmi-based scripts. However, as the sign has various meanings in Dives Akuru, it is proposed that the functions of VIRAMA be disunified and encoded in two separate characters. This approach will simplify the representation of the visible form of the sign and its conjunct-formation properties.

The ◌𑤿 DIVES AKURU SIGN HALANTA is a visible *virāma*. a visible *virāma*. It represents several features (see § 4.2). In addition to silencing the inherent vowel of a consonant letter, it represents an alternate form of the dependent vowel *u*. It is also used for indicating glottal stop. Naseema indicates that HALANTA has other functions when used for transliterating Thaana (see fig. 67 for details). In such cases, it is parallel to ◌ް U+07B0 THAANA SIGN SUKUN. A separate encoding for HALANTA will be practical for users of Dives Akuru, who are also generally users of Thaana.

3.9 Virama

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

Glyph	Character name	Variants	Latin	Thaana
◌𑥃	DIVES AKURU VIRAMA	—	—	—

The conjunct formation properties are assigned to ◌𑥃 DIVES AKURU VIRAMA. This control character is used for producing consonant conjuncts (§ 4.3) and is to be used for producing ligatures of a devowelized consonant + vowel lettter (§ 4.4). The VIRAMA is represented in the code chart as ◌𑥃 in order to indicate that it is a special character.

3.10 Digits

The script has a full set of digits:

Glyph	Character name	Variants	Latin	Thaana
𑥐	DIVES AKURU DIGIT ZERO		0	
𑥑	DIVES AKURU DIGIT ONE		1	
𑥒	DIVES AKURU DIGIT TWO		2	
𑥓	DIVES AKURU DIGIT THREE		3	
𑥔	DIVES AKURU DIGIT FOUR		4	
𑥕	DIVES AKURU DIGIT FIVE		5	
𑥖	DIVES AKURU DIGIT SIX		6	
𑥗	DIVES AKURU DIGIT SEVEN		7	
𑥘	DIVES AKURU DIGIT EIGHT		8	
𑥙	DIVES AKURU DIGIT NINE		9	

3.11 Punctuation

The following signs of punctuation are used in the script (see fig. 23–24):

Glyph	Character name	Variants	Latin	Thaana
𑥄	DIVES AKURU DOUBLE DANDA		.	
𑥅	DIVES AKURU GAP FILLER			

𑥄 DIVES AKURU END OF TEXT MARK

The Dives Akuru 𑥅 DOUBLE DANDA may be similar in appearance to ॥ U+0965 DEVANAGARI DOUBLE DANDA, but it is often written as two slightly curved strokes.

The 𑥃 GAP FILLER is used at the end of lines to fill space, as well as at the end of a document to signify completion of the text.

The 𑥄 END OF TEXT MARK is written at the end of a document. It is often accompanied by a preceding GAP FILLER. The glyph for END OF TEXT MARK is based upon the form used in F9 (fig. 24). As shown in other sources, the horizontal stroke is elongated to fill space. Such swash strokes are stylistic. As is also evident from F9, the 𑥄 is distinct from the 𑥃 and is not a shorthand or abbreviation for a sequence of multiple GAP FILLER characters. While the stroke of 𑥄 is elongated in the sources, the character does not have any extending properties and the stroke size is fixed. However, font developers may design a glyph with a stroke length of their choice.

4 Encoded Representations

4.1 Representations of ‘type 2’ vowel letters

The ‘type 2’ set of vowel letters is represented as shown below (see also figure 49). The interactions between the base consonant and dependent vowel signs is described in § 4.5.

Vowel	‘type 1’	‘type 2’	Character sequence for ‘type 2’
a	𑤀	𑤚	<𑤚 -A>
ā	𑤀𑤰	𑤚𑤰	<𑤚 -A, ◌𑤰 VOWEL SIGN AA>
i	𑤁	𑤚𑤱	<𑤚 -A, ◌𑤱 VOWEL SIGN I>
u	𑤂	𑤚𑤲	<𑤚 -A, ◌𑤲 VOWEL SIGN U>
ú	𑤂	𑤚𑥃	<𑤚 -A, ◌𑥃 HALANTA>
e	𑤄	𑤇𑤚	<𑤚 -A, 𑤇◌ VOWEL SIGN E>
o	𑤅	𑤇𑤚𑤰	<𑤚 -A, 𑤇◌𑤰 VOWEL SIGN O>

Alternate forms of ‘type 2’ forms are:

Vowel	‘type 1’	‘type 2’	Character sequence for alternate ‘type 2’
o	𑤅	𑤄𑤰	<𑤄 E, ◌𑤰 VOWEL SIGN AA>

Other ‘type 2’ forms without corresponding distinctive ‘type 1’ forms that are shown in secondary materials may be represented as follows:

Vowel	Glyph	Character sequence
ū	𑤚𑤳	<𑤚 -A, ◌𑤳 VOWEL SIGN UU>
ē	𑤇𑤚	<𑤚 -A, 𑤇◌ VOWEL SIGN AI>

4.2 *Halanta*

The sign ◌𑥃 HALANTA is used for silencing the inherent vowel of a consonant letter, but it is also used as an alternate sign for the vowel *u* and for marking glottal stop. Generally, it attaches to the right edge of a letter and forms a ligature with the base. The shape of some letters is modified.

k 𑤆𑥃 <𑤆 KA, ◌𑥃 HALANTA>

ṭ 𑤉𑥃 <𑤉 TTA, ◌𑥃 HALANTA>

t		<TA, HALANTA>
n		<NA, HALANTA>
s		<SA, HALANTA>

4.2.1 *Alternate sign for the vowel 'u'*

Although consonants marked by HALANTA are devowelized, they are pronounced in Dhivehi in some cases as syllables with /u/. The HALANTA, therefore, also functions as an alternate vowel sign for *u*, eg. may be read as *ṭ* and *ṭú*. For example, the word in fig. 14 may be read as *sṭna*, but it actually represents *súṭúna*. That figure shows both signs used with the same letter, eg. *bú* and *bu*.

ṭú		<TTA, HALANTA>
dhú		<DHA, HALANTA>
bú		<BA, HALANTA>
sú		<SA, HALANTA>

There is no independent letter for this vowel sign, although it is written with -A when independent or initial, eg. *ú*.

While the HALANTA can be used for indicating *ú*, it may be necessary to distinguish usage of for marking clusters and *-u* syllables for purposes of text processing. Additional research is required for determining the suitability of encoding a separate character for this sign, eg. a *VOWEL SIGN MUTE U.

4.2.2 *Halanta clusters*

While consonant clusters are generally rendered as conjuncts, they may also be indicated by marking non-final letters with HALANTA (see fig. 14).

sta		<SA, HALANTA, TA>
sva		<SA, HALANTA, VA>

4.2.3 Glottal stop

In late *fatkoḷu*, the letters KA, NA, TTA, TA are combined with HALANTA to indicate a word-final glottal stop. In some sources, these forms may be written as superscripts, at or above the head height and may appear superscript. Fig. 14 shows the use of superscript *ta-halanta* in F9 for denoting glottal stop.

The raised glottal stop *halanta* forms may be indicated using superscript layout features. However, there may be a potential for another mechanism for distinguishing the special function of such forms from other combinations of a particular letter + HALANTA.

Naseema describes combination of the above letters + HALANTA as 'sukun letters' (1999: 27, see fig. 67), and suggests that such forms were used for representing other features of Dhivehi, eg. *na-halanta* <NA, ◌ HALANTA> for indicating a nasal geminate, and the *ta-halanta* for a *ya* off-glide.

4.3 Consonant conjuncts

Consonant clusters are rendered as conjuncts in Dives Akuru. The majority of conjuncts consist of clusters of two consonants, but conjuncts with up to three consonants are attested.

The conjunct model for Dives Akuru follows the conventional VIRAMA model used for other Brahmi-based scripts. Conjuncts are represented in encoded text by placing the VIRAMA after each consonant letter in a cluster:

$$<C_1, \text{VIRAMA}, C_2 [, \text{VIRAMA}, C_n]^*>$$

Any accompanying vowel sign is placed after the last letter in the cluster (see § 4.5).

Depending upon the shapes of constituent letters, a conjunct is rendered as either a distinctive ligature or as a 'touching' ligature. The glyphic identity of the letters is visible in both types of ligatures.

The letters YA and RA have special behaviors in conjuncts, as described in § 4.3.3 and § 4.3.4 below. They do not occur in 'touching' conjuncts.

4.3.1 *Distinctive ligatures*

The glyphs of constituent letters are modified to produce a distinctive ligature:

kṣa		<KA, VIRAMA, SSA>
ṅga		<NGA, VIRAMA, GA>
ṭṭa		<TTA, VIRAMA, TTA>
ṭva		<TTA, VIRAMA, VA>
ṇḍa		<NNA, VIRAMA, DDA>
ttha		<TA, VIRAMA, THA>
ntha		<NA, VIRAMA, THA>
ndha		<NA, VIRAMA, DHA>
mba		<MA, VIRAMA, BA>
bbha		<BA, VIRAMA, BHA>
ṣṭa		<SSA, VIRAMA, TTA>
sta		<SA, VIRAMA, TA>

sva	𑤭𑤾𑤪	<𑤭 SA, 𑤾 VIRAMA, 𑤪 VA>

4.3.2 *'Touching' ligatures*

A 'touching' ligature is used for writing doubled consonants or with letters whose shapes cannot easily be combined into a distinctive ligature. A 'touching' ligature is produced by writing letters together without spaces, such that they touch at adjacent edges. The shapes of letters are not modified.

kta	𑤌𑤾𑤜	<𑤌 KA, 𑤾 VIRAMA, 𑤜 TA>
tka	𑤜𑤾𑤌	<𑤜 TA, 𑤾 VIRAMA, 𑤌 KA>
nta	𑤠𑤾𑤜	<𑤠 NA, 𑤾 VIRAMA, 𑤜 TA>
nna	𑤠𑤾𑤠	<𑤠 NA, 𑤾 VIRAMA, 𑤠 NA>
mma	𑤥𑤾𑤥	<𑤥 MA, 𑤾 VIRAMA, 𑤥 MA>
spa	𑤭𑤾𑤡	<𑤭 SA, 𑤾 VIRAMA, 𑤡 PA>
ḷḷa	𑤯𑤾𑤯	<𑤯 LLA, 𑤾 VIRAMA, 𑤯 LLA>

Such an orthography for conjuncts is meaningful in Dives Akuru because orthographic syllables (*akṣara*-s) of a word typically do not otherwise touch. In *lōmāfānu* syllables are separated by spaces and these spaces provide for distinctions between clusters and sequences of consonant syllables, for example:

tka	𑤜𑤾𑤌	<𑤜 TA, 𑤾 VIRAMA, 𑤌 KA>
taka	𑤜𑤌	<𑤜 TA, 𑤌 KA>
mma	𑤥𑤾𑤥	<𑤜 MA, 𑤾 VIRAMA, 𑤥 MA>
mama	𑤥𑤥	<𑤜 MA, 𑤌 MA>

4.3.3 The letter YA

When the consonant *ya* is non-initial in a cluster, it is represented by default using the post-base form ◌𑥀 and is written as a ligature with the preceding letter (see fig. 16). This post-base form is produced using VIRAMA before the letter 𑤦 YA:

tya	𑤜𑤾𑤦	<𑤜 TA, 𑤾 VIRAMA, 𑤦 YA>
dya	𑤞𑤾𑤦	<𑤞 DA, 𑤾 VIRAMA, 𑤦 YA>
dhya	𑤟𑤾𑤦	<𑤟 DHA, 𑤾 VIRAMA, 𑤦 YA>
sya	𑤭𑤾𑤦	<𑤭 SA, 𑤾 VIRAMA, 𑤦 YA>

yya		< -A, VIRAMA, YA>
yya		< YA, VIRAMA, YA>

4.3.4 The letter RA

The letter RA takes special forms when it occurs in conjuncts (see fig. 18). It is written as *repha* when initial in a cluster. The *repha* is placed above the following letter, or in the case of two-letter clusters, it is placed between the two letters. Following the conventional model, *repha* is produced as follows:

rka		< RA, VIRAMA, KA>
rmma		< RA, VIRAMA, MA, VIRAMA, MA>

When non-initial in a cluster, RA is written as *ra-kāra*. The *ra-kāra* attaches to the right edge of the preceding letter and curves beneath the letter. In the case of multi-letter clusters, it attaches to the last letter and its curve may span the entire conjunct. Following the conventional model, *ra-kāra* is produced as follows:

kra		< KA, VIRAMA, RA>
ntra		< NA, VIRAMA, TA, VIRAMA, RA>
pra		< PA, VIRAMA, RA>
śra		< SHA, VIRAMA, RA>
stra		< SA, VIRAMA, TA, VIRAMA, RA>
spra		< SA, VIRAMA, PA, VIRAMA, RA>

In some later records, the curve of *ra-kāra* is elongated as and may extend fully around the letter to the top left edge; compare and *kra*, and *stra*.

4.4 Ligatures of consonant + vowel letter

Conventionally, a devowelized word-final consonant is indicated using letter + HALANTA and is typically separated from the first orthographic syllable of the following word. For example, in L3 and L5, the word boundary in the phrase *avurodun ikit* is written as expected as -- *-n i-* (NA + HALANTA + I) with a vowel letter for *i*, and also as -- *-n 'i-* (NA + HALANTA + -A + VOWEL SIGN I) with a 'type 2' form for *i*.

However, in other instances throughout the *lōmāfānu*, the word-final consonant letter is connected to the following independent vowel letter or 'type 2' form of a vowel instead of being written with HALANTA (see fig. 25); the connection is indicated using '=' in transliteration: -- *-n=i-* (NA + I) and -- *-n='i-* (NA + -A + VOWEL SIGN I), as well as -- *-t=a-* (TA + A) in L2; and -- *-n=e-* (NA + E) in L3.

Although these forms resemble 'touching' conjuncts, they are liaisons between a word-final base consonant and a word-initial independent vowel. They may be represented using VIRAMA:

n=i	𑤟𑤾𑤂	<𑤟 NA, ◌𑤾 VIRAMA, 𑤂 I>
n=’i	𑤟𑤾𑤀𑤱	<𑤟 NA, ◌𑤾 VIRAMA, 𑤀 -A, ◌𑤱 VOWEL SIGN I>

These are contrasted with sequences of conventional orthographic syllables:

nai	𑤟𑤂	<𑤟 NA, 𑤂 I>
na’i	𑤟𑤀𑤱	<𑤟 NA, 𑤀 -A, ◌𑤱 VOWEL SIGN I>
n i	𑤟𑤽 𑤂	<𑤟 NA, ◌𑤽 HALANTA, 𑤂 I>
n ’i	𑤟𑤽 𑤀𑤱	<𑤟 NA, ◌𑤽 HALANTA, 𑤀 -A, ◌𑤱 VOWEL SIGN I>

4.5 Consonant-vowel combinations

Combinations of a consonant and dependent vowel sign are rendered following the pattern shown in § 4.1 for the 'type-2' vowel letters. 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: ◌𑤰.

kā	𑤌𑤰	<𑤌 KA, ◌𑤰 VOWEL SIGN AA>
mā	𑤤𑤰	<𑤤 MA, ◌𑤰 VOWEL SIGN AA>

In some *fatkoḷu*, the sign extends below the base, similar to VOWEL SIGN I, compare: 𑤌𑤰 and 𑤌𑤰 *kā*, 𑤤𑤰 and 𑤤𑤰 *mā*. In some instances it appears to connect to the base.

Vowel sign I The sign ◌𑤱 attaches to the top or top-right edge of the base and curves around to the right edge.

ki	𑤌𑤱	<𑤌 KA, ◌𑤱 VOWEL SIGN I>
di	𑤝𑤱	<𑤝 DA, ◌𑤱 VOWEL SIGN I>
dhi	𑤞𑤱	<𑤞 DHA, ◌𑤱 VOWEL SIGN I>
pi	𑤠𑤱	<𑤠 PA, ◌𑤱 VOWEL SIGN I>
si	𑤬𑤱	<𑤬 SA, ◌𑤱 VOWEL SIGN I>
hi	𑤭𑤱	<𑤭 HA, ◌𑤱 VOWEL SIGN I>

When written with cluster-final *ra*, the VOWEL SIGN I attaches to the *ra-kāra*:

kri  <KA, ◌ VIRAMA, RA, ◌ VOWEL SIGN I>

śri <SHA, ◌ VIRAMA, RA, ◌ VOWEL SIGN I>

In *fatkoḷu*, the sign is often elongated and may loop beneath the base, eg. *dhi*,  *hi*,  *kri*,  *śri*.

Vowel sign II Behaves like VOWEL SIGN I.

kī <KA, ◌ VOWEL SIGN II>

dhī  <DHA, ◌ VOWEL SIGN II>

In L1, the VOWEL SIGN II is written occurs attached above the letter as ◌, eg. *kī*,  *dhī*. It is a glyphic variant for the representative form. In later sources, the sign is written to the right, eg. *kī*, *dhī*.

Vowel sign U The shape of the dependent form of *u* is determined by the shape of the base letter. For most letters, the representative form ◌ is used, which attaches to the right edge:

dhu <DHA, ◌ VOWEL SIGN U>

mu <MA, ◌ VOWEL SIGN U>

pu <PA, ◌ VOWEL SIGN U>

su <SA, ◌ VOWEL SIGN U>

For letters with curves at the right edge, the sign takes the form ◌ and is written as a ligature with the base:

ku <KA, ◌ VOWEL SIGN U>

nu <NA, ◌ VOWEL SIGN U>

ru <RA, ◌ VOWEL SIGN U>

With some letters, the sign attaches near or below the base:

du <DA, ◌ VOWEL SIGN U>

The sign forms a special ligature when combined with the following letter:

ḷu <LLA, ◌ VOWEL SIGN U>

Vowel sign UU The sign attaches to the right edge of a letter and forms a ligature with the base:

kū	𑤏𑤳	<𑤏 KA, 𑤳 VOWEL SIGN UU>
pū	𑤥𑤳	<𑤥 PA, 𑤳 VOWEL SIGN UU>

Vowel sign E Written to the left of the base.

ke	𑤇𑤏	<𑤏 KA, 𑤇 VOWEL SIGN E>
re	𑤇𑤛	<𑤛 RA, 𑤇 VOWEL SIGN E>

Vowel sign AI Written to the left of the base.

lai	𑤇𑤇𑤨	<𑤏 LA, 𑤇𑤇 VOWEL SIGN AI>

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

ko	𑤇𑤏𑤱	<𑤏 KA, 𑤇𑤱 VOWEL SIGN O>
nno	𑤇𑤔𑤔𑤱	<𑤔 NA, 𑥂 VIRAMA, 𑤔 NA, 𑤇𑤱 VOWEL SIGN O>
mo	𑤇𑤩𑤱	<𑤩 MA, 𑤇𑤱 VOWEL SIGN O>

In sources where the elongated form of VOWEL SIGN AA is used, the right-side element of VOWEL SIGN O is similarly elongated, compare: 𑤇𑤏𑤱 and 𑤇𑤏𑤲 *ko*, 𑤇𑤩𑤱 and 𑤇𑤩𑤲 *mo*.

4.6 Vowel nasalization

Post-vocalic nasalization is indicated using the signs 𑤀 CANDRABINDU and 𑤁 ANUSVARA:

om̐	𑤆𑤀	<𑤆 O, 𑤀 SIGN CANDRABINDU>
kaṃ	𑤏𑤁	<𑤏 KA, 𑤁 SIGN ANUSVARA>
kāṃ	𑤏𑤱𑤁	<𑤏 KA, 𑤱 VOWEL SIGN AA, 𑤁 SIGN ANUSVARA>

4.7 Prefixed nasal sign

The 𑤽 PREFIXED NASAL SIGN is placed before a letter in the input sequence. The VIRAMA is not used with it. It is generally rendered as a ligature, attached to the top of the following letter. This sign does not occur in word-initial position. The example below occurs in L4, as shown in fig. 15:

ṅga <NGA, VIRAMA, GA>

ňga <PREFIXED NASAL SIGN, GA>

In some sources the PREFIXED NASAL SIGN is detached and raised from the base, as shown in the below example from fig. 20:

Syllable	Attached	Detached	Character sequence
ňsa			<PREFIXED NASAL SIGN, SA>

The raised sign is typical in the Dives Akuru calligraphy in late *fatkoḷu*, while the attached form is common in *lōmāfānu*. The positions are stylistic features and both representations of the sign are semantically identical. Usage of the two positional forms is not contrastive: one or the other is used consistently throughout a document. The attached and detached forms should be treated as glyphic variants belonging to particular styles of the script.

4.7.1 Comparison to the Burmese *kinzi*

Encoding the ◌ as a distinctive prefixed character provides the simplest implementation. The superficial aspects of the sign, and its derivation from NGA, are similar to the ◌ *kinzi* in the Burmese ('Myanmar') script. It is, therefore, interesting to evaluate the potential of adopting the *kinzi* model for the Dives Akuru prefixed nasal letter. In Burmese, the absence of the inherent vowel of င U+1004 MYANMAR LETTER NGA is rendered as င် *ṅ*, in which င *ṅa* is marked with a visible ◌် *virāma*. When *ṅ* occurs in cluster-initial position, it is rendered as a superscript form of င် known as ◌ *kinzi*, which is positioned above the following letter: င်္က *ṅka*. The Unicode model for Burmese uses the control character ◌္ U+1039 MYANMAR SIGN VIRAMA for producing conjuncts. Therefore, logically, the cluster *ṅka* would be represented using <င U+U1004, ◌္ U+1039, က U+1000>. However, this produces the conjunct င္က, a stack consisting of of င *ṅa* and က *ka*. The correct rendering of *kinzi* requires the *virāma* to be both a visible sign and a control character; however, it is defined solely as the latter. In order to produce the *kinzi*, the character ◌် U+1004 MYANMAR SIGN ASAT is required in the input sequence after MYANMAR LETTER NGA and before MYANMAR SIGN VIRAMA: <င U+1004, ◌် U+103A, ◌္ U+1039, က U+1000>, which provides the expected င်္က *ṅka*.

The graphical resemblance between these Dives Akuru and Burmese signs is coincidental. Indeed, they seem to be mirror images, but their structures are inherently different. The *kinzi* possesses a visible *virāma*, while the Dives Akuru sign does not. If the *kinzi* model were adopted for Dives Akuru, the ◌ HALANTA would be the equivalent of MYANMAR SIGN ASAT. Accordingly, *ňsa* would be generated using <NGA, ◌ HALANTA, VIRAMA, SA>. Such a model is not practical for Dives Akuru. Usage of HALANTA in such a context is superfluous as it is not part of the graphical representation. Secondly, this model requires four characters to produce *ňsa*, while the prefixed nasal sign requires two. For this reason, the proposed PREFIXED NASAL SIGN is the most suitable option.

4.8 'Gemination'

Naseema (1990) show the signs ◌, ◌, etc. used for indicating gemination, or doubled consonants (see fig. 59, 68). These signs are not true gemination signs and have different semantics in the primary sources.

The interpretation of these signs as marking gemination may have been the result of sound changes in spoken Dhivehi. The so-called 'gemination signs' are analyzed below:

1. 'Gemination sign' Naseema illustrates usage of ◌𑤿 as a gemination sign in the word 𑤌𑤿𑤨𑤎, which is glossed as '*kallage*'. This word is originally *kaṅlage*, an instance of which occurs in L2 (plate 23, line 2). The sign ◌𑤿 is identical to the proposed 𑤿 PREFIXED NASAL SIGN. The transliteration of 𑤌𑤿𑤨𑤎 as *kallage* in N reflects a change in the pronunication of nasal + stop sequences to a doubling of the stop. In this sense, the PREFIXED NASAL SIGN indicated a nasal in Old Dhivehi, but is read as a gemination of the base letter from the perspective of modern Divehi phonology.

glyph	'geminate'	real cluster	character sequence
𑤿𑤨	'*lla*'	*ṅla*	<𑤿 PREFIXED NASAL SIGN, 𑤨 LA>

2. *Conjunct with* THA In some cases the sign ◌𑤜 may be interpreted as a gemination sign. In actuality, it is the conjoining form of 𑤜 THA. In later forms of the script, this aspirate letter lost its original value of *tha*. A common conjunct containing *tha* as C_2 is 𑤛𑤾𑤜 *ttha*, which was read as *tta* in later Dhivehi. It is possible that the ◌𑤜 in '*tta*' was interpreted as a doubling of 𑤛. Similarly, 𑤟𑤾𑤜 *ntha* was read as '*nna*'. Usage of C_2 THA as a gemination mark was extended beyond the dental class. An isolated example is 𑤌𑤾𑤜, which reads *ktha*, but is used for '*kka*' (see fig. 21). Such forms are a matter of orthography and should be treated as regular conjuncts.

glyph	'geminate'	real cluster	character sequence
𑤌𑤾𑤜	'*kka*'	*ktha*	<𑤌 KA, 𑤾 VIRAMA, 𑤜 THA>
𑤛𑤾𑤜	'*tta*'	*ttha*	<𑤛 TA, 𑤾 VIRAMA, 𑤜 THA>
𑤟𑤾𑤜	'*nna*'	*ntha*	<𑤟 NA, 𑤾 VIRAMA, 𑤜 THA>

Some ligatures that indicate doubled consonants, eg 𑤩𑤾𑤩 *vva*, appear as if they contain the ◌𑤜 element. The curled terminals of 𑤜 THA and 𑤩 VA may lead to such interpretations. While 𑤩𑤾𑤩 may be analyzed as a conjunct of 𑤩 VA + 𑤜 THA, it is accurate to analyze it as a conjunct of 𑤩 VA + 𑤩 VA.

3. *Conjunct with* YA In later documents, such as Sidi, conjuncts with the letter 𑤥 as C_2 are read as a geminate cluster of C_1, eg. 𑤬𑤾𑤥 *sya* = '*ssa*' (see fig. 21). In such cases, the post-base form ◌𑥁 of -A is interpreted as a gemination sign. Possibly, the absence of *-ya* clusters in Dhivehi resulted in the respective conjuncts being reassigned for indicating geminates. The usage of *-ya* conjuncts as geminates are matter of orthography and or reinterpretation of conventional conjuncts. For this reason, these geminates are to be treated as regular conjuncts of the actual underlying letters.

glyph	'geminate'	real cluster	character sequence
𑤛𑤾𑤥	'*tta*'	*tya*	<𑤛 TA, 𑤾 VIRAMA, 𑤥 YA>
𑤬𑤾𑤥	'*ssa*'	*sya*	<𑤬 SA, 𑤾 VIRAMA, 𑤥 YA>

4.9 Nukta

The 𑥗 NUKTA is used for representing new sounds. It is written beneath a letter whose base value most closely approximates the foreign sound.

fa 𑤚𑥗 <𑤚 PA, 𑥗 NUKTA>

4.10 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. Two-part vowel signs are broken across lines in some sources, with the left-side element at the end of line and the base and right-side ligature at the beginning of the next line. Allowance for such line breaks is needed for accurately representing text as it appears in a particular source. However, for general purposes, the components of two-part vowel signs should be kept together with the base, for example, the left-side element should not be separated from the syllable at the end of line.

4.11 Collation

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

𑤀 A < 𑤁 AA < 𑤂 I < 𑤃 II < 𑤄 U < 𑤅 UU < 𑤆 E < 𑤇 O < 𑤈 KA <

𑤉 KHA < 𑤊 GA < 𑤋 GHA < 𑤌 CA < 𑤍 CHA < 𑤎 JA < 𑤏 NYA < 𑤐 TTA <

𑤑 DDA < 𑤒 DDHA < 𑤓 NNA < 𑤔 TA < 𑤕 THA < 𑤖 DA < 𑤗 DHA <

𑤘 NA < 𑤙 PA < 𑤚 PHA < 𑤛 BA < 𑤜 BHA < 𑤝 MA < 𑤞 -A < 𑤟 YA <

𑤠 RA < 𑤡 LA < 𑤢 VA < 𑤣 SHA < 𑤤 SSA < 𑤥 SA < 𑤦 HA < 𑤧 LLA < 𑤨 ZA <

𑤰 VOWEL SIGN AA < 𑤱 VOWEL SIGN I < 𑤲 VOWEL SIGN II < 𑤳 VOWEL SIGN U <

𑤴 VOWEL SIGN UU < 𑤵 VOWEL SIGN E < 𑤶 VOWEL SIGN AI < 𑤷 VOWEL SIGN O

The vowel-carrier letter 𑤞 -A is sorted before 𑤟 YA.

The 𑤽 PREFIXED NASAL SIGN is to be sorted in the same position as 𑤓 NGA. For cases such as 𑤽𑤓 *ṅga* and 𑤓 *ňga*, the NGA (in *ṅga*) should be ordered before PREFIXED NASAL SIGN (in *ňga*).

The following characters have secondary weights:

𑤀 ANUSVARA, 𑤁 CANDRABINDU, 𑥗 NUKTA, 𑥃 HALANTA

5 Character Data

5.1 Unicode character data: `UnicodeData.txt`

```
11900;DIVES AKURU LETTER A;Lo;0;L;;;;;N;;;;;
11901;DIVES AKURU LETTER AA;Lo;0;L;;;;;N;;;;;
11902;DIVES AKURU LETTER I;Lo;0;L;;;;;N;;;;;
11903;DIVES AKURU LETTER II;Lo;0;L;;;;;N;;;;;
11904;DIVES AKURU LETTER U;Lo;0;L;;;;;N;;;;;
11905;DIVES AKURU LETTER UU;Lo;0;L;;;;;N;;;;;
11906;DIVES AKURU LETTER E;Lo;0;L;;;;;N;;;;;
11907;<reserved>
11908;<reserved>
11909;DIVES AKURU LETTER O;Lo;0;L;;;;;N;;;;;
1190A;<reserved>
1190B;<reserved>
1190C;DIVES AKURU LETTER KA;Lo;0;L;;;;;N;;;;;
1190D;DIVES AKURU LETTER KHA;Lo;0;L;;;;;N;;;;;
1190E;DIVES AKURU LETTER GA;Lo;0;L;;;;;N;;;;;
1190F;DIVES AKURU LETTER GHA;Lo;0;L;;;;;N;;;;;
11910;DIVES AKURU LETTER NGA;Lo;0;L;;;;;N;;;;;
11911;DIVES AKURU LETTER CA;Lo;0;L;;;;;N;;;;;
11912;DIVES AKURU LETTER CHA;Lo;0;L;;;;;N;;;;;
11913;DIVES AKURU LETTER JA;Lo;0;L;;;;;N;;;;;
11914;<reserved>
11915;DIVES AKURU LETTER NYA;Lo;0;L;;;;;N;;;;;
11916;DIVES AKURU LETTER TTA;Lo;0;L;;;;;N;;;;;
11917;<reserved>
11918;DIVES AKURU LETTER DDA;Lo;0;L;;;;;N;;;;;
11919;DIVES AKURU LETTER DDHA;Lo;0;L;;;;;N;;;;;
1191A;DIVES AKURU LETTER NNA;Lo;0;L;;;;;N;;;;;
1191B;DIVES AKURU LETTER TA;Lo;0;L;;;;;N;;;;;
1191C;DIVES AKURU LETTER THA;Lo;0;L;;;;;N;;;;;
1191D;DIVES AKURU LETTER DA;Lo;0;L;;;;;N;;;;;
1191E;DIVES AKURU LETTER DHA;Lo;0;L;;;;;N;;;;;
1191F;DIVES AKURU LETTER NA;Lo;0;L;;;;;N;;;;;
11920;DIVES AKURU LETTER PA;Lo;0;L;;;;;N;;;;;
11921;DIVES AKURU LETTER PHA;Lo;0;L;;;;;N;;;;;
11922;DIVES AKURU LETTER BA;Lo;0;L;;;;;N;;;;;
11923;DIVES AKURU LETTER BHA;Lo;0;L;;;;;N;;;;;
11924;DIVES AKURU LETTER MA;Lo;0;L;;;;;N;;;;;
11925;DIVES AKURU LETTER -A;Lo;0;L;;;;;N;;;;;
11926;DIVES AKURU LETTER YA;Lo;0;L;;;;;N;;;;;
11927;DIVES AKURU LETTER RA;Lo;0;L;;;;;N;;;;;
11928;DIVES AKURU LETTER LA;Lo;0;L;;;;;N;;;;;
11929;DIVES AKURU LETTER VA;Lo;0;L;;;;;N;;;;;
1192A;DIVES AKURU LETTER SHA;Lo;0;L;;;;;N;;;;;
1192B;DIVES AKURU LETTER SSA;Lo;0;L;;;;;N;;;;;
1192C;DIVES AKURU LETTER SA;Lo;0;L;;;;;N;;;;;
1192D;DIVES AKURU LETTER HA;Lo;0;L;;;;;N;;;;;
1192E;DIVES AKURU LETTER LLA;Lo;0;L;;;;;N;;;;;
1192F;DIVES AKURU LETTER ZA;Lo;0;L;;;;;N;;;;;
11930;DIVES AKURU VOWEL SIGN AA;Mc;0;L;;;;;N;;;;;
11931;DIVES AKURU VOWEL SIGN I;Mc;0;L;;;;;N;;;;;
11932;DIVES AKURU VOWEL SIGN II;Mc;0;L;;;;;N;;;;;
11933;DIVES AKURU VOWEL SIGN U;Mc;0;L;;;;;N;;;;;
11934;DIVES AKURU VOWEL SIGN UU;Mc;0;L;;;;;N;;;;;
11935;DIVES AKURU VOWEL SIGN E;Mc;0;L;;;;;N;;;;;
11936;<reserved>
11937;DIVES AKURU VOWEL SIGN AI;Mc;0;L;;;;;N;;;;;
```

```
11938;DIVES AKURU VOWEL SIGN O;Mc;0;L;11935 11930;;;;N;;;;;
11939;<reserved>
1193A;<reserved>
1193B;DIVES AKURU SIGN ANUSVARA;Mn;0;NSM;;;;;N;;;;;
1193C;DIVES AKURU SIGN CANDRABINDU;Mn;0;NSM;;;;;N;;;;;
1193D;DIVES AKURU SIGN HALANTA;Mc;9;L;;;;;N;;;;;
1193E;DIVES AKURU VIRAMA;Mn;9;NSM;;;;;N;;;;;
1193F;DIVES AKURU PREFIXED NASAL SIGN;Mn;0;NSM;;;;;N;;;;;
11940;DIVES AKURU SIGN NUKTA;Mn;7;NSM;;;;;N;;;;;
11941;DIVES AKURU DOUBLE DANDA;Po;0;L;;;;;N;;;;;
11942;DIVES AKURU GAP FILLER;Po;0;L;;;;;N;;;;;
11943;DIVES AKURU END OF TEXT MARK;Po;0;L;;;;;N;;;;;
11950;DIVES AKURU DIGIT ZERO;Nd;0;L;;0;0;0;N;;;;;
11951;DIVES AKURU DIGIT ONE;Nd;0;L;;1;1;1;N;;;;;
11952;DIVES AKURU DIGIT TWO;Nd;0;L;;2;2;2;N;;;;;
11953;DIVES AKURU DIGIT THREE;Nd;0;L;;3;3;3;N;;;;;
11954;DIVES AKURU DIGIT FOUR;Nd;0;L;;4;4;4;N;;;;;
11955;DIVES AKURU DIGIT FIVE;Nd;0;L;;5;5;5;N;;;;;
11956;DIVES AKURU DIGIT SIX;Nd;0;L;;6;6;6;N;;;;;
11957;DIVES AKURU DIGIT SEVEN;Nd;0;L;;7;7;7;N;;;;;
11958;DIVES AKURU DIGIT EIGHT;Nd;0;L;;8;8;8;N;;;;;
11959;DIVES AKURU DIGIT NINE;Nd;0;L;;9;9;9;N;;;;;
```

5.2 Linebreak data: `LineBreak.txt`

```
11900..11906;AL    # DIVES AKURU LETTER A..DIVES AKURU LETTER E
11908;AL           # DIVES AKURU LETTER O
1190C..11913;AL    # DIVES AKURU LETTER KA..DIVES AKURU LETTER JA
11915..11916;AL    # DIVES AKURU LETTER NYA..DIVES AKURU LETTER TTA
11918..1192F;AL    # DIVES AKURU LETTER DDA..DIVES AKURU LETTER ZA
11930..11935;CM    # DIVES AKURU VOWEL SIGN AA..DIVES AKURU VOWEL SIGN E
11937..11938;CM    # DIVES AKURU VOWEL SIGN AI..DIVES AKURU VOWEL SIGN O
1193B..1193D;CM    # DIVES AKURU SIGN ANUSVARA..DIVES AKURU SIGN HALANTA
1193E;CM           # DIVES AKURU VIRAMA
1193F;CM           # DIVES AKURU PREFIXED NASAL SIGN
11940;CM           # DIVES AKURU SIGN NUKTA
11941..11943;BA    # DIVES AKURU DOUBLE DANDA..DIVES AKURU END OF TEXT MARK
11950..11959;NU    # DIVES AKURU DIGIT ZERO..DIVES AKURU DIGIT NINE
```

5.3 Indic syllabic categories: `IndicSyllabicCategory.txt`

```
# Indic_Syllabic_Category=Bindu

1193B..1193C ; Bindu             # Mn   [2] DIVES AKURU SIGN ANUSVARA..
                                            DIVES AKURU SIGN CANDRABINDU

# Indic_Syllabic_Category=Nukta

11940        ; Nukta             # Mn       DIVES AKURU SIGN NUKTA

# Indic_Syllabic_Category=Pure_Killer

1193D        ; Pure_Killer       # Mn       DIVES AKURU SIGN HALANTA

# Indic_Syllabic_Category=Invisible_Stacker

1193E        ; Invisible_Stacker # Mn       DIVES AKURU VIRAMA
```

```
# Indic_Syllabic_Category=Vowel_Independent

11900..11906 ; Vowel_Independent # Lo   [7] DIVES AKURU LETTER A..
                                            DIVES AKURU LETTER E

11909        ; Vowel_Independent # Lo   [2] DIVES AKURU LETTER O

# Indic_Syllabic_Category=Vowel_Dependent

11930..11935 ; Vowel_Dependent   # Mc   [6] DIVES AKURU VOWEL SIGN AA..
                                            DIVES AKURU VOWEL SIGN E

11937..11938 ; Vowel_Dependent   # Mc   [2] DIVES AKURU VOWEL SIGN AI..
                                            DIVES AKURU VOWEL SIGN O

# Indic_Syllabic_Category=Consonant

1190C..11913 ; Consonant         # Lo   [8] DIVES AKURU LETTER KA..
                                            DIVES AKURU LETTER JA

11915..11915 ; Consonant         # Lo   [2] DIVES AKURU LETTER NYA..
                                            DIVES AKURU LETTER TTA

11918..1192F ; Consonant         # Lo  [25] DIVES AKURU LETTER NYA..
                                            DIVES AKURU LETTER ZA

# Indic_Syllabic_Category=Consonant_Prefixed

1193F  ; Consonant_Prefixed      # Lo       DIVES AKURU PREFIXED NASAL SIGN

# Indic_Syllabic_Category=Number

11950..11959 ; Number            # Nd  [10] DIVES AKURU DIGIT ZERO..
                                            DIVES AKURU DIGIT NINE
```

5.4 Indic positional categories: `IndicPositionalCategory.txt`

```
# Indic_Positional_Category=Right

11930..11934 ; Right          # Mc   [5] DIVES AKURU VOWEL SIGN AA..
                                           DIVES AKURU VOWEL SIGN UU
1193D        ; Right          # Mc       DIVES AKURU SIGN HALANTA

# Indic_Positional_Category=Left

11935        ; Left           # Mc       DIVES AKURU VOWEL SIGN E
11937        ; Left           # Mc       DIVES AKURU VOWEL SIGN AI

# Indic_Positional_Category=Left_And_Right

11938        ; Left_And_Right # Mc       DIVES AKURU VOWEL SIGN O

# Indic_Positional_Category=Top

1193B..1193C ; Top            # Mn   [2] DIVES AKURU SIGN ANUSVARA..
                                           DIVES AKURU SIGN CANDRABINDU
1193F        ; Top            # Mn       DIVES AKURU PREFIXED NASAL SIGN
```

```
# Indic_Positional_Category=Bottom

11940        ; Bottom         # Mn       DIVES AKURU SIGN NUKTA
```

6 References

Anderson, Deborah, et. al. 2017 “Recommendations to UTC #153 October 2017 on Script Proposals”. L2/17-384. https://www.unicode.org/L2/L2017/17384-script-ad-hoc-recs.pdf

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: Koḷu-Fuṛi 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

ﷺ ﷺ [= Bodufenvalhuge Sidi]. 1959. ﷺ [= *Divehi Akuru*]. ﷺ [= *evvana bai* (‘part I’)]. 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

Naseema Mohamed. 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. ދިވެހި އަކުރު [= *Divehi Akuru*]. އެއްވަނަ ބައި [= *evvana bai* ('part ɪ')]. 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`

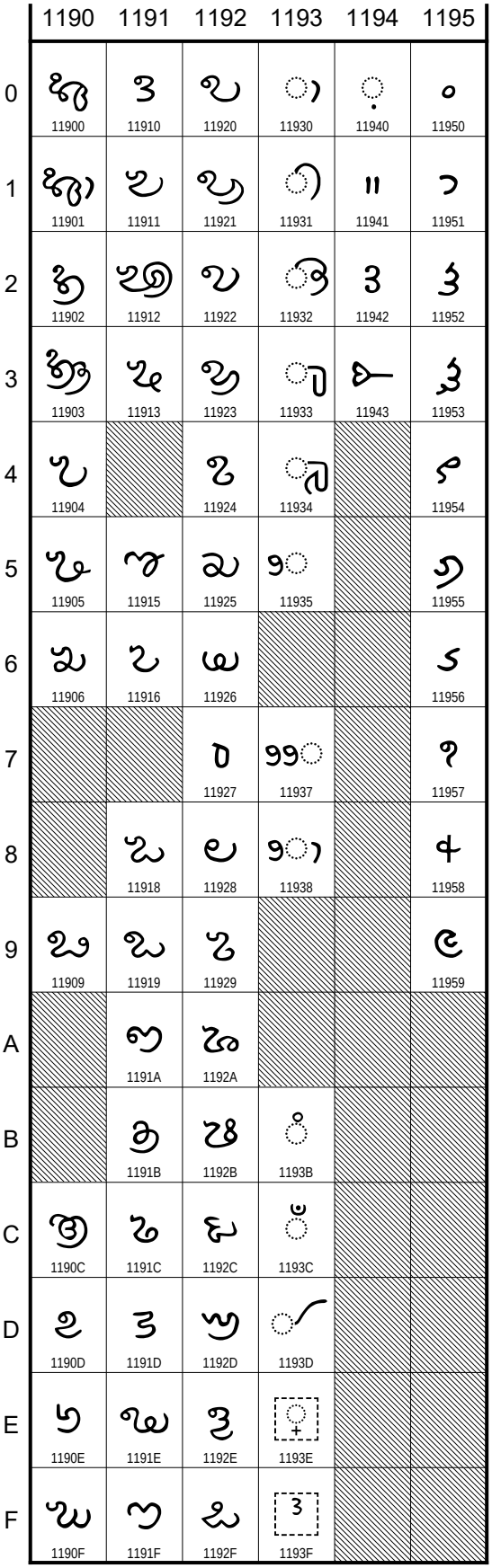
Wikipedia. "ދަނބިދޫ ލޯމާފާނު" [= *Dam̆bidū Lōmāfānu*]. `http://dv.wikipedia.org/wiki/`ދަނބިދޫ ލޯމާފާނު.

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.

7 Acknowledgments

This proposal would not have been possible without the invaluable assistance of Jost Gippert (Goethe-Universität Frankfurt am Main), who in addition to providing details of numerous characters and styles of the script, granted me permission to use digital images of Dives Akuru sources from the TITUS (Thesaurus Indogermanischer Text- und Sprachmaterialien) Project, and also provided me with his personal unpublished script charts. I owe a great gratitude to Xavier Romero-Frias for helping me to initiate this project years ago and for providing me with information to learn the script and to prepare the encoding. I am thankful to him for insightful discussions and for providing me with specimens of the script, especially a copy of Bodufenvalhuge Sidi's *Divehi Akuru*.

This present project to encode Dives Akuru is made possible in part by a grant from the Adopt-A-Character program of the Unicode Consortium, and is supervised by Deborah Anderson and Rick McGowan. Earlier projects in 2009 and 2010 were made possible in part by a grant from the United States National Endowment for the Humanities, which funded the Universal Scripts Project (part of the Script Encoding Initiative at the University of California, Berkeley). All views and recommendations expressed here are those of the author.


1190 1191 1192 1193 1194 1195
0 11900 11910 11920 11930 11940 11950
1 11901 11911 11921 11931 11941 11951
2 11902 11912 11922 11932 11942 11952
3 11903 11913 11923 11933 11943 11953
4 11904 11924 11934 11954
5 11905 11915 11925 11935 11955
6 11906 11916 11926 11956
7 11927 11937 11957
8 11918 11928 11938 11958
9 11909 11919 11929 11959
A 1191A 1192A
B 1191B 1192B 1193B
C 1190C 1191C 1192C 1193C
D 1190D 1191D 1192D 1193D
E 1190E 1191E 1192E 1193E
F 1190F 1191F 1192F 1193F

This block supports both Evela Akuru and Dives Akuru.

Independent vowels

11900 DIVES AKURU LETTER A
11901 DIVES AKURU LETTER AA
11902 DIVES AKURU LETTER I
11903 DIVES AKURU LETTER II
11904 DIVES AKURU LETTER U
11905 DIVES AKURU LETTER UU
11906 DIVES AKURU LETTER E
11907 <reserved>
11908 <reserved>
11909 DIVES AKURU LETTER O
1190A <reserved>
1190B <reserved>

Consonants

1190C DIVES AKURU LETTER KA
1190D DIVES AKURU LETTER KHA
1190E DIVES AKURU LETTER GA
1190F DIVES AKURU LETTER GHA
11910 DIVES AKURU LETTER NGA
11911 DIVES AKURU LETTER CA
11912 DIVES AKURU LETTER CHA
11913 DIVES AKURU LETTER JA
11914 <reserved>
11915 DIVES AKURU LETTER NYA
11916 DIVES AKURU LETTER TTA
11917 <reserved>
11918 DIVES AKURU LETTER DDA
11919 DIVES AKURU LETTER DDHA
1191A DIVES AKURU LETTER NNA
1191B DIVES AKURU LETTER TA
1191C DIVES AKURU LETTER THA
1191D DIVES AKURU LETTER DA
1191E DIVES AKURU LETTER DHA
1191F DIVES AKURU LETTER NA
11920 DIVES AKURU LETTER PA
11921 DIVES AKURU LETTER PHA
11922 DIVES AKURU LETTER BA
11923 DIVES AKURU LETTER BHA
11924 DIVES AKURU LETTER MA
11925 DIVES AKURU LETTER -A
• used as a vowel carrier
11926 DIVES AKURU LETTER YA
11927 DIVES AKURU LETTER RA
11928 DIVES AKURU LETTER LA
11929 DIVES AKURU LETTER VA
1192A DIVES AKURU LETTER SHA
1192B DIVES AKURU LETTER SSA
1192C DIVES AKURU LETTER SA
1192D DIVES AKURU LETTER HA
1192E DIVES AKURU LETTER LLA
1192F DIVES AKURU LETTER ZA

Dependent vowel signs

11930 DIVES AKURU VOWEL SIGN AA
11931 DIVES AKURU VOWEL SIGN I
11932 DIVES AKURU VOWEL SIGN II
11933 DIVES AKURU VOWEL SIGN U
11934 DIVES AKURU VOWEL SIGN UU
11935 DIVES AKURU VOWEL SIGN E
11936 <reserved>
11937 DIVES AKURU VOWEL SIGN AI
11938 DIVES AKURU VOWEL SIGN O
≡ 11935 ◌𑥘 11930 ◌𑥃
11939 <reserved>
1193A <reserved>

Nasalization signs

1193B DIVES AKURU SIGN ANUSVARA
1193C DIVES AKURU SIGN CANDRABINDU

Halanta

1193D DIVES AKURU SIGN HALANTA
= sukun
• silences the inherent vowel

Virama

1193E DIVES AKURU VIRAMA
• control character for conjunct production
• also used for producing a ligature of devowelized consonant and independent vowel letter

Prefixed nasal sign

1193F DIVES AKURU PREFIXED NASAL SIGN
• used for cluster-initial homorganic nasal

Nukta

11940 DIVES AKURU SIGN NUKTA
• modern sign used for extending the alphabet

Punctuation

11941 DIVES AKURU DOUBLE DANDA
11942 DIVES AKURU GAP FILLER
11943 DIVES AKURU END OF TEXT MARK

Digits

11950 DIVES AKURU DIGIT ZERO
11951 DIVES AKURU DIGIT ONE
11952 DIVES AKURU DIGIT TWO
11953 DIVES AKURU DIGIT THREE
11954 DIVES AKURU DIGIT FOUR
11955 DIVES AKURU DIGIT FIVE
11956 DIVES AKURU DIGIT SIX
11957 DIVES AKURU DIGIT SEVEN
11958 DIVES AKURU DIGIT EIGHT
11959 DIVES AKURU DIGIT NINE

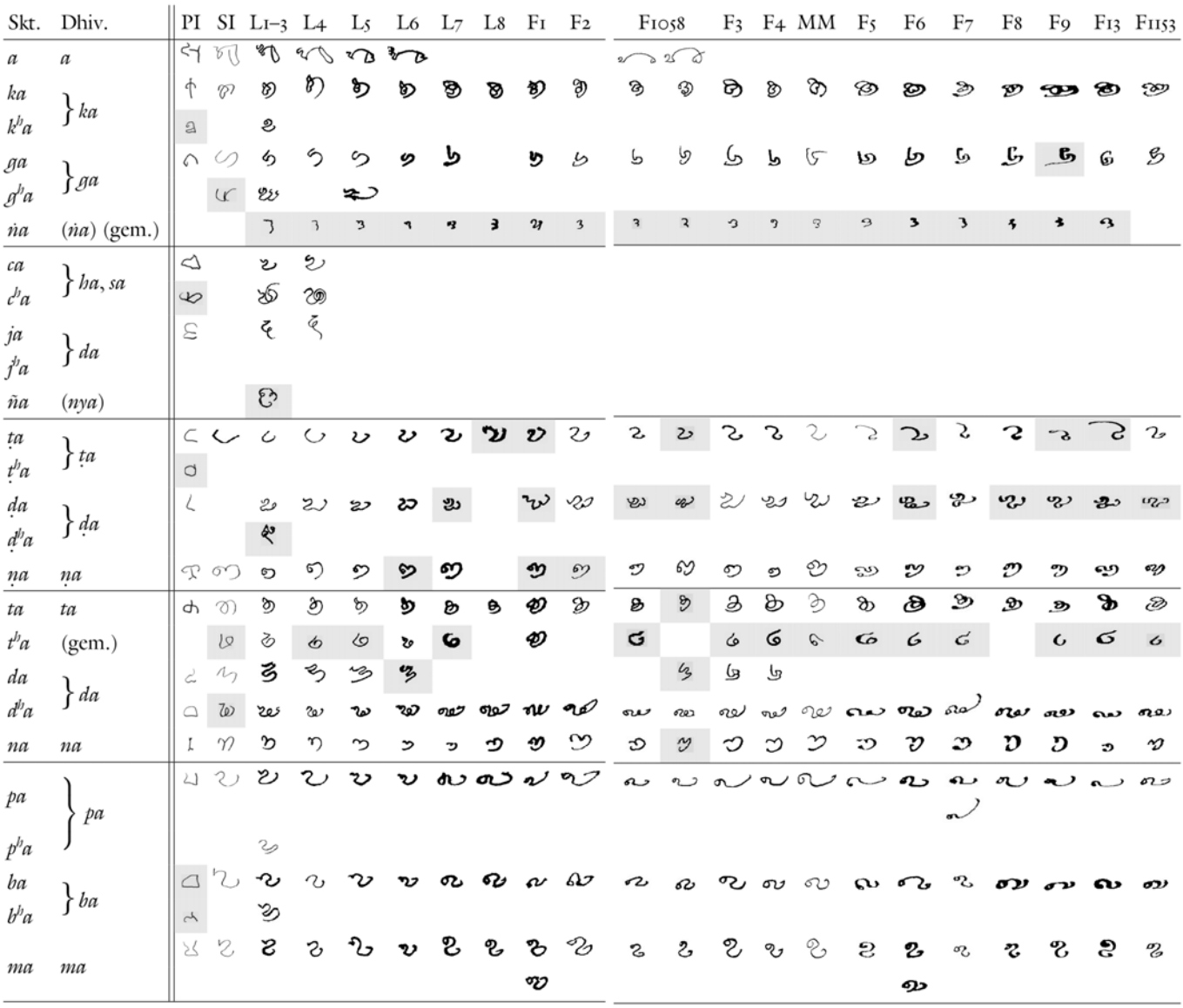


Figure 1: Inventory of Dives Akuru letters A, KA .. MA across various *lōmāfānu* and *fatkoḷu* (from Gippert 2013: Table 1). Continued in figure 2.

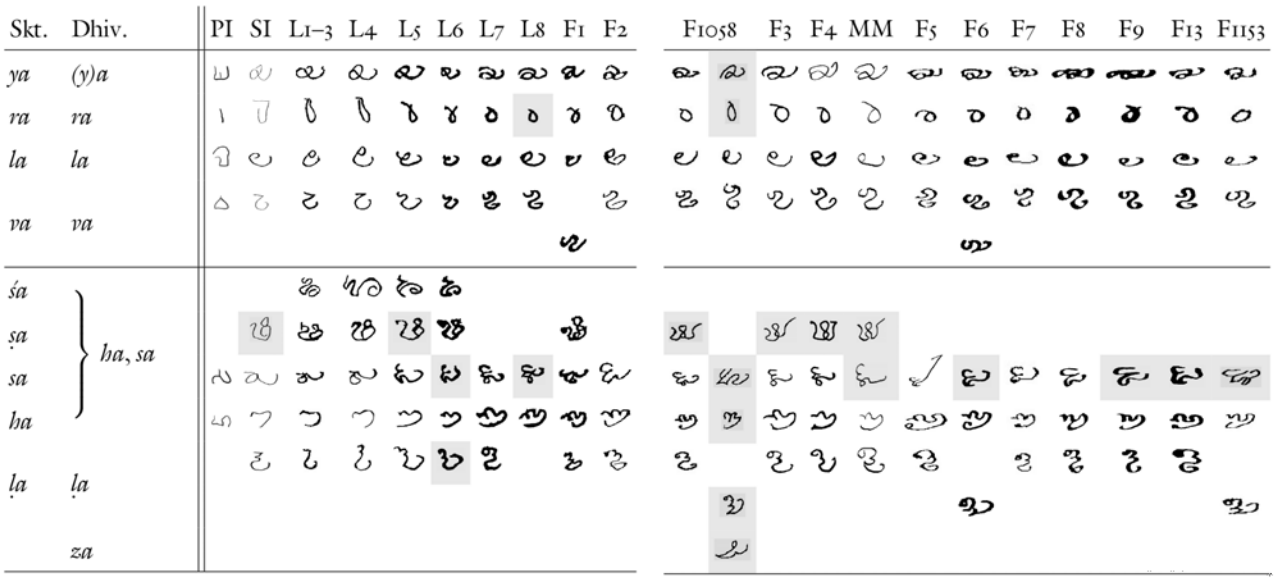
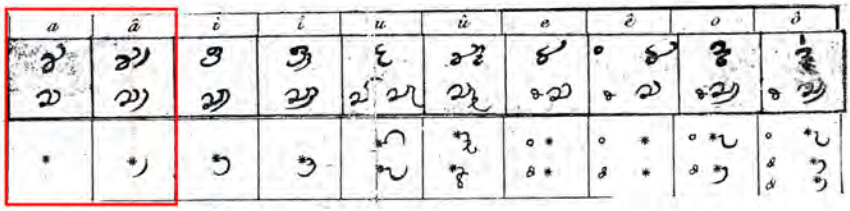


Figure 2: Inventory of Dives Akuru letters -A .. ZA across various *lōmāfānu* and *fatkoḷu* (from Gippert 2013: Table 1). Continued from figure 1.

Usage of 𑤀 -A for 'type 2' forms for 𑤀 *a* (red) and 𑤁 *aa* (blue) in L2.

Usage of 𑤀 A (red) and 𑤁 AA (blue) in L3.

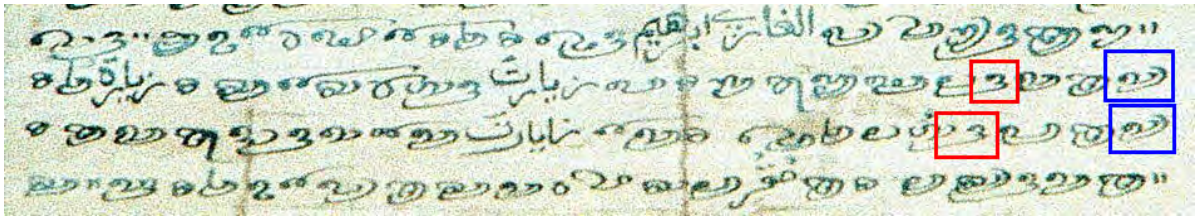


Usage of 𑤀 -A for *a* in G (excerpted from fig. 49).

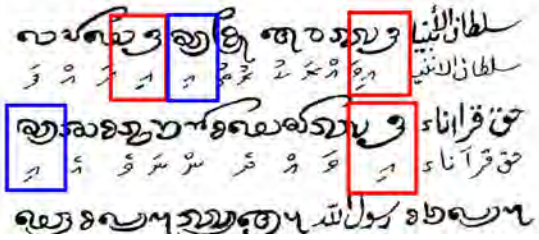
Figure 3: Specimens of the vowel letters A and AA.

Usage of the vowel letter 𑤆 I and the ‘type 2’ form 𑤅 *’i* in L2.

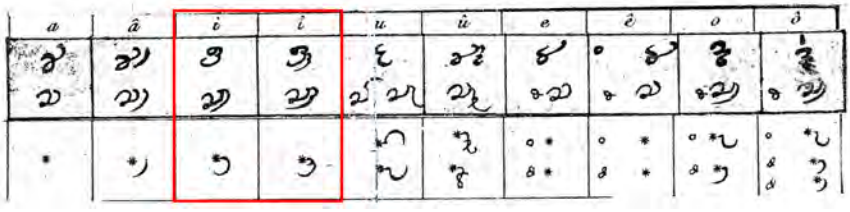
Usage of the vowel letter 𑤆 I in L3.



Usage of the vowel letter 𑤆 I and the ‘type 2’ form 𑤅 *’i* in F6.



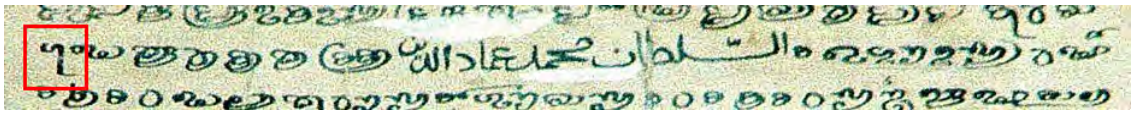
Independent form of *i* written using the variant 𑤃 (red) of 𑤆 I and the ‘type 2’ form 𑤅 *’i* (blue) in Sidi (1959: 16).



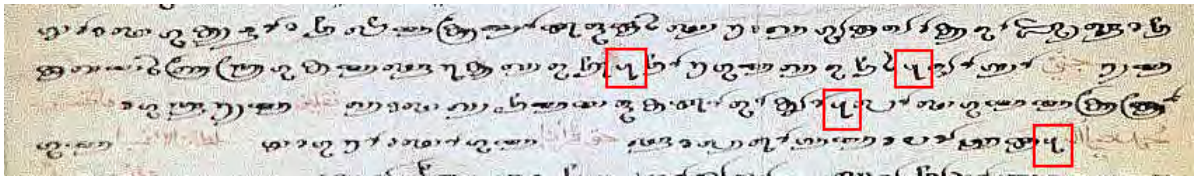
Specimen of *i* in G (excerpted from fig. 49).

Figure 4: Specimens of the vowel letters I and II.

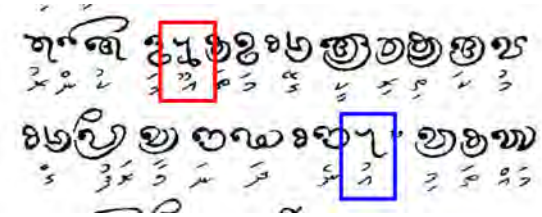
Usage of 𑤉 U in L3.



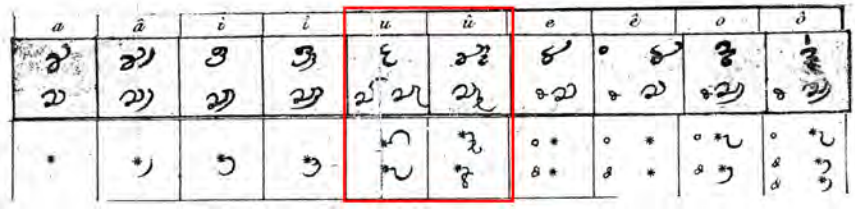
Shape of 𑤉 U in F6.



Shape of 𑤉 U in F8.



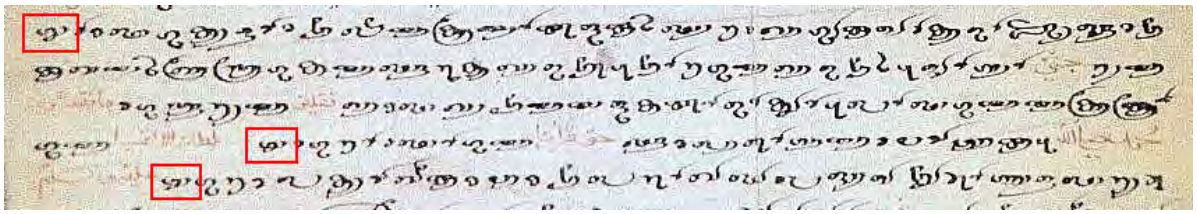
Representation of 𑤉 U as 𑤌 (blue) and 𑤊 UU as variant 𑤋 (red) in Sidi (1959: 29).



Specimen of *u* in G (excerpted from fig. 49).

Figure 5: Specimens of the vowel letters U and UU.

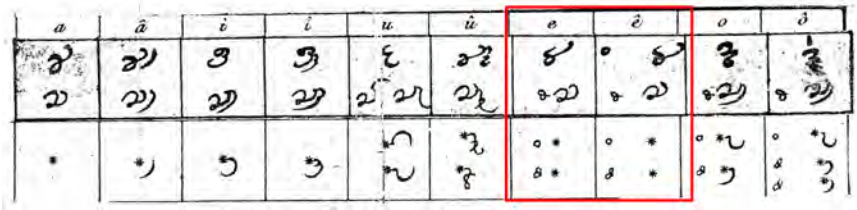
Usage of 𑤆 E and the 'type 2' form *'e* in L4.



Shape of 𑤆 E in F8.

Shape of 𑤆 E in F9.

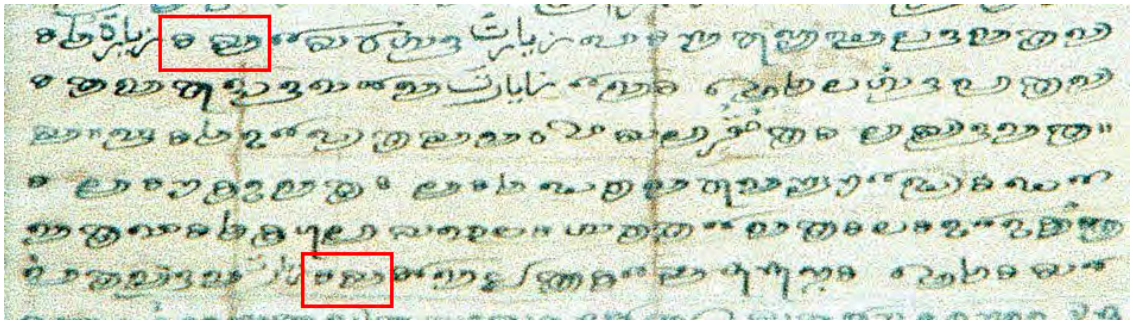
Shape of 𑤆 E in F11.



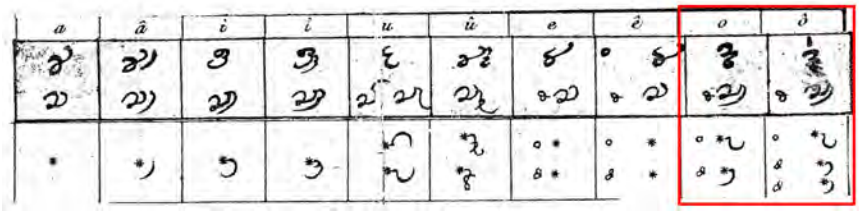
Specimen of *e* in G (excerpted from fig. 49).

Figure 6: Specimens of the vowel letter E.

Usage of 𑤮 o in L3.



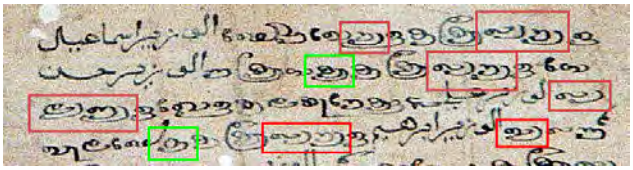
Usage of the ‘type 2’ form of 𑤇𑤮 *o* in F6.



Specimen of *o* in G (excerpted from fig. 49).

Figure 7: Specimens of the vowel letter o.

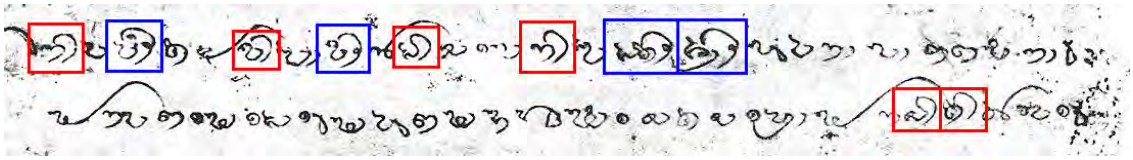
Shape of VOWEL SIGN AA in L1.



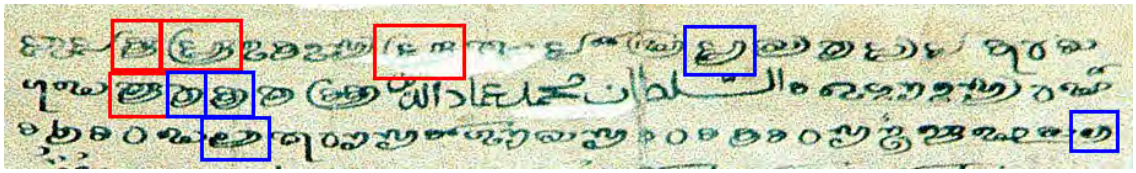
Shape of VOWEL SIGN AA in F12. Compare to VOWEL SIGN I (green).

Figure 8: Specimens of VOWEL SIGN AA.

Shape of VOWEL SIGN I and VOWEL SIGN II in L2.



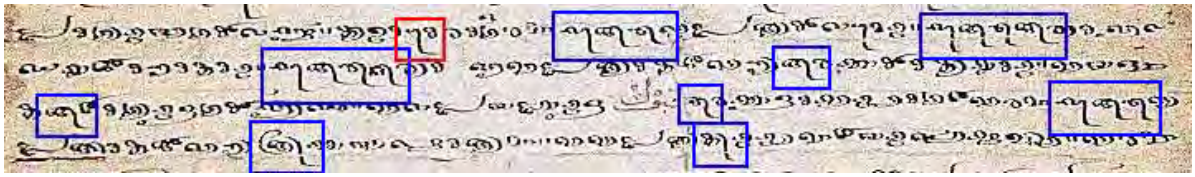
Shape of VOWEL SIGN I and VOWEL SIGN II in L5.



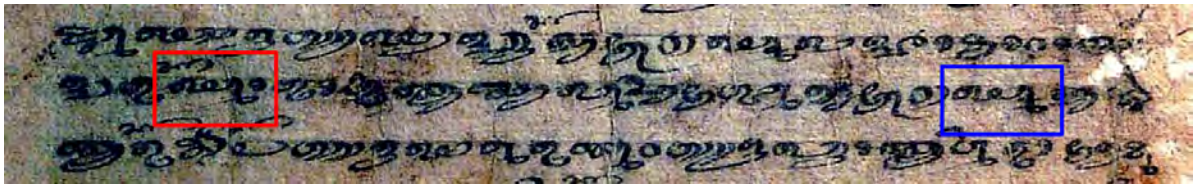
Shape of VOWEL SIGN I and VOWEL SIGN II in F6.

Figure 9: Specimens of VOWEL SIGN I and VOWEL SIGN II.

The ◌ු VOWEL SIGN U (red) and ◌ූ VOWEL SIGN UU (blue) in L4.



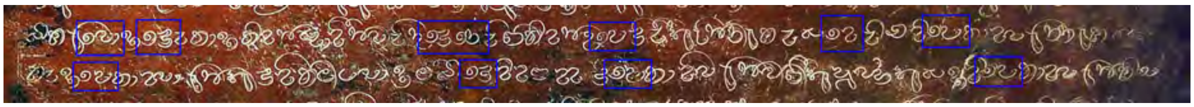
The ◌ු VOWEL SIGN U written with the later form ◌ු in F5.



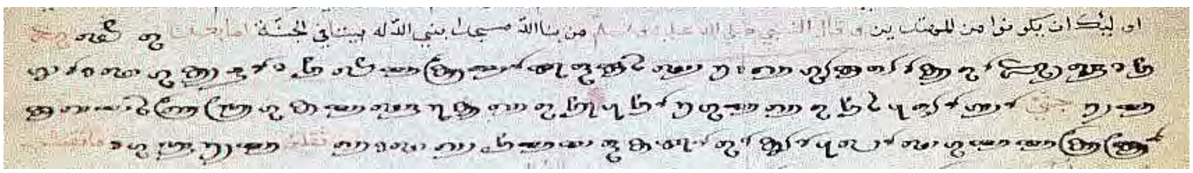
The ◌ු VOWEL SIGN U and ◌ූ VOWEL SIGN UU in F1153 written, respectively, with the forms ◌ු and ◌ූ in *dhu* and *dhū*.

Usage of ◌ූ VOWEL SIGN UU in L2.

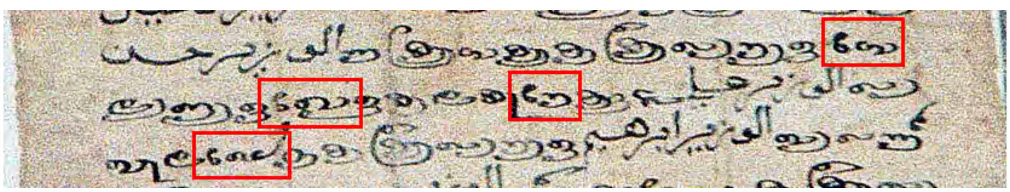
Figure 10: Specimens of the ◌ු VOWEL SIGN U and ◌ූ VOWEL SIGN UU.



Usage of 𑤷◌ VOWEL SIGN E in L1.



Usage of 𑤷◌ VOWEL SIGN E in F8.

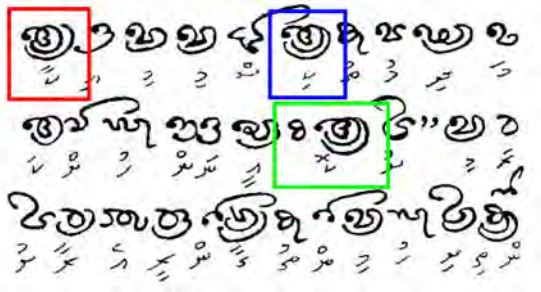


Idiosyncratic form □ of 𑤷◌ VOWEL SIGN E in F12.

Usage of 𑤸◌ VOWEL SIGN AI in *lai* in L2.

Figure 11: Specimens of VOWEL SIGN E and VOWEL SIGN AI.

Usage of VOWEL SIGN O in L2.



Representation of the vowel signs *a*, *i*, and *o* with *ka* in Sidi (1959: 24). The excerpt shows the syllable *ko* (green) written with a variant of 𑤷𑤺 VOWEL SIGN O whose right-side element attaches to the base, similar to the behavior of the 𑤺 VOWEL SIGN I in *ki* (blue), which differs from the 𑤺 VOWEL SIGN AA, which does not attach to the base.

Representation of dependent signs for the vowels *o* and *ō* in Sidi (1959: 24). The excerpt shows the syllable *ko* and *bō*, both written using the same vowel sign. It suggests that these vowels were not differentiated by the time of Sidi's writing. Both vowels may be represented using the proposed 𑤷𑤺 VOWEL SIGN O.

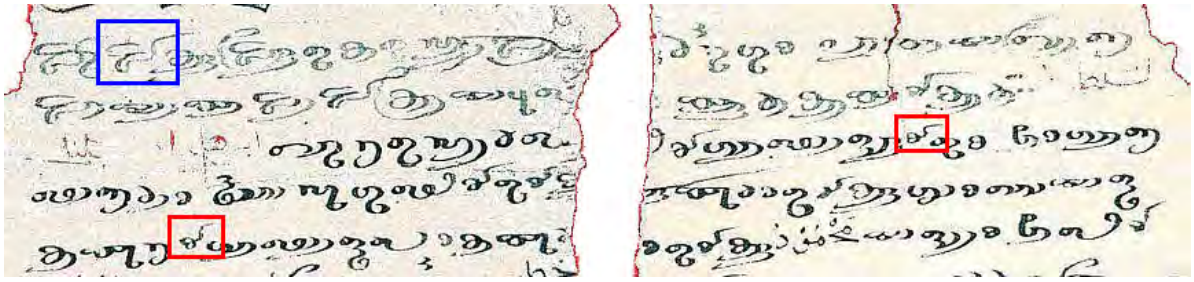
Figure 12: Specimens of VOWEL SIGN O.

Usage of ◌ॅ CANDRABINDU in *oṁ* in IC 009, upper part (from Gippert 2014: fig. 7b).

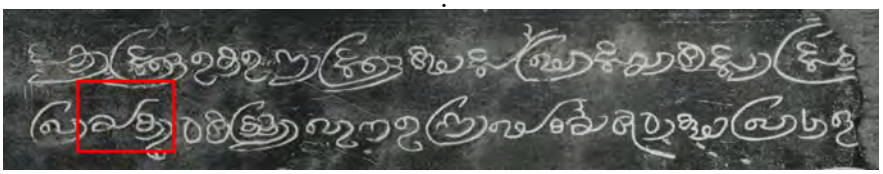
Usage of ◌ं ANUSVARA in *mmaṃ* in L1.

Usage of ◌ं ANUSVARA in *ṇāṃ* in IC 009 (from Gippert 2014: fig. 7b).

Figure 13: Specimens of CANDRABINDU and ANUSVARA.

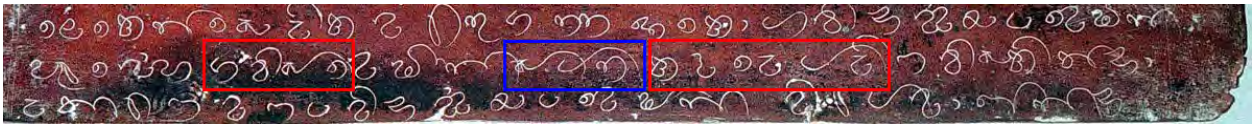


Usage of 𑤿 HALANTA for marking 𑤢 SA in the cluster 𑤢𑤿𑤩 *sta* (blue), and with 𑤩 TA for indicating glottal stop using 𑤹 (red) in F9.



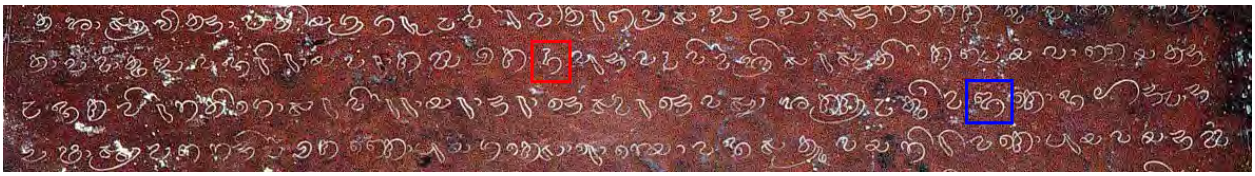
Usage of 𑤿 HALANTA with 𑤬 -A for representing *ú* in *uttara* in L8.

Usage of 𑤿 HALANTA and 𑤶 VOWEL SIGN U for writing *bu* in L3: the former sign occurs in 𑤸 *bú* in *dhabúduvú* (red) and the latter in 𑤸𑤶 in *budu* (blue).

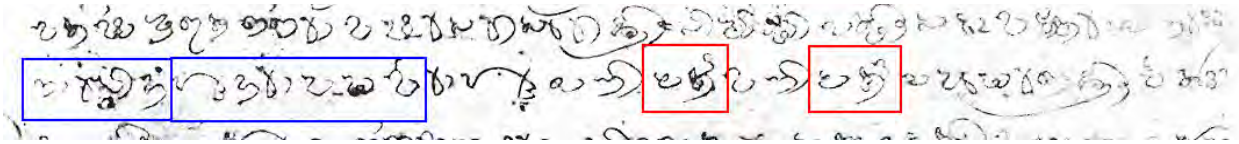


Usage of 𑤿 HALANTA for marking both the vowel *ú* and bare consonants in L4. The sign represents the *ú* in the word *súṭúna* (blue) with 𑤢 SA in 𑤢𑤿 *sú* and 𑤸𑤿 *ṭú*. The word *gamis* (red) contains a bare *s* written with HALANTA as 𑤢𑤿. The word *kaḷaveṭ* (red) contains word-final *ṭ* written as 𑤸𑤿.

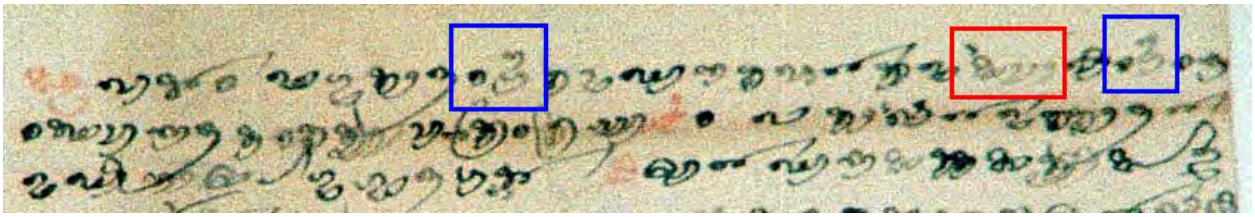
Figure 14: Representations of HALANTA.



The syllable 𑤙 *ṅga* written using the 𑤾 PREFIXED NASAL SIGN (red) and 𑤙𑥃 *ṅga* written as a conjunct.

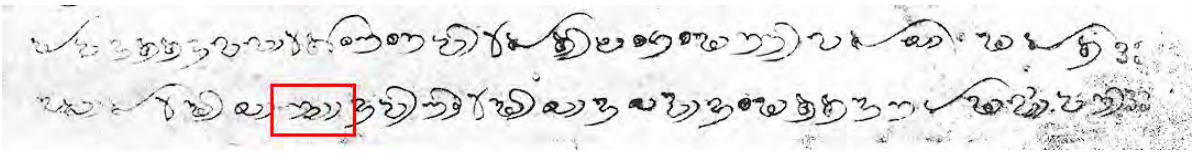


𑤙 NGA in the clusters *ṅka* and *ṅga* in L5: *nārasiṅga* (blue), *aṅgarāvadhama* (blue), and two instances of *laṅka* (red).



𑤙 NGA in the conjunct *ṅge* (red) and 𑤾 PREFIXED NASAL SIGN in the syllable *ṅsvā* in F2.

Figure 15: Representations of the letter NGA.

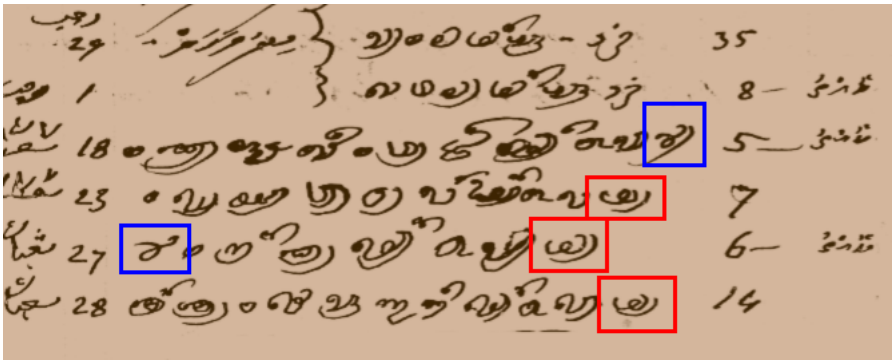


The conjunct *nyā* in L5.

Examples of *-ya* conjuncts in L3: *tya* (red) in the name *gaghanādītya* and *dya* (blue) in the word *rādya*.

The conjunct *yya* in IC 009 (from Gippert 2014: fig. 15, 16).

Figure 16: Representations of conjuncts with *-ya*.



Usage of 𑤬 YA in *yā* (red) in the word *rupiyā* in HMK (excerpted from fig. 34; analysis by Gippert, personal communication, December 2017). Shown for contrastive usage is 𑤅 -A in the 'type 2' forms *ā* (blue; line 3) and *a* (blue, line 5).

Figure 17: Representations of the letter YA.

◌𑤾 *repha* in the *rmma* in the name *daṛmmānanda* (red), and ◌𑤿 *ra-kāra* in *tri* in *triṅśati* and *śrī* in L2. Also note the old form 𑤢 of 𑤣 RA (green).

A syllable which might be interpreted as either *pṛ* or *pru*, in which the VOWEL SIGN U is written as a loop at the terminal of the *ra-kāra*.

Figure 18: Representations of 𑤣 RA.

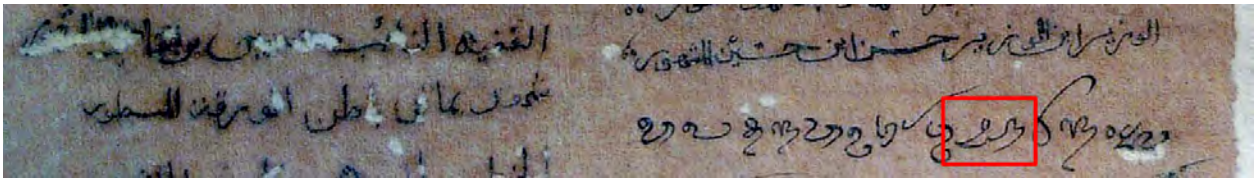
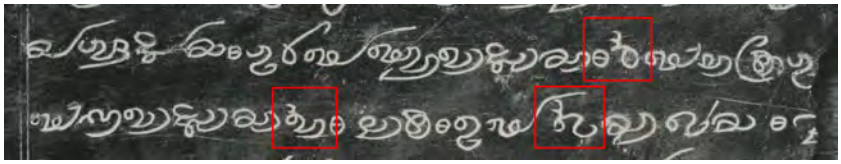
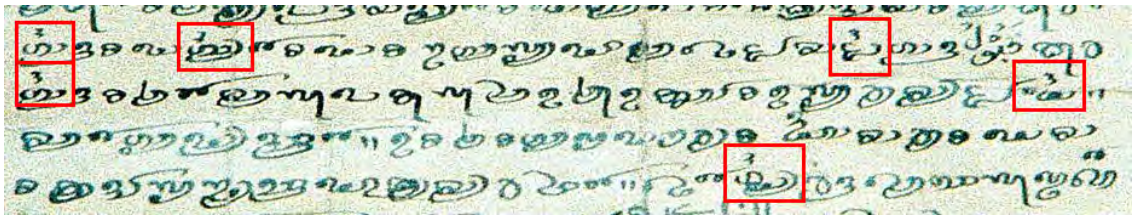


Figure 19: Usage of 𑤮 ZA in the syllable *zī* in *vazīru* in F1058.



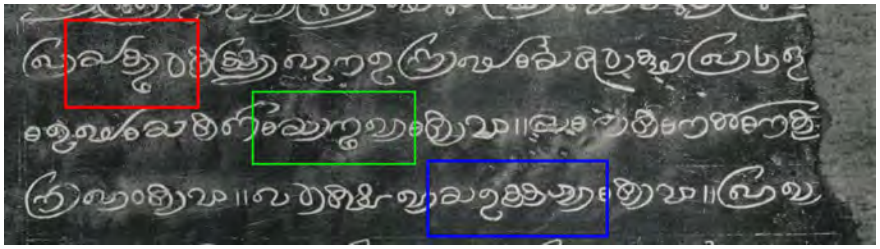
Usage of the 𑤿 PREFIXED NASAL SIGN in the syllables *ňre*, *ňmi*, and *ňba* in L8.



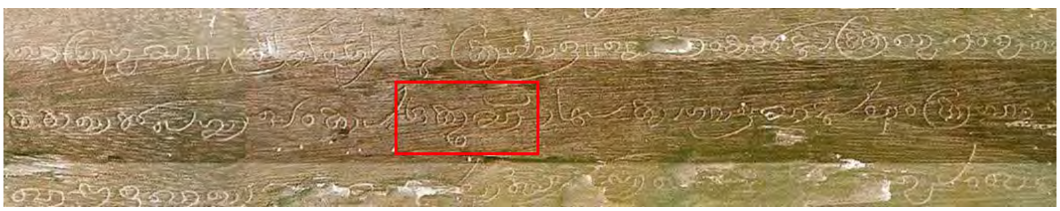
Usage of the 𑤿 PREFIXED NASAL SIGN in F6, written detached from the letter in *ňva*, *ňvā*, *ňsa*, *ňva*, *ňdha*, *ňḍā*.

Compare the attached *ňsa* in L8 (here) with the detached *ňsa* in F6.

Figure 20: Representations of the PREFIXED NASAL SIGN.



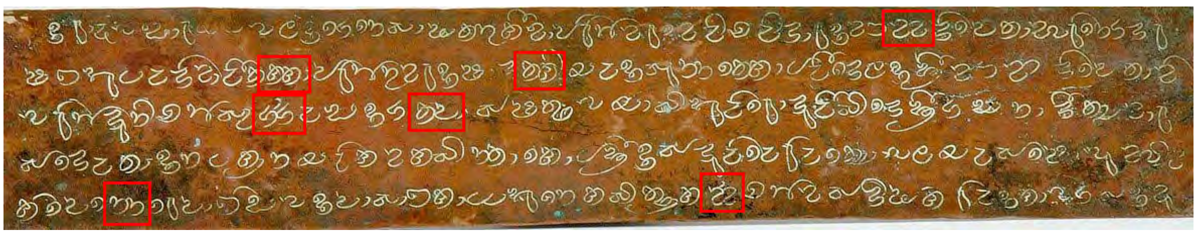
Representations of geminate clusters *tta* and *nna* in L8. The first *tta* occurs in *uttara* (red) as the ligature 𑤛𑤾𑤜 (𑤛 TA + 𑤜 THA). The second in *amattavi* (blue) as the touching conjunct 𑤛𑤾𑤛 (𑤛 TA + 𑤛 TA). The *nna* occurs in *onnami* (green) as the ligature 𑤟𑤾𑤜 (𑤟 NA + 𑤜 THA).



The geminate cluster *kka* represented as 𑤌𑤾𑤜 *ktha* in the word *dakka'i* in F3.

The geminate clusters *ssa* and *vva* represented as 𑤬𑤰 (𑤬 SA + 𑤰 -A) (red) and 𑤩𑤰 (𑤩 VA + 𑤰 -A) (blue), respectively in Sidi (1959: 22).

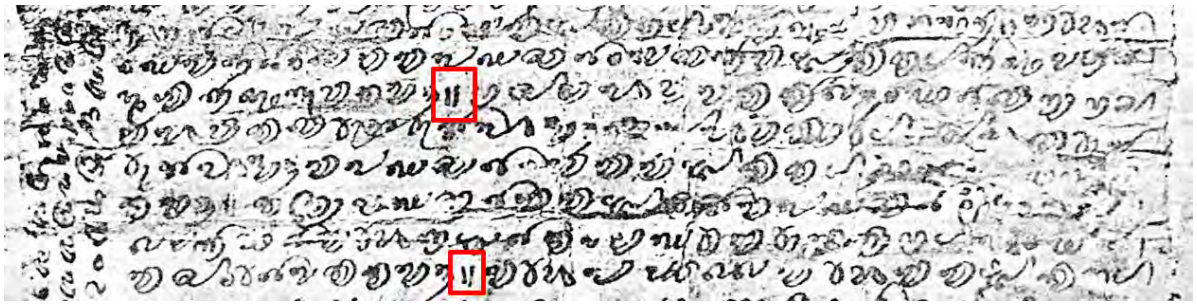
Figure 21: Representation of geminates using conjuncts.



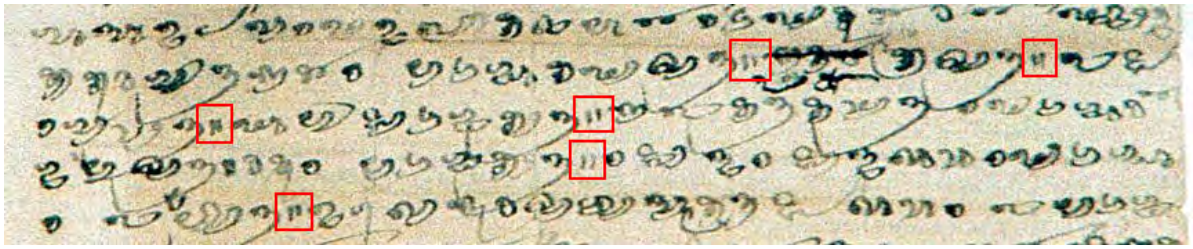
'Touching' conjuncts in L2, from top: *mma*, *kka*, *tka*, *rgga*, *tpa*, *nna*, *rmma*.

Comparison of the 'touching' conjunct *tka* and the syllable sequence *taka* in L4.

Figure 22: Specimens of 'touching' conjuncts.



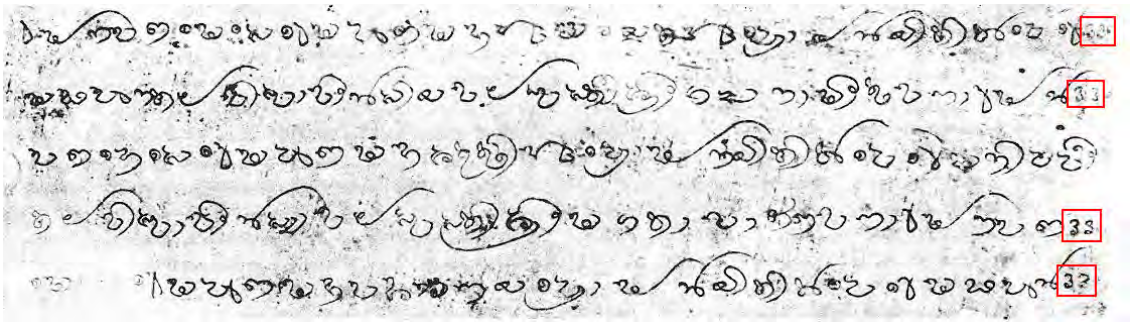
Usage of the 𑥄 DOUBLE DANDA in F1.



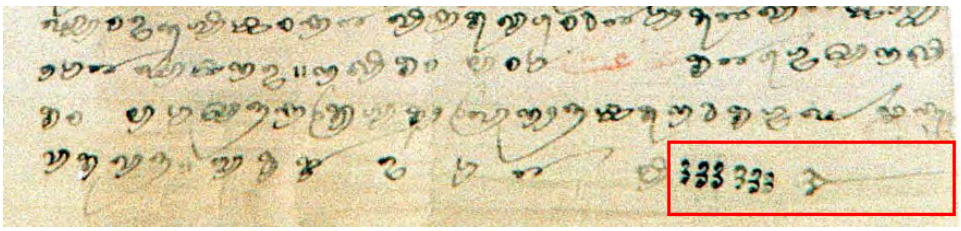
Usage of the 𑥄 DOUBLE DANDA in F2.

Usage of the 𑥄 DOUBLE DANDA in F9.

Figure 23: Usage of the 𑥄 DOUBLE DANDA.

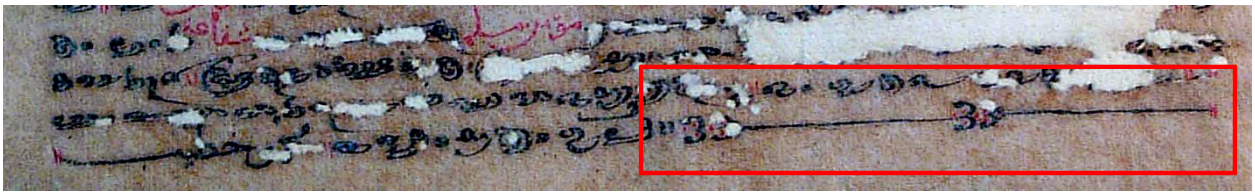


𑥐 GAP FILLER at the end of lines in L5.



Usage of the 𑥐 GAP FILLER and 𑥄 END OF TEXT MARK at the end of F2.

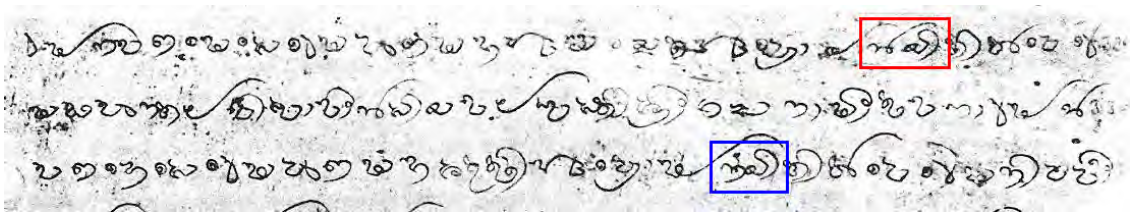
𑥐 GAP FILLER and 𑥄 END OF TEXT MARK at the end of F9.



𑥅 DOUBLE DANDA, 𑥐 GAP FILLER, and 𑥄 END OF TEXT MARK in F1058.

Figure 24: Representations of 𑥅 DOUBLE DANDA, 𑥐 GAP FILLER, and 𑥄 END OF TEXT MARK.

The word boundary in the phrase *avúrodûn ikit* written conventionally using "-𑤦𑤿-" (NA + HALANTA + I) [red], and using a 'false conjunct' "-𑤦𑤲-" (NA + I) [blue] in L3.



The word boundary in the phrase *avúrodûn ikit* written conventionally using "-𑤦𑤿𑤩-" (NA + HALANTA + *'i*) [red], and using a 'false conjunct' "-𑤦𑤩-" (NA + the 'type 2' form for *i*) [blue] in L5. Compare to the actual conjunct *nya* in L5 shown in fig. 16.

The word boundary in the phrase *vat arṅdha* written using a 'false conjunct' "-𑤢𑤳-" (TA + A) in L2.

The word boundary in the phrase *asarakdān eki* written using a 'false conjunct' "-𑤦𑤬-" (NA + E) in L3.

Figure 25: Examples of 'false conjuncts'

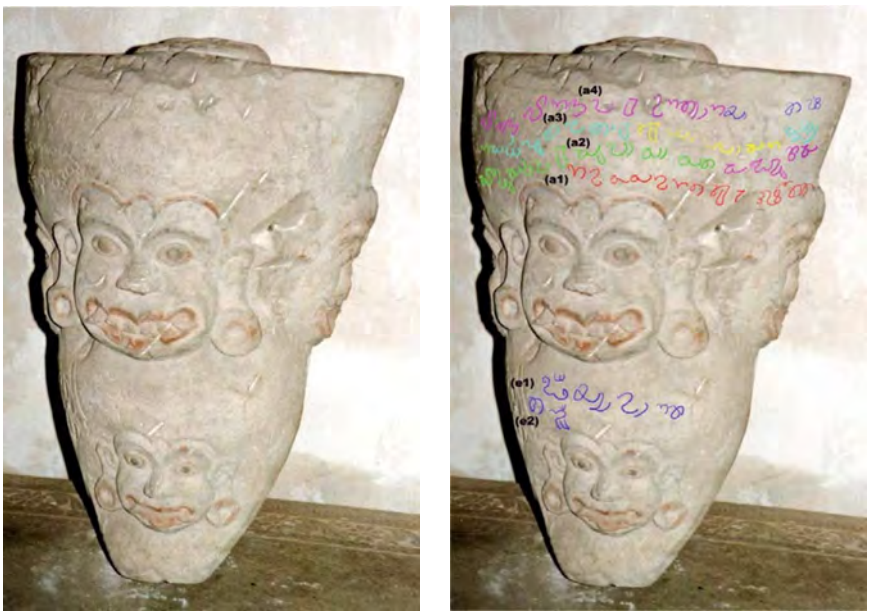


Figure 26: IC 009: a Vajrayana statue from Māle (from Gippert 2013: figures 1, 3). The inscription has been traced in color by Gippert.

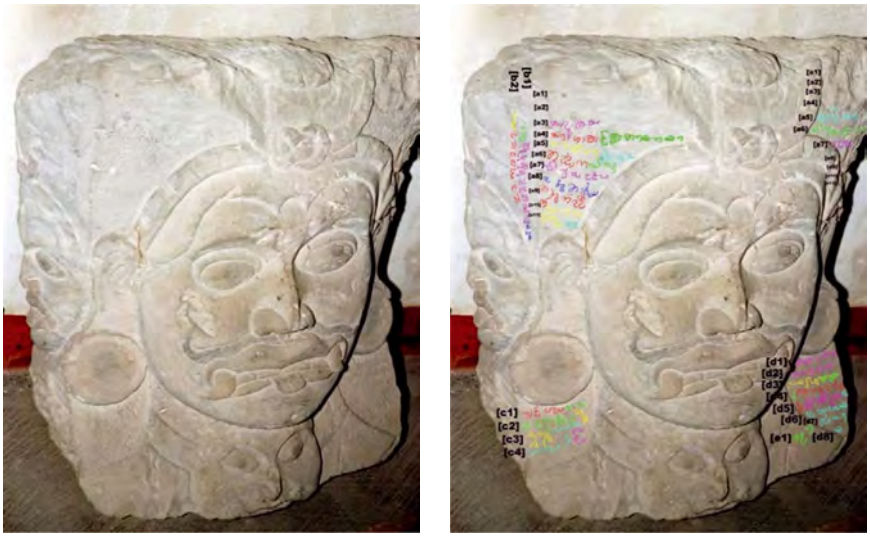


Figure 27: IC 010: a Vajrayana statue from Māle (from Gippert 2013: figures 2, 4). The inscription has been traced in color by Gippert.

Figure 28: L3: '*Dambidū Lōmāfānu*'. Plates 1, 2 of 16. Image from Wikimedia Commons.

Figure 29: L6: Single plate. From Bell 1930: Plate I, “Lómáfánu No. 1”.

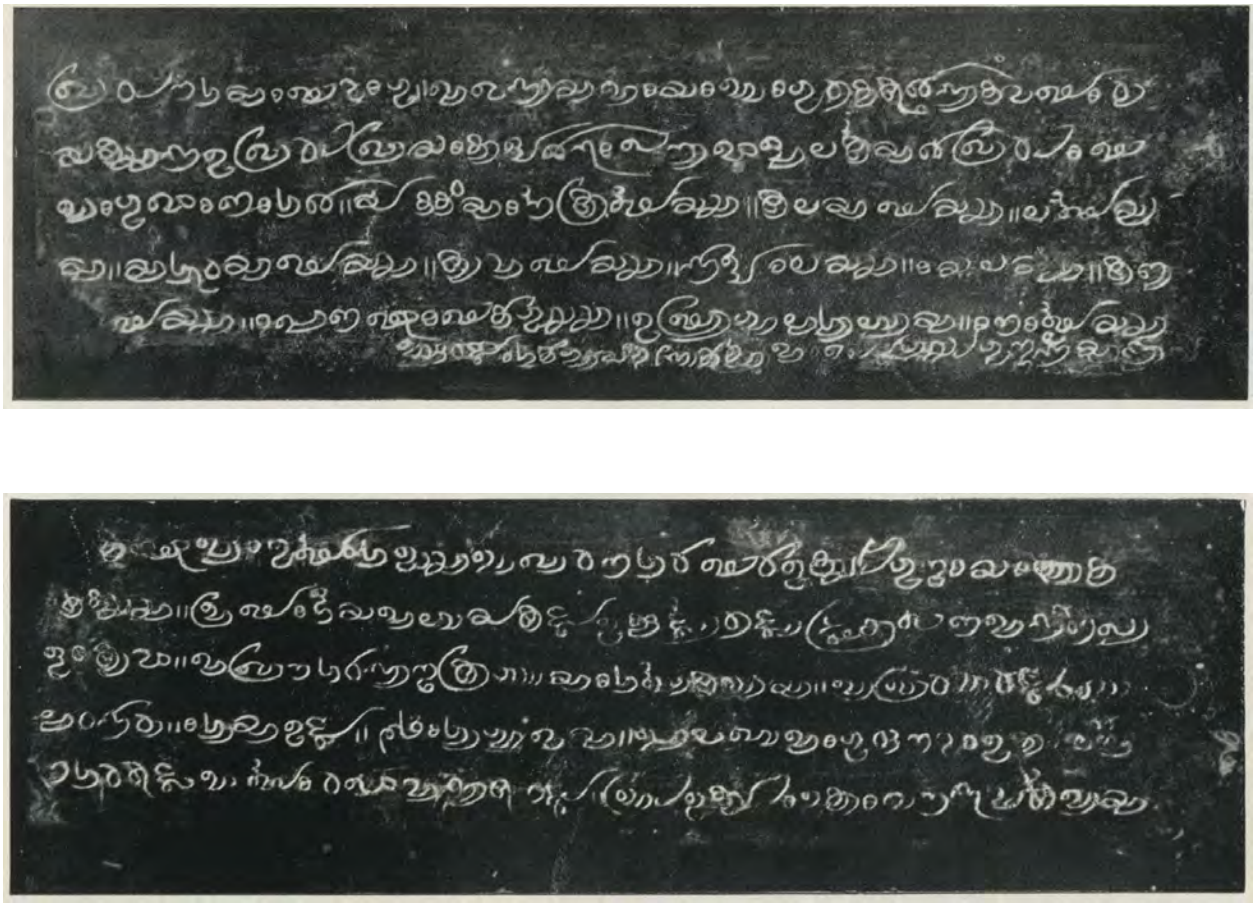
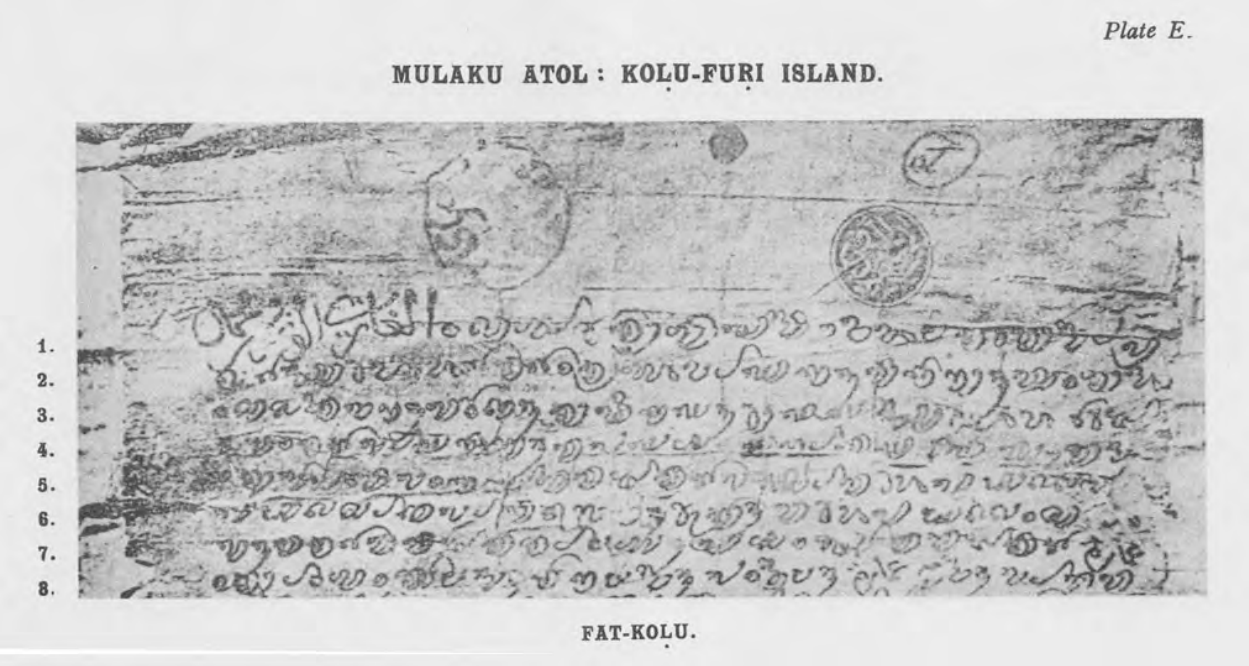


Figure 30: L7: Single plate. From Bell 1930: Plate II, “Lómáfánu No. 2”.

Figure 31: L8: Single plate (fragment). From Bell 1930: Plate III, IV, “Lómáfánu No. 3”.



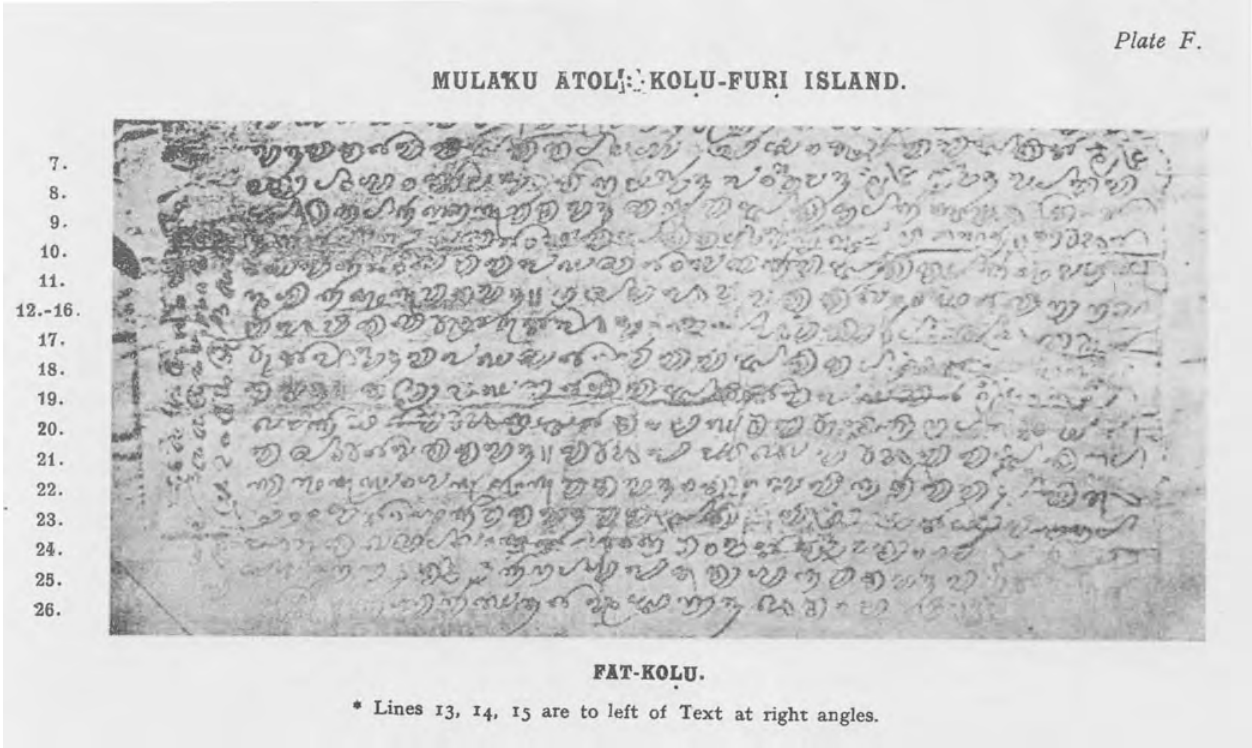


Figure 32: F1: ‘Koḷufuśi Faṭkoḷu’ (from Bell 1929: Plate E and Plate F).

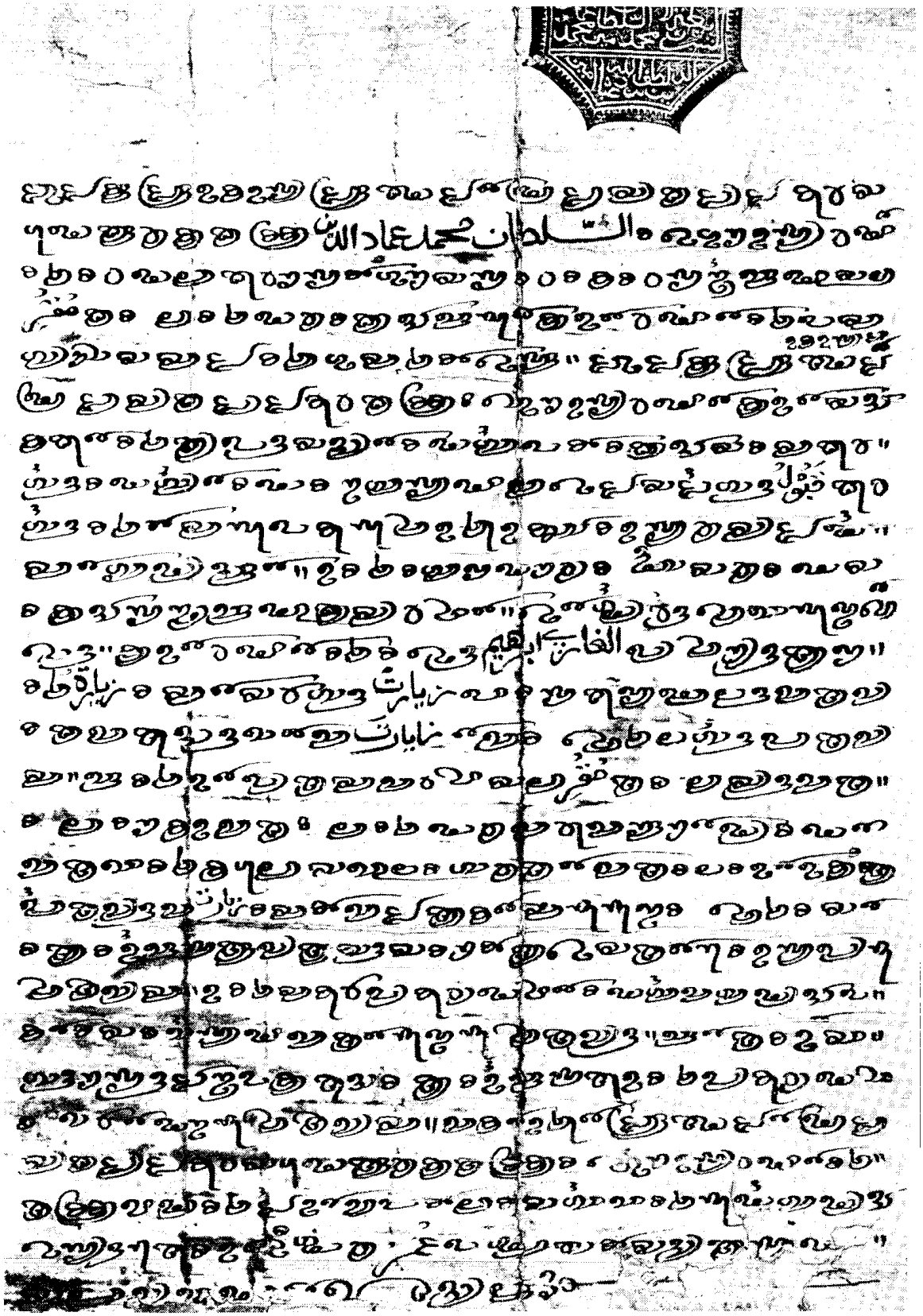


Figure 33: F6: 'Hannamīdū Fatkoḷu' of Muhammad Imaduddin (from Naseema 1999: 30).

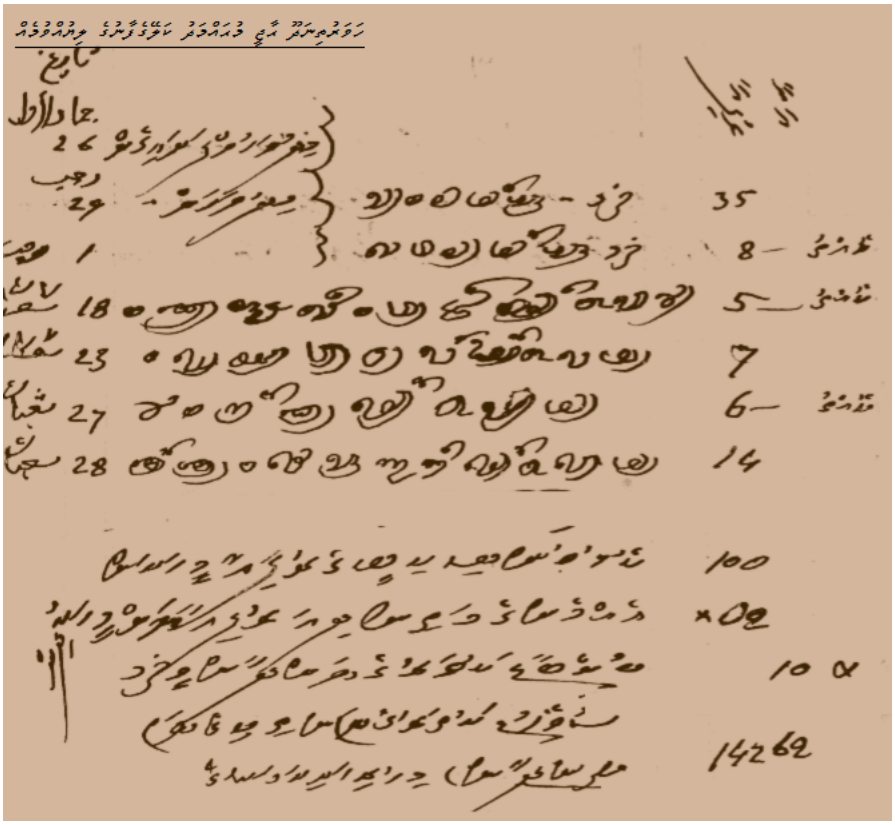


Figure 34: A document of Hajji Muhammad Kalegefanu from Havaru Tinadu in Huvadu atoll written in Dives Akuru, Thaana, and Arabic, dated 1346 AH (c. 1927 CE). Image from `www.galehiri.com`.

Figure 35: A lacquer jar with Dhives Akuru inscription from Tuḷādū in Baa Atoll, early 20th century. Image courtesy of Xavier Romero-Frias. Photo: Stephan Rebsamen, Bernisches Historisches Museum.

Figure 36: Representation of 18th century Dives Akuru based upon Thaana features: Basic consonant letters (from Sidi 1959: 4). The order follows that of Thaana.

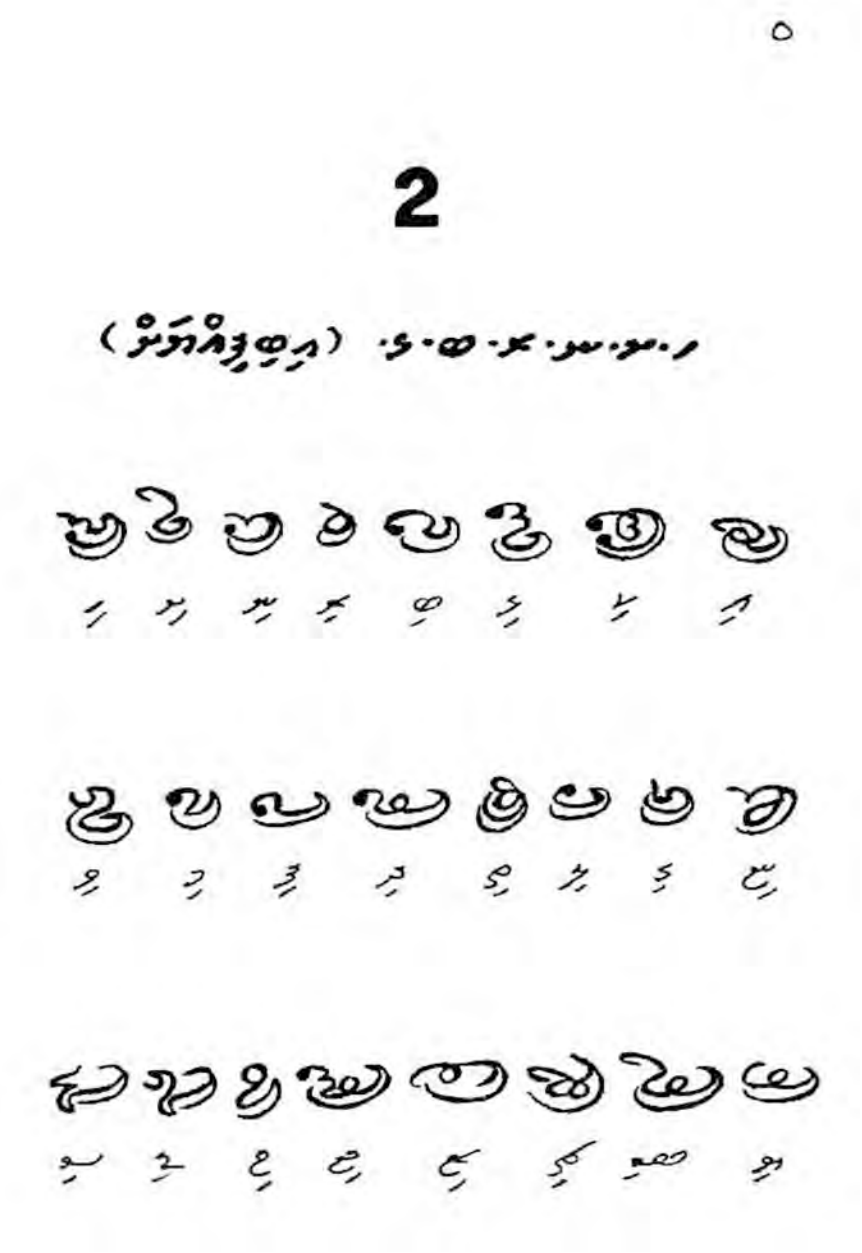


Figure 37: Representation of 18th century Dives Akuru based upon Thaana features: Consonant vowel combination with VOWEL SIGN I (from Sidi 1959: 5).

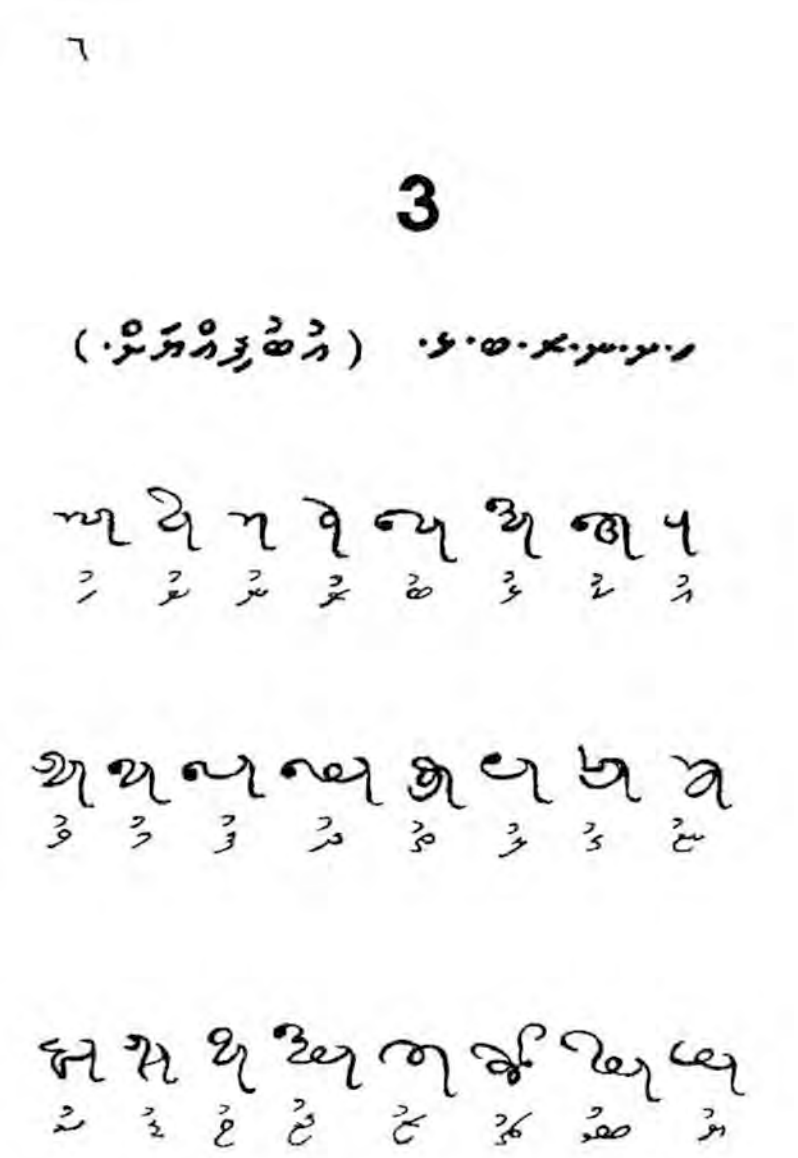


Figure 38: Representation of 18th century Dives Akuru based upon Thaana features: Consonant vowel combination with VOWEL SIGN U (from Sidi 1959: 6).

Figure 39: Representation of 18th century Dives Akuru based upon Thaana features: Consonant vowel combination with VOWEL SIGN E (from Sidi 1959: 7).

Figure 40: Representation of 18th century Dives Akuru based upon Thaana features: Consonant vowel combination with VOWEL SIGN O (from Sidi 1959: 8).

Figure 41: Representation of 18th century Dives Akuru based upon Thaana features: Consonant vowel combination with VOWEL SIGN AA (from Sidi 1959: 9).

Figure 42: Representation of 18th century Dives Akuru based upon Thaana features: Consonant vowel combination with VOWEL SIGN II (from Sidi 1959: 10).

Figure 43: Representation of 18th century Dives Akuru based upon Thaana features: Consonant vowel combination with VOWEL SIGN UU (from Sidi 1959: 11).

Figure 44: Representation of 18th century Dives Akuru based upon Thaana features: Consonant vowel combination with VOWEL SIGN E for representing the Dhivehi long vowel *ē* (from Sidi 1959: 12).

Figure 45: Representation of 18th century Dives Akuru based upon Thaana features: Consonant vowel combination with VOWEL SIGN O for representing the Dhivehi long vowel *ō* (from Sidi 1959: 13).

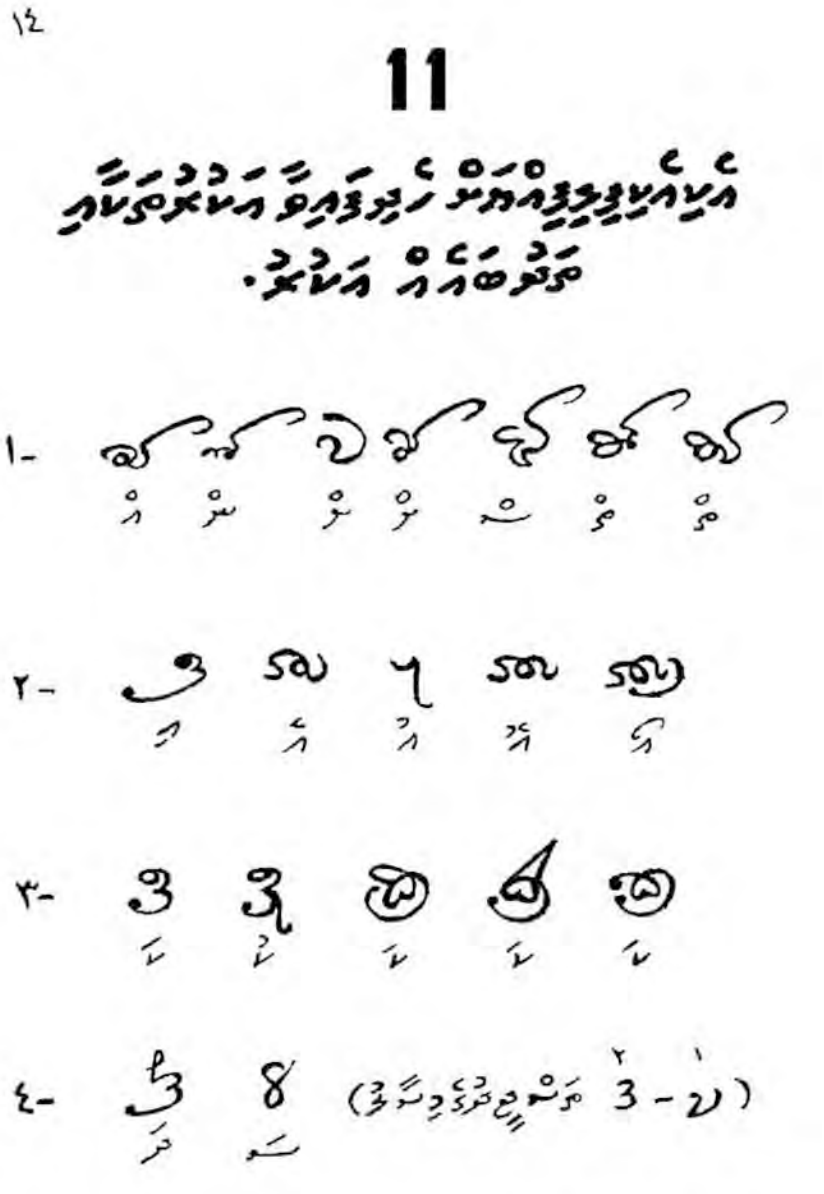


Figure 46: Representation of 18th century Dives Akuru based upon Thaana features: Various alternate forms of letters and some Dives Akuru forms of Thaana *sukun* letters (from Sidi 1959: 14).

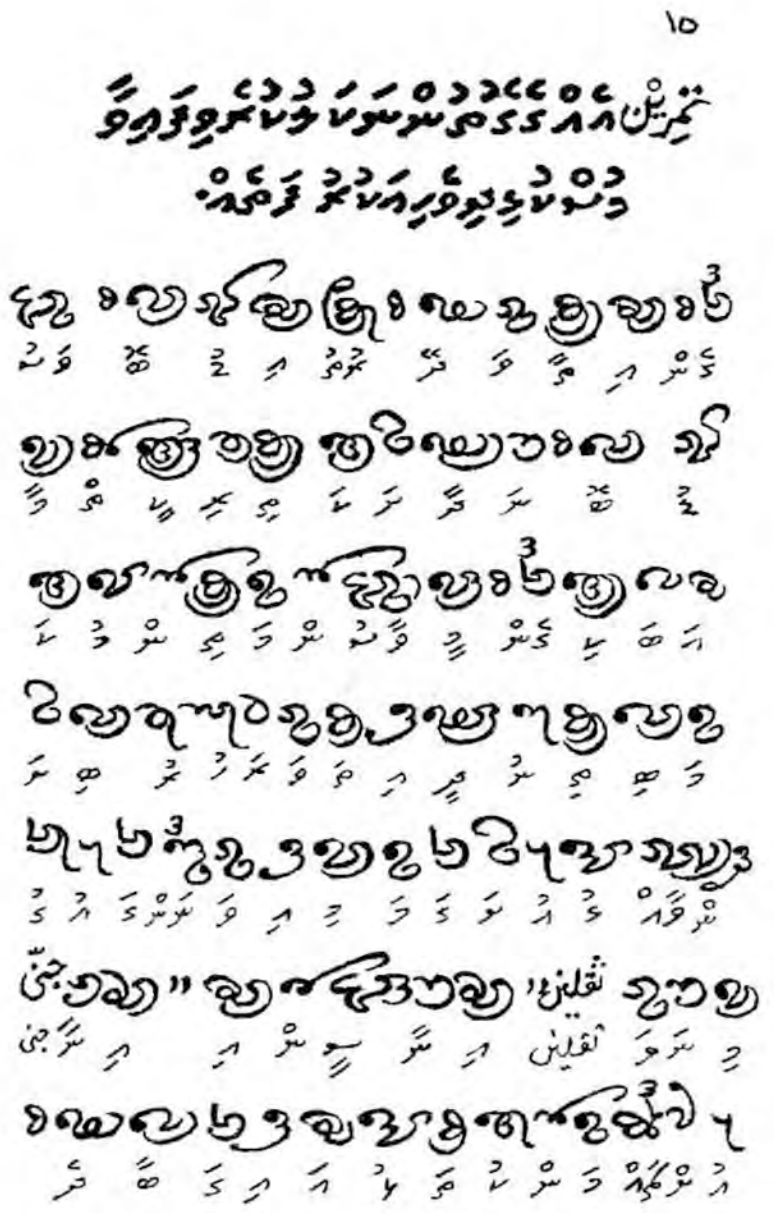


Figure 47: Specimen of 20th century Dives Akuru in Sidi (1959: 15).

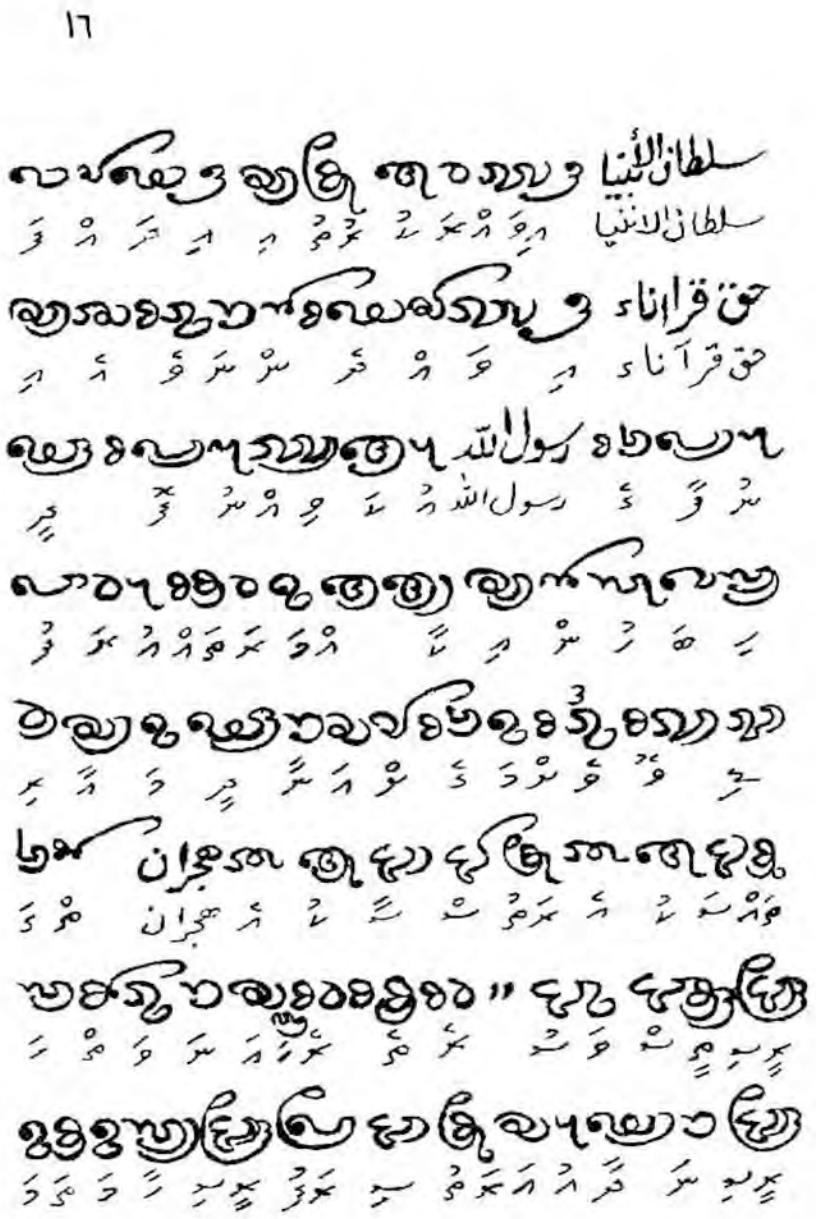


Figure 48: Specimen of 20th century Dives Akuru in Sidi (1959: 16).

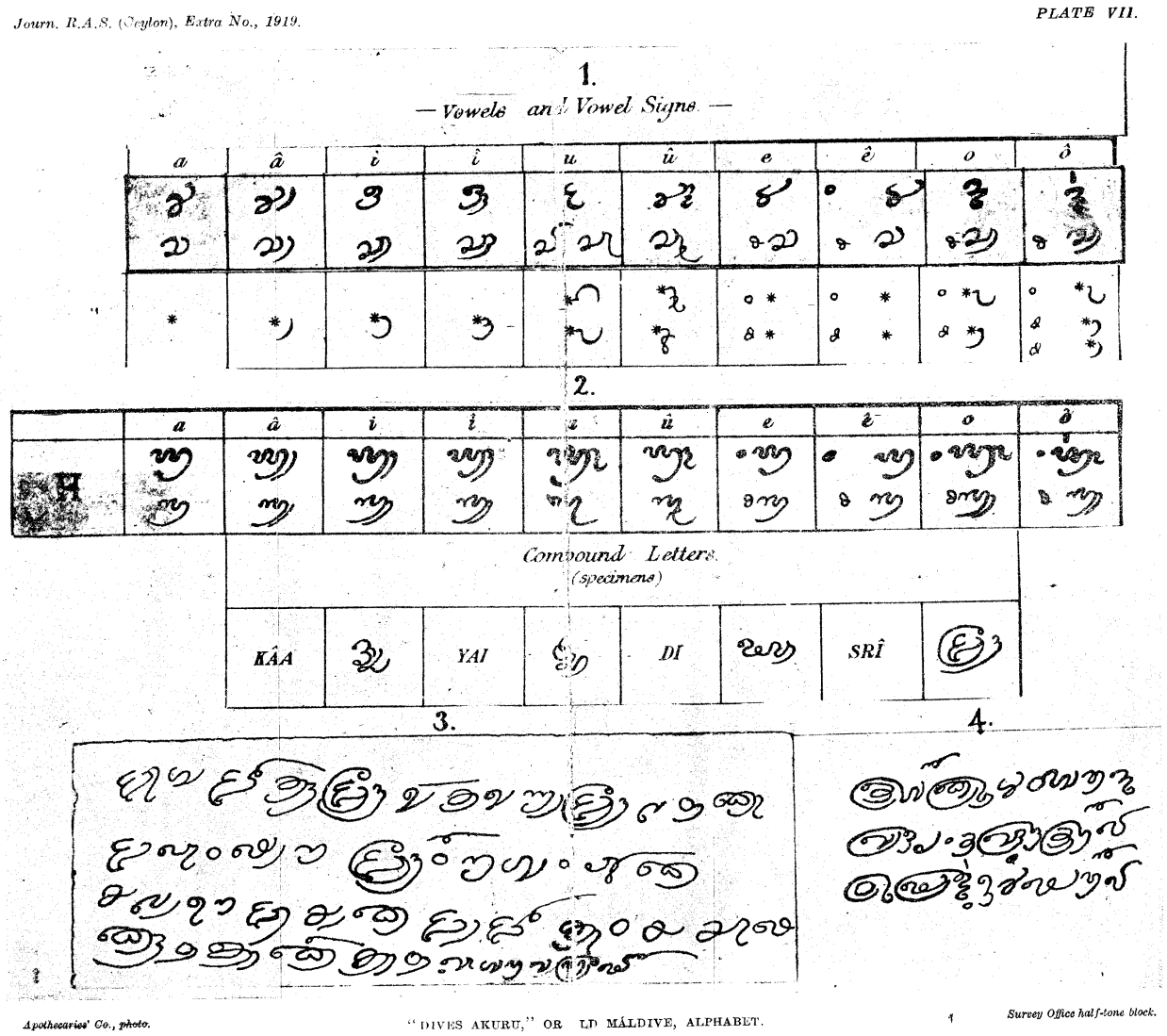


Figure 49: Wilhelm Geiger's table showing vowel letters, 2) consonant-vowel combinations for *ha*, 3) and 4) specimens of '*dives akuru*' (1919: Plate VII).

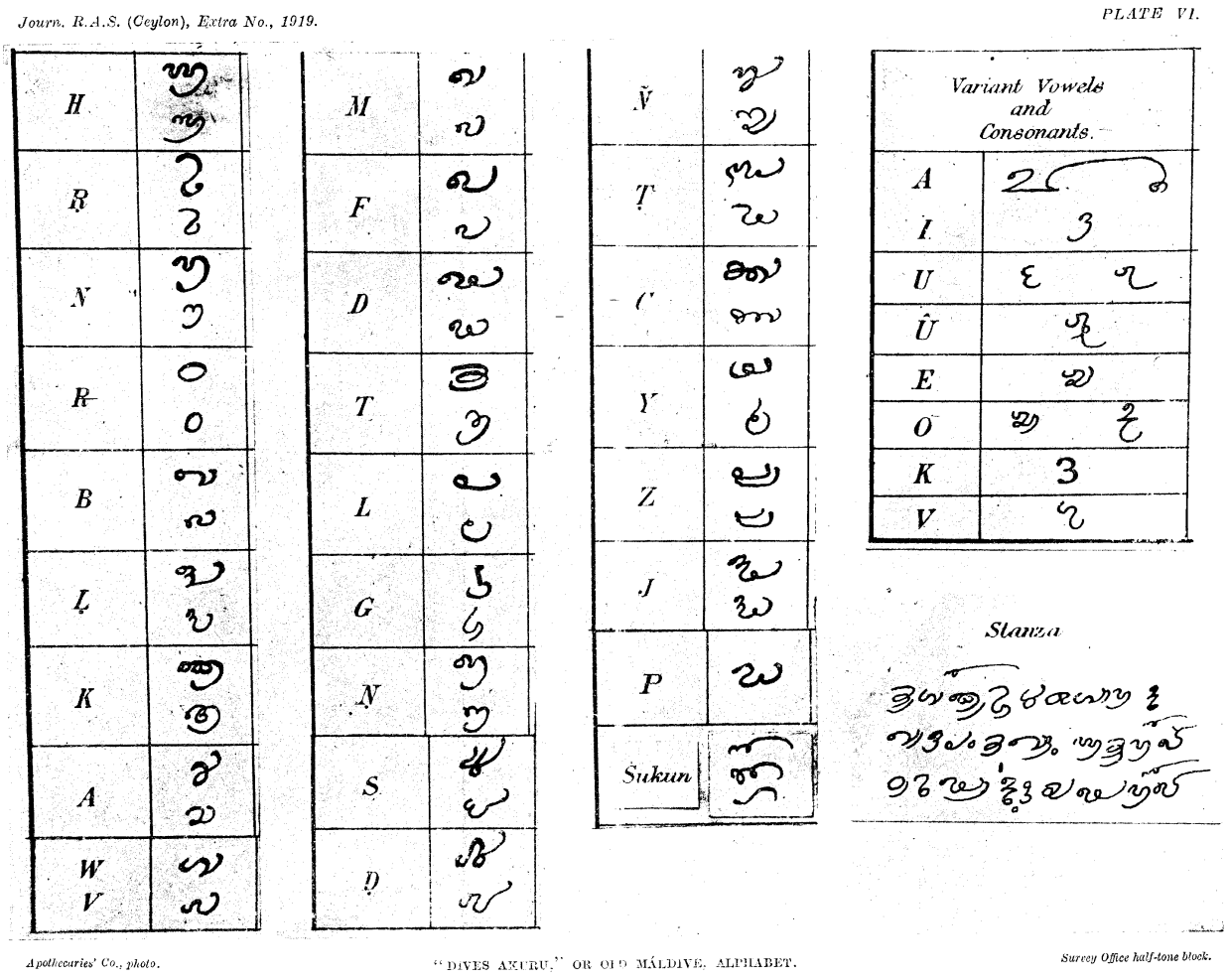


Figure 50: Wilhelm Geiger's chart comparing '*dives akuru*' and '*evēla akuru*' (1919: Plate VI).

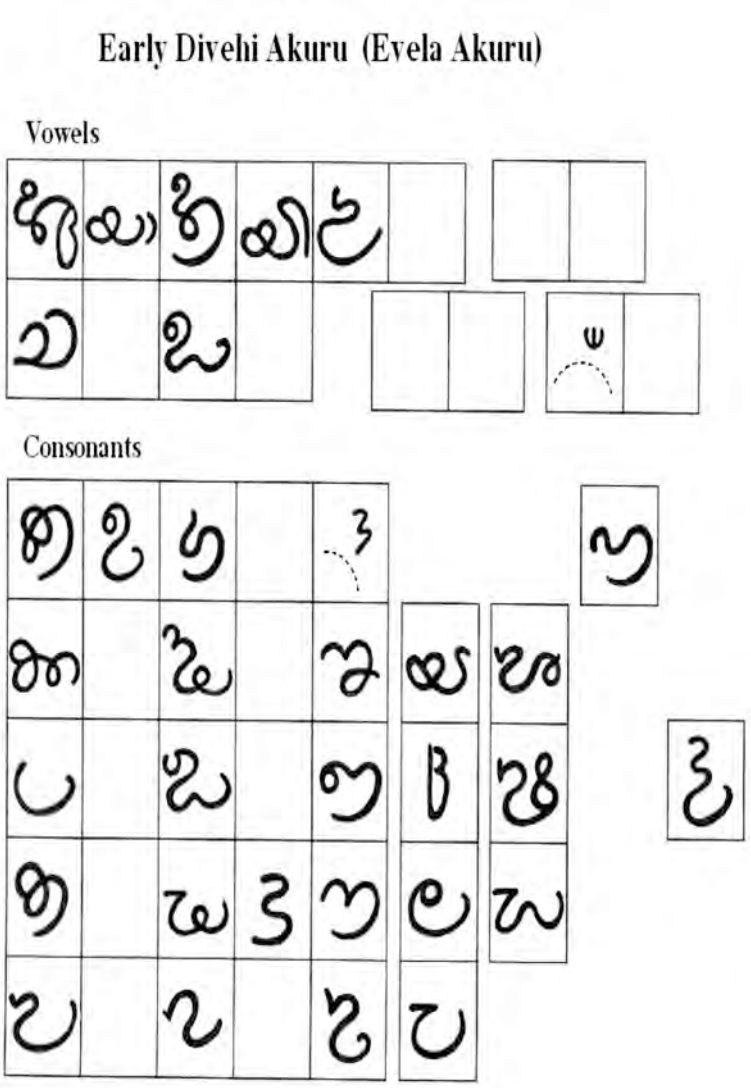


Figure 51: Chart of 'Early Divehi Akuru' (from Romero-Frias 2003).

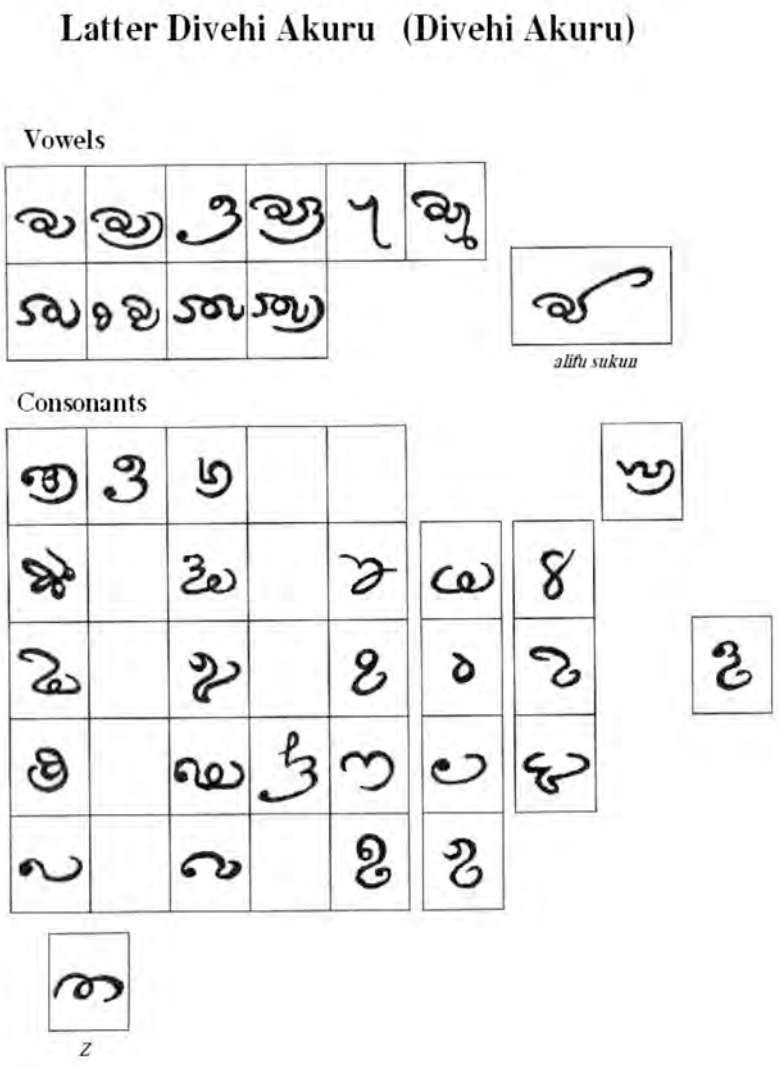


Figure 52: Chart of 'Later Divehi Akuru' (from Romero-Frias 2003).

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 sub-continent.

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 Eḷuttu*'.

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,

11

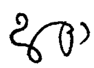
Figure 53: Description of *evēla akuru* (from Naseema 1999: 11).

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

e.g.:  ka ,  ga ,  ma.

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.

TABLE NO.1. VOWEL SYMBOLS

Symbol	Sound
	a
	a
	ā
	ā
	i
	i
	u
	e or ē
	o or ō

12

Figure 54: Description of *evēla akuru* (from Naseema 1999: 12).

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

TABLE NO.2. FILI (VOWEL STROKES)

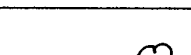
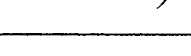
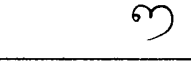
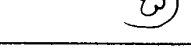
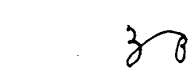
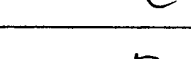
Fili	Sound	Example	Transliteration
)	ā	)	kā
)	i	)	ki
)	ī	)	kī
)	u	)	ku
)	u	)	ku
)	u	)	fu, pu
)	u	)	ru
)	ū	)	fū, pū
)	e	)	ke
)	ē	)	kē
)	ai	)	kai
)	o	)	ko
)	ō	)	kō

13

Figure 55: Description of *evēla akuru* (from Naseema 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
	h
	ś or ṭ
	n
	ṇ
	r
	b
	ḷ
	k
	kh (aspirate)
	a
	a
	v
	m
	f, p
	ḍ

14

Figure 56: Description of *evēla akuru* (from Naseema 1999: 14).

TABLE NO. 3 CONTINUED

Letter	Sound
𑤈	d
𑤉	d
𑤊	t
𑤋	l
𑤌	g
𑤍	s
𑤎	sh or ś
𑤏	sh or ś
𑤐	sh
𑤑	dh (aspirate)
𑤒	ṭ or ṭṭ
𑤓	y

In the transliteration and translation work done by the Maldivian scholars, the late Ali Najeeb and Ahmed Shafeeq, the letter 𑤋 was given the phonological value *ś* and the letter 𑤒 the value *ṭ*.

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 𑤋 was given the phonological value of *ṭ* and 𑤒 was transliterated as *ṭṭ*.

15

Figure 57: Description of *evēla akuru* (from Naseema 1999: 5).

The phonological value *ś* in Divehi is said by linguists to have evolved from the *ţ* of earlier times (Cain, 1996). In modern Divehi, the words incorporating the symbol ෴ in the copperplate writings of the 12th century are used with the phonological value *ś* and not with the *ţ* 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

ෂ	kh
ෲ	dh

They also concluded that the symbol ෲ was used for both *a* and *y*.

Three sibilants corresponding to palatal *ś*, 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

ශ	sh or ś
ෂ	sh
ස	s

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

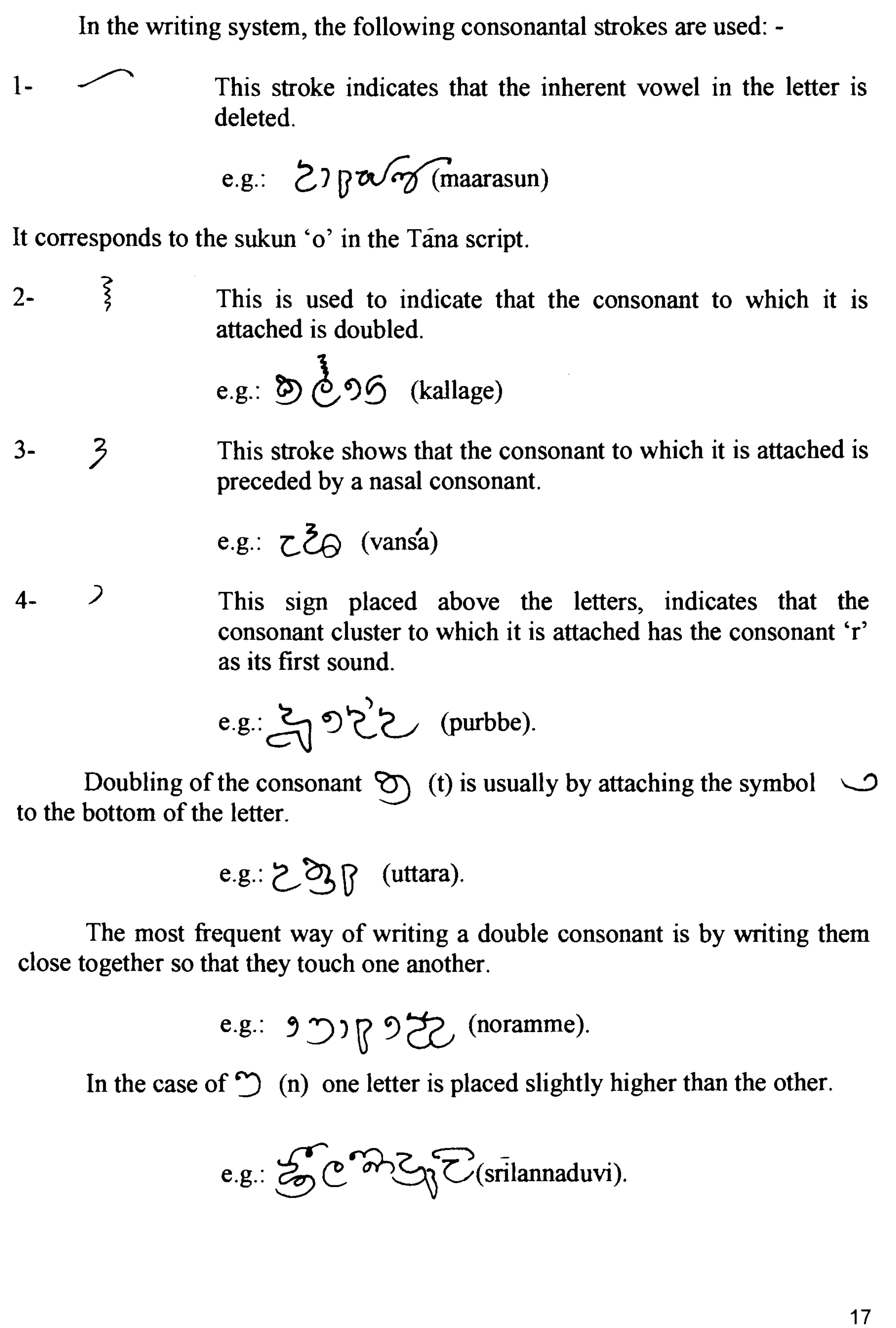
Dental and cerebral *n* existed in Divehi until the 20th century and different letters were used for these sounds. The Southern atolls still differentiate between these sounds, but standard Divehi only has the symbol for dental *n*.

The symbol ෆ was used for *f* and *p* although in latter centuries, *p* was represented in Dives Akuru by ෆ්, 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.

16

Figure 58: Description of *evēla akuru* (from Naseema 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.

e.g.: (maarasun)

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

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

e.g.: (kallage)

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

e.g.: (vanśa)

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

e.g.: (purbbe).

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

e.g.: (uttara).

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

e.g.: (noramme).

In the case of (n) one letter is placed slightly higher than the other.

e.g.: (srīlannaduvi).

17

Figure 59: Description of *evēla akuru* (from Naseema 1999: 17).

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

e.g.:  (komme).

Similarly, in the case of the vowel *o*, two components of the fili, ෙ and ා , are placed on either side of the cluster.

e.g.:  (duppoḷi).

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

e.g.:  (sintha)

 (fange).

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

e.g.:  (vyana).

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

e.g.:  (krana)

 (driti).

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

e.g.:  (laksha),

 (fansha),

 (kandorāi)

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*.

18

Figure 60: Description of *evēla akuru* (from Naseema 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 Tāna and Dives Akuru, but after 1780 the Dives Akuru script fell into disuse, it's place taken by the Tāna 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 ؏ , 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.

21

Figure 61: Description of *dives akuru* (from Naseema 1999: 21).

The Alphabet

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

TABLE NO.6

Vowel	Sound
𑤀	a
𑤁	ā
𑤂	i
𑤃	i
𑤄	ī
𑤅	u
𑤆	ū
𑤇	e
𑤈	e
𑤀𑤇	ē
𑤁𑤇	ē
𑤉	o
𑤀𑤉	o
𑤁𑤉	ō
𑤀𑤆	ō

22

Figure 62: Description of *dives akuru* (from Naseema 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).

Fili	Sound	Example	Transliteration
)	ā	𑤏)	kā
)	i	𑤏)	ki
𑤳	ī	𑤏𑤳	kī
𑤲	u	𑤏𑤲	ku
𑤱	u	𑤔𑤱	du
𑤴	ū	𑤏𑤴	kū
𑤶	e	𑤶𑤏	ke
𑤶𑤶	ē	𑤶𑤶𑤏	kē
𑤶	ē	𑤶 𑤏	kē
𑤶)	o	𑤶𑤏)	ko
𑤶)	ō	𑤶𑤏))	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,

23

Figure 63: Description of *dives akuru* (from Naseema 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 *ñ* was also introduced.

TABLE NO.8. CONSONANT SYMBOLS.

Letter	Sound
𑤳	h
𑤲	ś
𑤱	n
𑤱	n
𑤮	r
𑤮	r
𑤫	b
𑤫	b
𑤭	ḷ
𑤩	k
𑤩	k
𑤩	k

24

Figure 64: Description of *dives akuru* (from Naseema 1999: 24).

TABLE NO. 8 CONTINUED

Letter	Sound
𑤃	kh (aspirate k)
𑤀	a
𑤀𑤰	a
𑤅	v
𑤅	v
𑤂	m
𑤁	f
𑤆	d
𑤆	d
𑤆	d
𑤇	t
𑤉	l
𑤉	l
𑤄	g

25

Figure 65: Description of *dives akuru* (from Naseema 1999: 25).

TABLE NO. 8 CONTINUED

Letter	Sound
𑤏	g
𑤐	g
𑤑	ñ
𑤒	s
𑤓	sh
𑤔	sh
𑤕	ḍ
𑤖	ḍ
𑤗	z
𑤘	ṭ
𑤙	y
𑤚	p
𑤛	j
𑤜	c
𑤝	c

26

Figure 66: Description of *dives akuru* (from Naseema 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 Tāna 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
(a)	
(ś)	
(n)	
(s)	
(t)	

The sukun and the sukun show glottal stops. The sukun represents a double nasal sound and the sukun is pronounced as a vowel-less *s* sibilant. The sukun represents a *y* off-glide 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.

27

Figure 67: Description of *dives akuru* (from Naseema 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
೨	೨೨	bappa	father
೩	೨೩	bappa	father
೯	೨೯	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.

Sound	Symbols
d	೮, ೩, ೩
l	೮, ೬
g	೨, ೨, ೨
sh	೪, ೪
c	೫, ೫
k	೨, ೨, ೨
ḍ	೨ , ೮

28

Figure 68: Description of *dives akuru* (from Naseema 1999: 28).

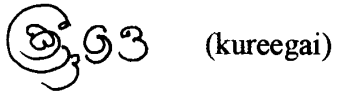
It may be that the same phonological value was given to more than one consonant symbol. It could also mean that the phonological values of some of these symbols had earlier variations. Over time, sound changes having taken place, aspirate sounds were lost and dental and cerebral sounds began to be pronounced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

When the consonants 𑤬 (*r*) and 𑤯 (*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: -

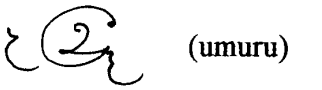
e.g.: If 𑤯 (*v*) is the consonant to be joined for example, to 𑤱 (*s*), then the modification is 𑤱𑤯.


swastī.

If 𑤬 (*r*) is the second consonant to be joined, the shape of the 𑤬 (*r*) changes to 𑤭 as in: -


(kureegai)


(shukuru)


(umuru)

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.

e.g.


(koilu)


(audāna)


(kuravvai)

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

29

Figure 69: Description of *dives akuru* (from Naseema 1999: 29).

TABLE NO.12 (THE TĀNA ALPHABET)

No.	Arabic numeral	Letter	Transliteration	Modern name	Old name*
1	١	ހ	h	hā	haviyani
2	٢	ށ	ś	śaviyani	śaviyani
3	٣	ނ	n	nūnu	naviyani
4	٤	ރ	r	rā	raviyani
5	٥	ބ	b	bā	baviyani
6	٦	ޅ	ḷ	ḷaviyani	ḷaviyani
7	٧	ކ	k	kāfu	kaviyani
8	٨	އ	a	alifu	aviyani
9	٩	ވ	v	vāvu	vaviyani
No.	Divehi numeral	Letter	Transliteration	Modern name	Old name
1	٥	މ	m	meemu	maviyani
2	٦	ފ	f	fāfu	faviyani
3	٧	ދ	d	dālu	daviyani
4	٨	ތ	t	tā	taviyani
5	٩	ލ	l	lāmu	laviyani**
6	٠	ގ	g	gāfu	gaviyani
7	١	ގ	ñ	ñaviyani	ñaviyani

* Old names are taken from W.Geiger's Maldivian Linguistic Studies (1919).
** Not included by Geiger.

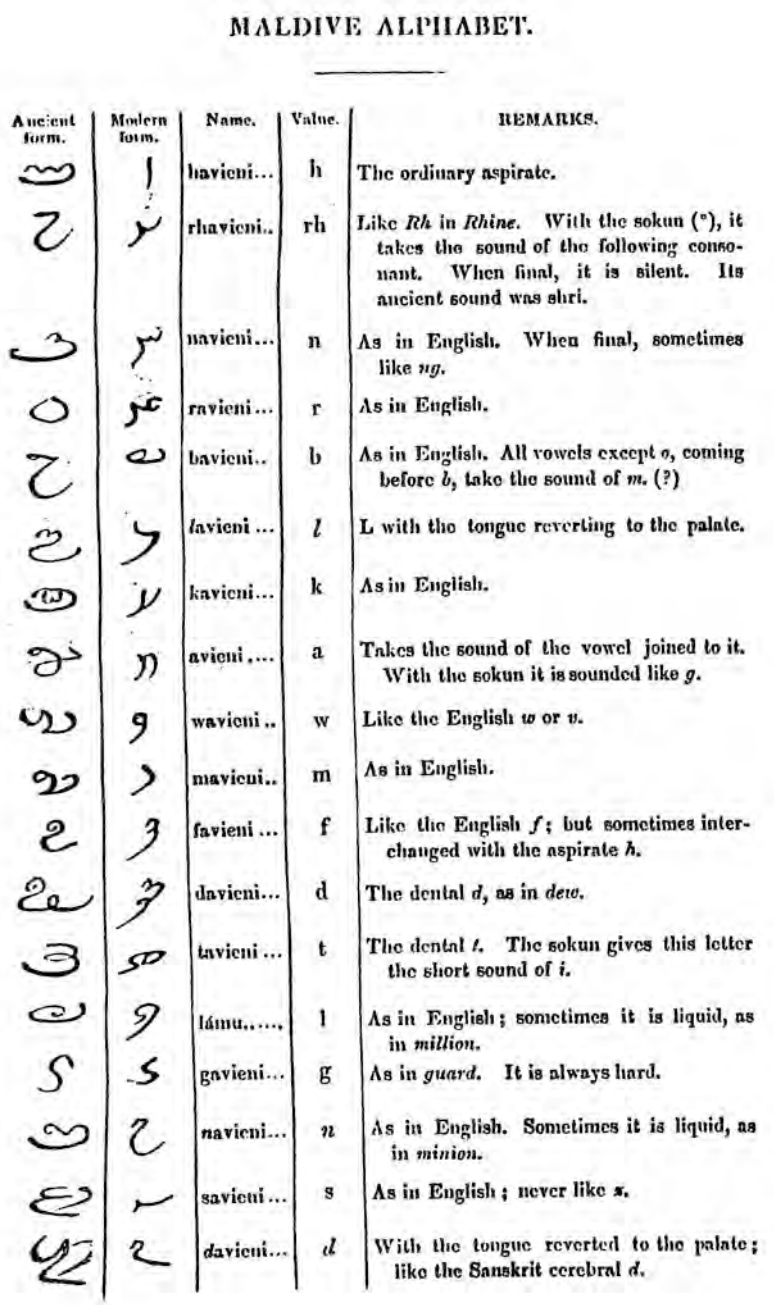
32

Figure 70: Comparison of Dives Akuru and Arabic digits and Thaana letters (from Naseema 1999: 32).

TABLE NO. 12 CONTINUED

No.	Divehi numeral	Letter	Transliteration	Modern name	Old name
8	۸	ﷺ	s	seenu	saviyani
9	۹	ﷺ	ḍ	ḍaviyani	ḍaviyani
		ﷺ	z	zaviyani	zaviyani
		ﷺ	ṭ	ṭaviyani	ṭaviyani
		ﷺ	y	yā	yaviyani
		ﷺ	p	paviyani	paviyani
		ﷺ	j	javiyani	javiyani
		ﷺ	c	chaviyani	chaviyani

Figure 71: Comparison of Dives Akuru and Arabic digits and Thaana letters (from Naseema 1999: 33).

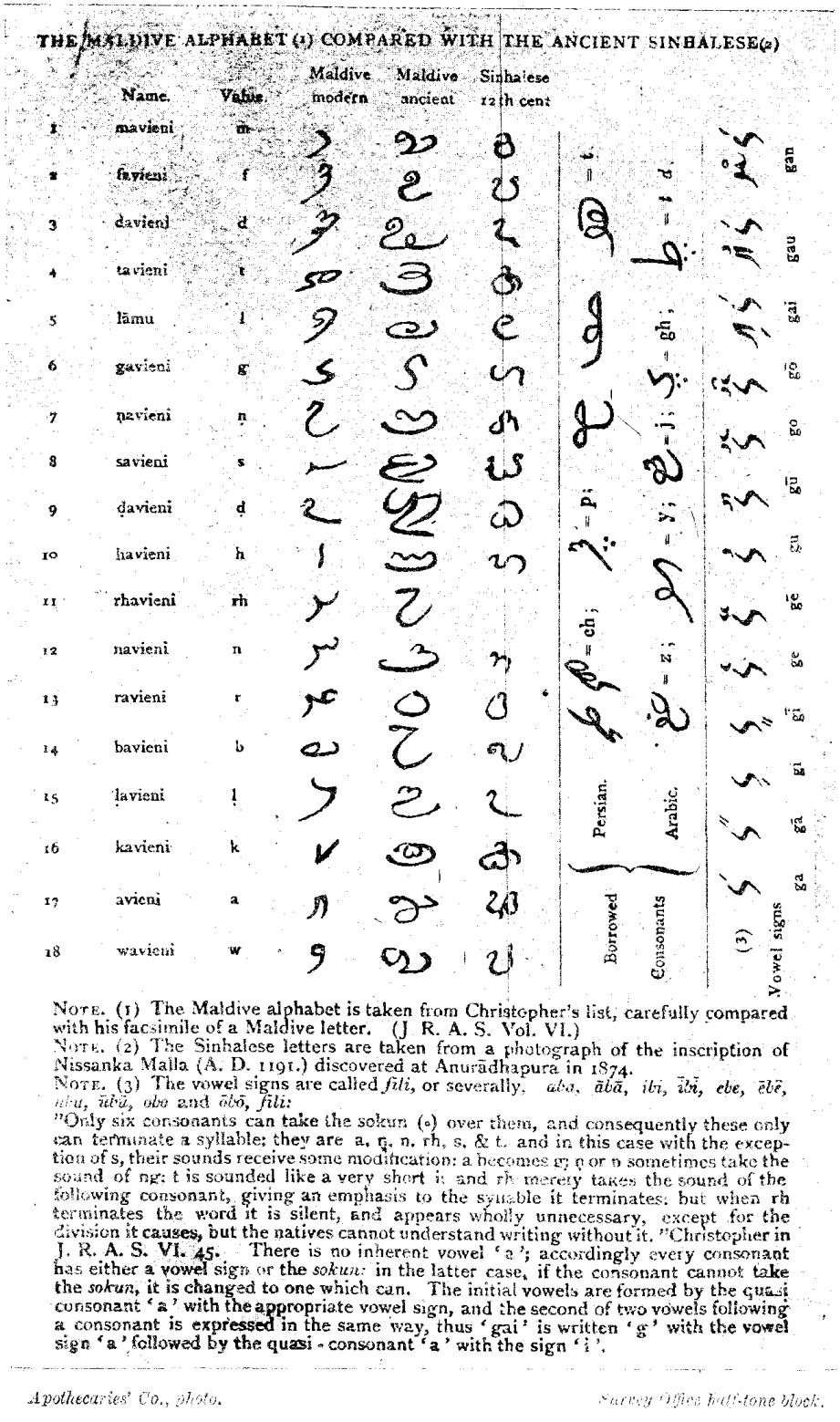


MALDIVE ALPHABET.

Ancient form.	Modern form.	Name.	Value.	REMARKS.
	ا	havieni...	h	The ordinary aspirate.
	ر	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.
	ن	navieni...	n	As in English. When final, sometimes like *ng*.
	ع	ravieni...	r	As in English.
	ب	bavieni..	b	As in English. All vowels except *o*, coming before *b*, take the sound of *m*. (?)
	ل	lavieni ...	*l*	L with the tongue reverting to the palate.
	ك	kavieni...	k	As in English.
	ا	avieni	a	Takes the sound of the vowel joined to it. With the sokun it is sounded like *g*.
	و	wavieni ..	w	Like the English *w* or *v*.
	م	mavieni..	m	As in English.
	ف	favieni ...	f	Like the English *f*; but sometimes interchanged with the aspirate *h*.
	ذ	davieni...	d	The dental *d*, as in *dew*.
	ت	tavieni ...	t	The dental *t*. The sokun gives this letter the short sound of *i*.
	ل	lámu.....	l	As in English; sometimes it is liquid, as in *million*.
	ګ	gavieni...	g	As in *guard*. It is always hard.
	ن	*n*avieni...	*n*	As in English. Sometimes it is liquid, as in *minion*.
	س	savieni ...	s	As in English; never like *z*.
	ڏ	davieni...	*d*	With the tongue reverted to the palate; like the Sanskrit cerebral *d*.

Figure 72: Willmott Christopher's chart of Maldivian scripts showing Dives Akuru (left) and Thaana (right) letters (Wilson 1841: 44).

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



THE MALDIVE ALPHABET (1) COMPARED WITH THE ANCIENT SINHALESE(2)

	Name.	Value.	Maldive modern	Maldive ancient	Sinhalese 12th cent
1	mavieni	m			
2	favieni	f			
3	davieni	d			
4	tavieni	t			
5	lāmu	l			
6	gavieni	g			
7	ṇavieni	ṇ			
8	savieni	s			
9	ḍavieni	ḍ			
10	havieni	h			
11	rhavieni	rh			
12	navieni	n			
13	ravieni	r			
14	bavieni	b			
15	ḷavieni	ḷ			
16	kavieni	k			
17	avieni	a			
18	wavieni	w			

Borrowed Consonants — Persian. — Arabic.

(3) Vowel signs: ga gā gi gī ge gē gu gū go gō gai gau gan

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, ībī, ebe, ēbē, ubu, ūbū, obo* and *ōbō, fili:*
"Only six consonants can take the sokun (◦) over them, and consequently these only can terminate a syllable; they are a, ṇ, n, rh, s, & t. and in this case with the exception of s, their sounds receive some modification: a becomes ng; ṇ or n sometimes take the sound of ng: t is sounded like a very short i: and rh merely takes the sound of the following consonant, giving an emphasis to the syllable it terminates: but when rh terminates the word it is silent, and appears wholly unnecessary, except for the division 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 half-tone block.*

Figure 73: Wilhelm Geiger's charts of Maldivian scripts (1919: Plate II).

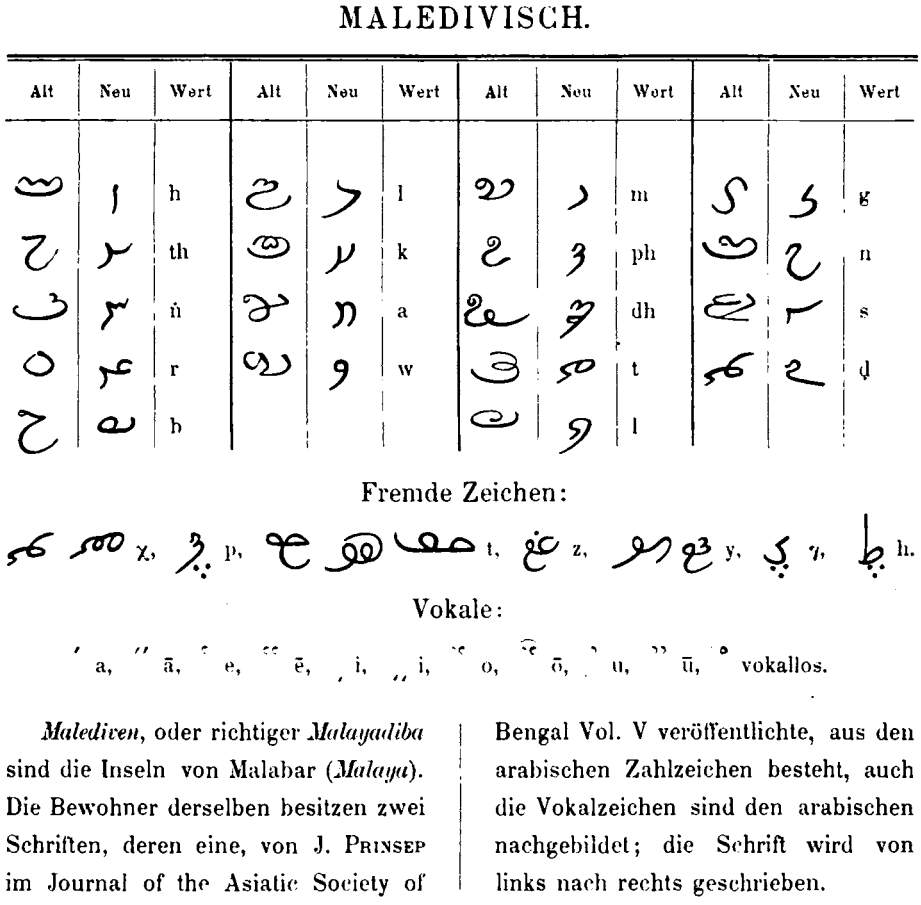


Figure 74: Chart showing some characters from 'old' and 'new' forms of Maldivian writing (from Faulmann 1880: 155). The 'old' forms are Dives Akuru and the 'new' are Thaana.

	Dives Akuru	Sinhala
A	𑤀	අ
AA	𑤁	ආ
I	𑤂	ඉ
II	𑤃	ඊ
U	𑤄	උ
UU	𑤅	ඌ
E	𑤆	එ
EE	—	ඒ
AI	—	ඓ
O	𑤇	ඔ
OO	—	ඕ
AU	—	ඖ

Figure 75: Comparison of Dives Akuru and Sinhala vowel letters.

	Dives Akuru	Sinhala		Dives Akuru	Sinhala
KA	𑤓	කා	DHA	𑤢	ධ
KHA	𑤔	ඛ	NA	𑤣	න
GA	𑤕	ග	PA	𑤤	ප
GHA	𑤖	ඝ	PHA	𑤥	ඵ
NGA	𑤗	ඞ	BA	𑤦	බ
CA	𑤘	ච	BHA	𑤧	භ
CHA	𑤙	ඡ	MA	𑤨	ම
JA	𑤚	ජ	-A	𑤩	ය
JHA	—	ඣ	RA	𑤪	ර
NYA	𑤛	ඤ	LA	𑤫	ල
TTA	𑤜	ට	VA	𑤬	ව
TTHA	□	ඨ	SHA	𑤭	ශ
DDA	𑤝	ඩ	SSA	𑤮	ෂ
DDHA	𑤞	ඪ	SA	𑤯	ස
NNA	𑤟	ණ	HA	𑤰	හ
TA	𑤠	ත	LLA	𑤱	ළ
THA	𑤡	ථ	FA	—	ෆ
DA	𑤢	ද	ZA	𑤲	—

Figure 76: Comparison of Dives Akuru and Sinhala consonants.

Consonants

D	T	name
𑤃	ر	HAA
𑤄	ز	SHAVIYANI
𑤅	س	NOONU
𑤆	ش	RAA
𑤇	ص	BAA
𑤈	ض	LHAVIYANI
𑤉	ط	KAAFU
𑤊	ظ	ALIFU
𑤋	ع	VAAVU
𑤌	غ	MEEMU
𑤍	ف	FAAFU
𑤎	ق	DHAALU
𑤏	ك	THAA

D	T	name
𑤐	ل	LAAMU
𑤑	ى	GAAFU
𑤒	ؾ	GNAVIYANI
𑤓	ؿ	SEENU
𑤔	ـ	DAVIYANI
𑤕	ف	ZAVIYANI
𑤖	ق	TAVIYANI
𑤗	ك	YAA
𑤘	ل	PAVIYANI
𑤙	م	JAVIYANI
𑤚	ن	CHAVIYANI
𑤛	ه	NAA

Vowels

D	T	name
—	◌	ABAFILI
◌ا	◌ٓ	AABAAFILI
◌ි	◌ٖ	IBIFILI
◌ී	◌ٗ	EEBEEFILI
◌ු	◌ٙ	UBUFILI
◌ූ	◌ٚ	OOBOOFILI

D	T	name
◌ෙ	◌ٛ	EBEFILI
◌ේ	◌ٜ	EYBEYFILI
◌ො	◌ٝ	OBOFILI
◌ෝ	◌ٞ	OABOAFILI
◌්	◌ٔ	SUKUN

Figure 77: Correspondences between Dives Akuru (‘D’) and Thaana (‘T’), based upon Sidi (1959). Thaana names are based upon names in the Unicode ‘Thaana’ block.

Figure 78: Comparison of 'Evela Akuru' and 'Dives Akuru' with other southern Brahmi-based scripts (from Naseema 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 Dives Akuru. 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 Dives Akuru version would better represent Maldivian culture. The proposal was rejected on the grounds that Arabic reflects the Muslim character of the country.

Figure 79: A proposed coat of arms of Maldives with text in Dives Akuru. Image courtesy of Xavier Romero-Frias.

ISO/IEC JTC 1/SC 2/WG 2
PROPOSAL SUMMARY FORM TO ACCOMPANY SUBMISSIONS
FOR ADDITIONS TO THE REPERTOIRE OF ISO/IEC 10646[1]
Please fill all the sections A, B and C below.
Please read Principles and Procedures Document (P & P) from http://std.dkuug.dk/JTC1/SC2/WG2/docs/principles.html **for guidelines and details before filling this form.**
Please ensure you are using the latest Form from http://std.dkuug.dk/JTC1/SC2/WG2/docs/summaryform.html**.**
See also http://std.dkuug.dk/JTC1/SC2/WG2/docs/roadmaps.html **for latest *Roadmaps*.**

A. Administrative

1. **Title:** *Proposal to encode Dives Akuru in Unicode*
2. Requester's name: *Anshuman Pandey <pandey@umich.edu>*
3. Requester type (Member body/Liaison/Individual contribution): *Individual contribution*
4. Submission date: *2018-01-16*
5. Requester's reference (if applicable):
6. Choose one of the following:
   This is a complete proposal: *Yes*
   (or) More information will be provided later:

B. Technical – General

1. Choose one of the following:
   a. This proposal is for a new script (set of characters): *Yes*
      Proposed name of script: *Dives Akuru*
   b. The proposal is for addition of character(s) to an existing block:
      Name of the existing block:
2. Number of characters in proposal: *69*
3. Proposed category (select one from below - see section 2.2 of P&P document):
   A-Contemporary ____ B.1-Specialized (small collection) ____ B.2-Specialized (large collection) ____
   C-Major extinct X D-Attested extinct ____ E-Minor extinct ____
   F-Archaic Hieroglyphic or Ideographic ____ G-Obscure or questionable usage symbols ____
4. Is a repertoire including character names provided? *Yes*
   a. If YES, are the names in accordance with the "character naming guidelines" in Annex L of P&P document? *Yes*
   b. Are the character shapes attached in a legible form suitable for review? *Yes*
5. Fonts related:
   a. Who will provide the appropriate computerized font to the Project Editor of 10646 for publishing the standard?
   Anshuman Pandey
   b. Identify the party granting a license for use of the font by the editors (include address, e-mail, ftp-site, etc.):
6. References:
   a. Are references (to other character sets, dictionaries, descriptive texts etc.) provided? *Yes*
   b. Are published examples of use (such as samples from newspapers, magazines, or other sources) of proposed characters attached? *Yes*
7. Special encoding issues:
   Does the proposal address other aspects of character data processing (if applicable) such as input, presentation, sorting, searching, indexing, transliteration etc. (if yes please enclose information)? *Yes*
   See text of proposal

8. Additional Information:

Submitters are invited to provide any additional information about Properties of the proposed Character(s) or Script that will assist in correct understanding of and correct linguistic processing of the proposed character(s) or script. Examples of such properties are: Casing information, Numeric information, Currency information, Display behaviour information such as line breaks, widths etc., Combining behaviour, Spacing behaviour, Directional behaviour, Default Collation behaviour, relevance in Mark Up contexts, Compatibility equivalence and other Unicode normalization related information. See the Unicode standard at http://www.unicode.org for such information on other scripts. Also see Unicode Character Database (http://www.unicode.org/reports/tr44/) and associated Unicode Technical Reports for information needed for consideration by the Unicode Technical Committee for inclusion in the Unicode Standard.

[1] Form number: N4502-F (Original 1994-10-14; Revised 1995-01, 1995-04, 1996-04, 1996-08, 1999-03, 2001-05, 2001-09, 2003-11, 2005-01, 2005-09, 2005-10, 2007-03, 2008-05, 2009-11, 2011-03, 2012-01)

C. Technical - Justification

1. Has this proposal for addition of character(s) been submitted before? *No*
   If YES explain
2. Has contact been made to members of the user community (for example: National Body, user groups of the script or characters, other experts, etc.)? *Yes*
   If YES, with whom? *Jost Gippert (Goethe-Universität Frankfurt am Main)*
   Xavier Romero-Frias
   If YES, available relevant documents:
3. Information on the user community for the proposed characters (for example: size, demographics, information technology use, or publishing use) is included? *Yes*
   Reference: *See text of proposal*
4. The context of use for the proposed characters (type of use; common or rare) *Common*
   Reference: *See text of proposal*
5. Are the proposed characters in current use by the user community? *Yes*
   If YES, where? Reference: *By Maldivian and other scholars*
6. After giving due considerations to the principles in the P&P document must the proposed characters be entirely in the BMP? *N/A*
   If YES, is a rationale provided?
   If YES, reference:
7. Should the proposed characters be kept together in a contiguous range (rather than being scattered)? *Yes*
8. Can any of the proposed characters be considered a presentation form of an existing character or character sequence? *No*
   If YES, is a rationale for its inclusion provided?
   If YES, reference:
9. Can any of the proposed characters be encoded using a composed character sequence of either existing characters or other proposed characters? *No*
   If YES, is a rationale for its inclusion provided?
   If YES, reference:
10. Can any of the proposed character(s) be considered to be similar (in appearance or function) to, or could be confused with, an existing character? *No*
    If YES, is a rationale for its inclusion provided?
    If YES, reference:
11. Does the proposal include use of combining characters and/or use of composite sequences? *Yes*
    If YES, is a rationale for such use provided? *Yes*
    If YES, reference: *Combining signs for dependent vowels, nasalization*
    Is a list of composite sequences and their corresponding glyph images (graphic symbols) provided? *N/A*
    If YES, reference:
12. Does the proposal contain characters with any special properties such as control function or similar semantics? *Yes*
    If YES, describe in detail (include attachment if necessary) *Virama*
    See text of proposal
13. Does the proposal contain any Ideographic compatibility characters? *No*
    If YES, are the equivalent corresponding unified ideographic characters identified?
    If YES, reference: