

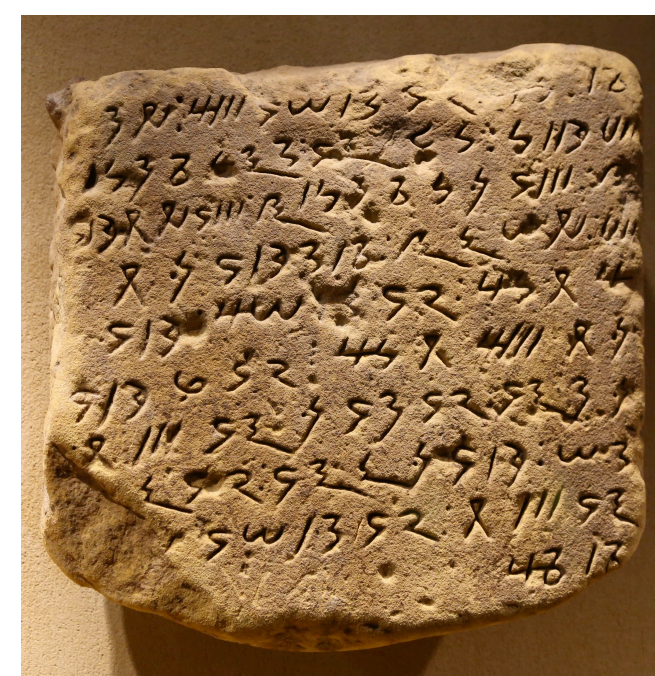
# Working Towards Meroitic Decipherment: A Computational Approach

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## What is Meroitic?

- Ancient language of Meroë, civilization in what is now Sudan
- ~ 270 BC - 330 AD
- One of the oldest African written languages



## Problem:

Currently *undeciphered!*

What is known?

- Writing system
- Certain names and loanwords
- A few grammatical concepts, (e.g. genitival constructions)
- Formulaic funerary inscriptions
- Phylogeny (Nilo-Saharan NES)

Unknown:

- Most vocabulary
- Verbal grammar
- Long Royal Narratives

## Challenges:

- No bilingual texts for Meroitic
- Lack of related languages
- Limited Vocabulary knowledge
- Orthographic Variation
- Gaps of grammatical understanding

## Possible Solutions:

Cognate Detection

- Word frequency and string matching
- Meroitic, Old Nubian, other?

Recognize orthographic variants

- Frequency/string matching
- Northern and southern texts, etc.

Utilize comparable texts

- Meroitic Long Royal Narratives
- Egyptian Campaigns

## Current Setting

- A large text corpus (*over 1,200 docs!*)
- Writing system is alpha-syllabic
- Grammar is agglutinative
- Utilizes separator character
- Some vocabulary and grammar (mostly from funerary inscriptions) already known
- Data Digitization
  - Meroitic example phrases/ vocabulary
  - Nubian/Old Nubian Dictionaries

**Goal: Learn vocabulary through cognate detection and nonparallel data analysis**



		a			l
		e			h
		i			h (s)
		o			s (se)
		y			k
		w			q
		b			t
		p			te
		m			to
		n			d
		ñ (ne)			:
		r			word divider

