

The Maritime Munda Hypothesis

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“From Assam, the pre-Mundas followed the Brahmaputra River into the northeast Indian plain, leaving behind the Khasis in Assam and acquiring many of the characteristic South Asian phonological and grammatical features from the previous Dravidian residents.”

(Starosta 2005:1912)



“Brahmaputra Migration Hypothesis”

Proponents generally assert that the ancestor of the Munda languages arrived in South Asia by migration from South(west) China or Southeast Asia (usually in conjunction with Khasi). They also generally assume a considerable time depth (e.g. Blust 1996 posits 6 kya).

There are several problems with this scenario.

- 1) Munda languages and Khasi are not closely related inside Austroasiatic.**
- 2) The Ganges Delta is one of the major barriers in Eurasia.**
- 3) The (pre-)historical distribution of the Munda languages does not support an entry from the Indo-Gangetic Plain into the subcontinent.**
- 4) Reconciliation of time-depth and localizations requires very specific assumptions**

Additional slide for Web publication



The Maritime Munda Hypothesis

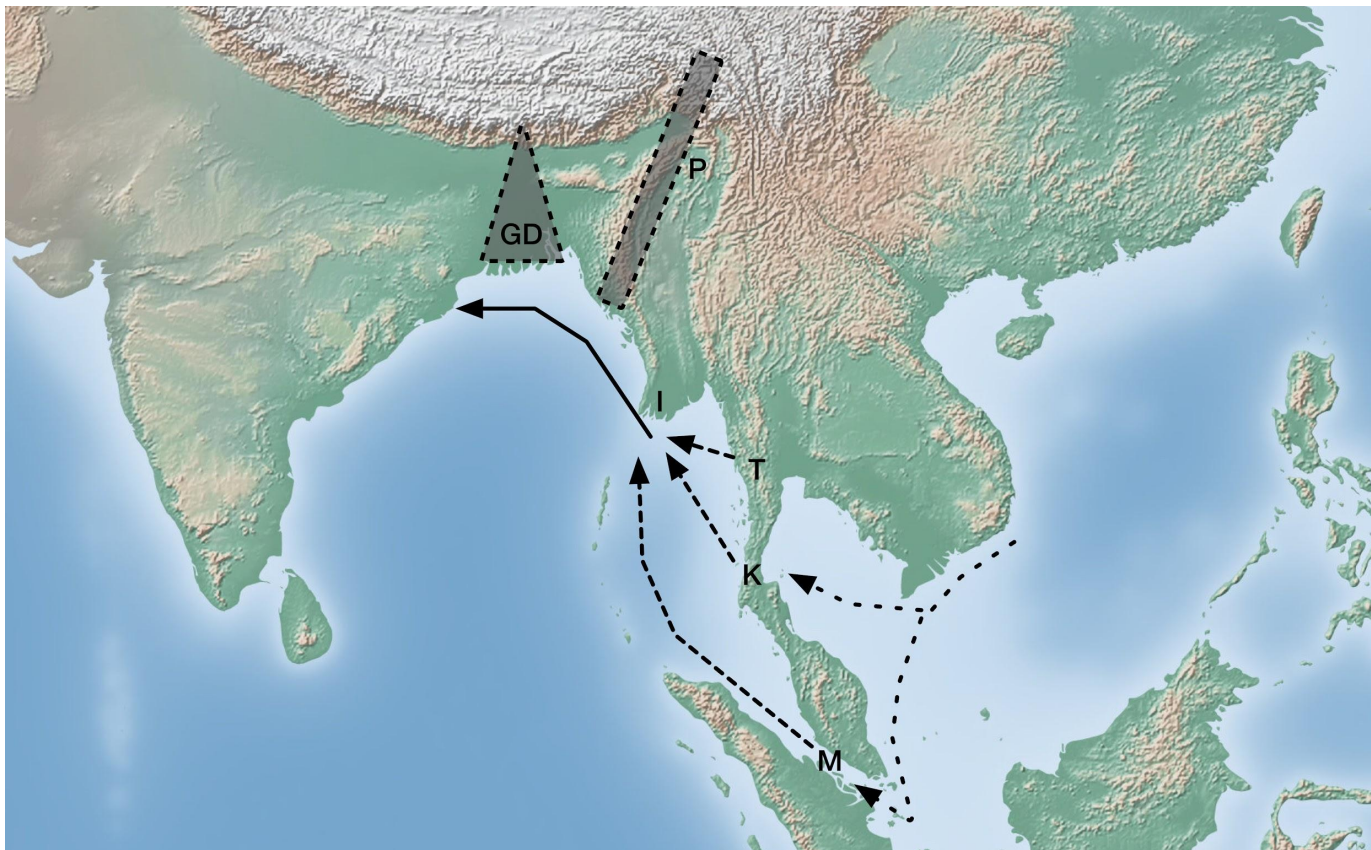
Claim 1:

The Proto-Munda **homeland** is situated in the **Mahanadi Delta** and adjacent coastal plains. Proto-Munda was spoken by a **rice and millet growing culture** consisting of South and Southeast Asian components at around **4 to 3.5 kya**.

Claim 2:

The **Southeast Asian pre-Munda** reached this location via a **maritime route around or across the Bay of Bengal** from an unknown jump-off location in Southeast Asia.

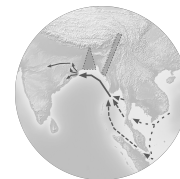




[Asia vectorial map](#), Additions by the authors, [CC0 1.0](#)

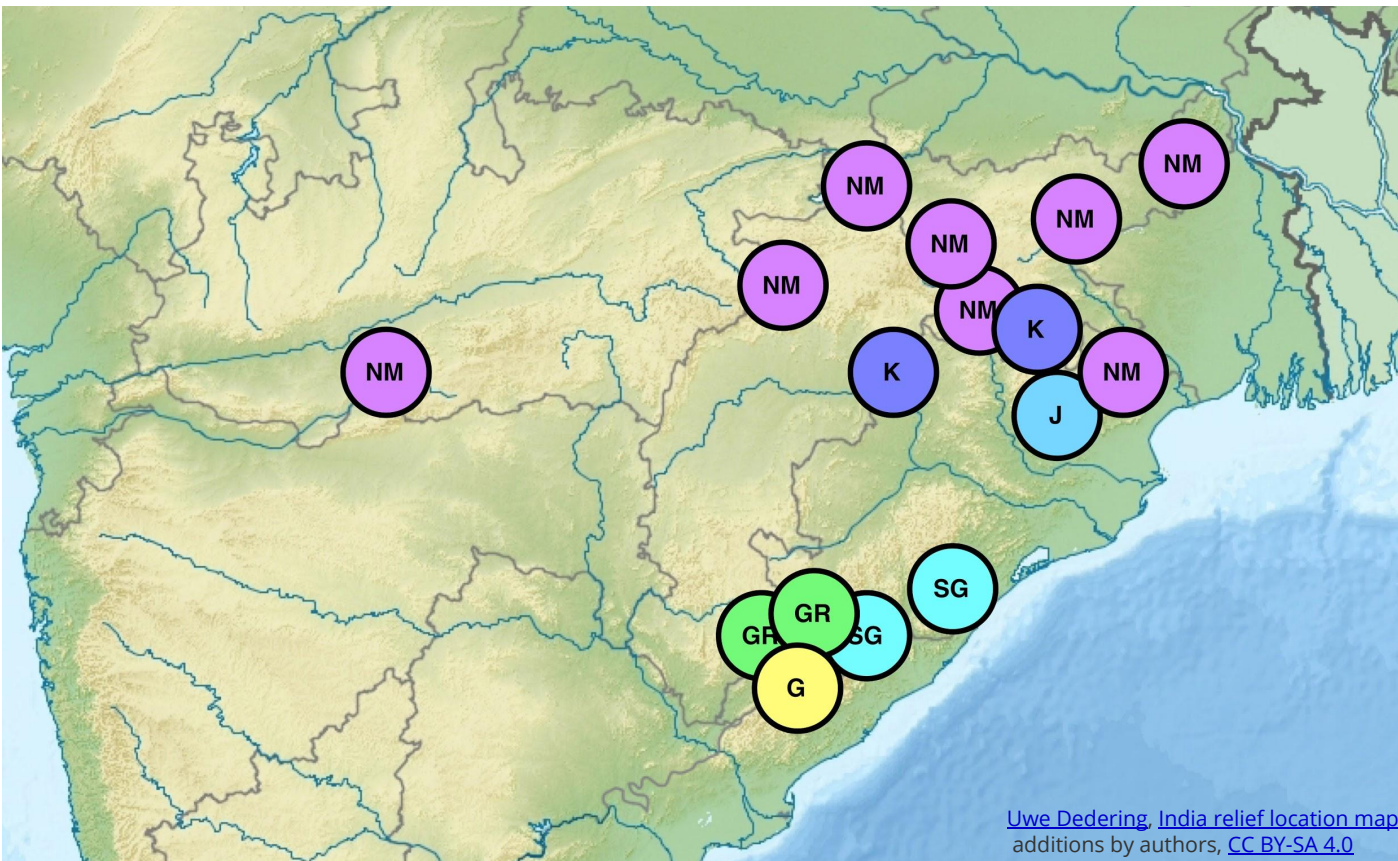
Possible pre-Munda migration routes

I Irrawaddy Delta, T Tanintharyi region,
K Isthmus of Kra, M Strait of Malacca,
GD Ganges Delta, P Patkai Range



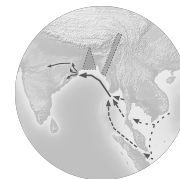
Linguistic Evidence



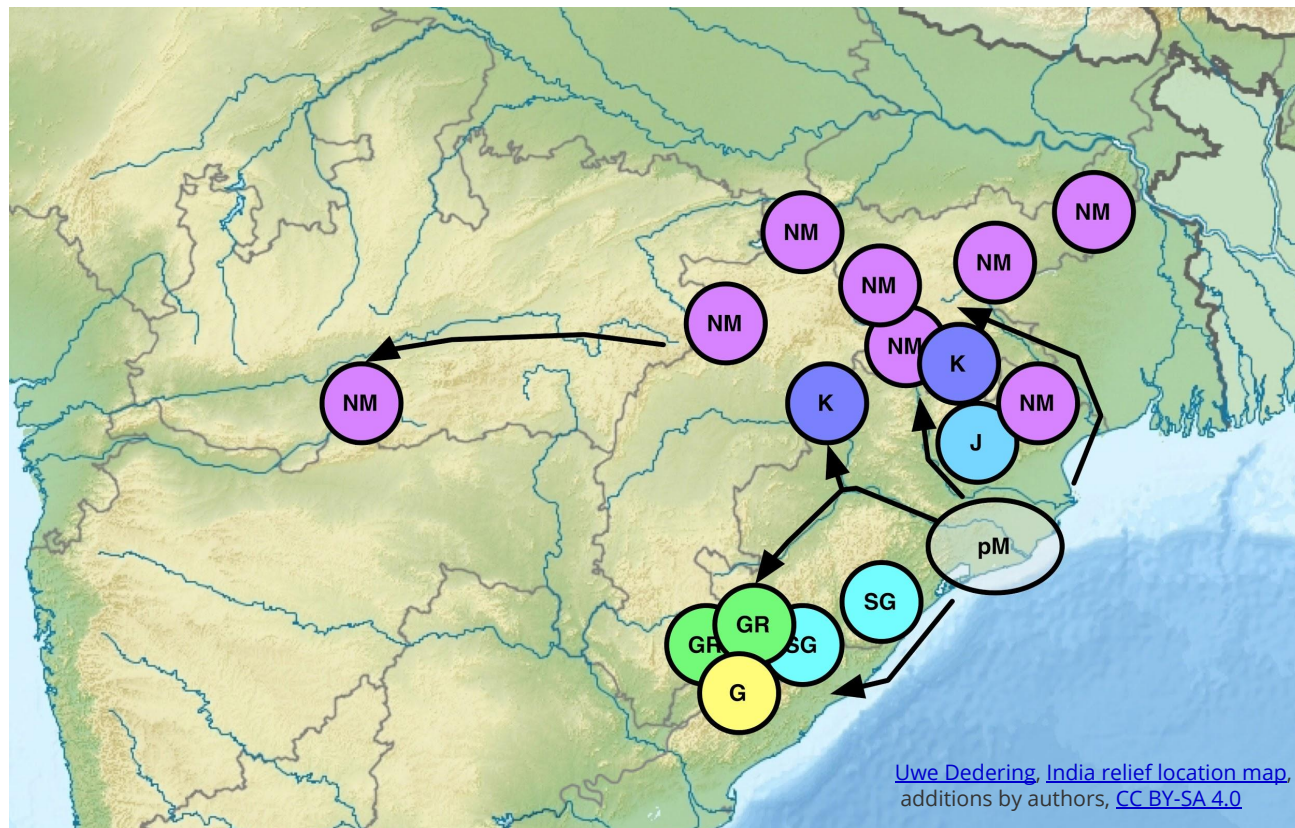


Distribution of Munda languages

G Gta?, GR Gutob-Remo, K Kharia, J Juang,
NM North Munda, SG Sora-Gorum



Distribution of Munda languages and
indicative migration
along river valleys



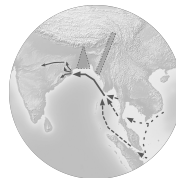
Proto-Munda syllable restructuring

Syllable Canon: pAA σ_{\max} *C(C)V(C) → pMunda σ_{\max} *CV(C)

Cluster splitting: **klaʔ* (MKCD 197) → pMunda **kə 'la* 'tiger'
 **mraik* (MKCD 416) → pMunda **ma 'ra'k* 'peacock'
 **blu:ʔ* (MKCD 223) → pMunda **bu 'luu'* 'thigh'

When a language lacking word-initial clusters borrows words from a language with initial #TRV sequences, T an oral stop and R a liquid, it is common to find vowel epenthesis, most typically vowel-copy. (Blevins 2017:4)

The restructure suggests that pMunda formed when speakers of a CVC language acquired and adapted the language of AA speakers from SEAsia.



Proto-Munda Agriculture Lexicon

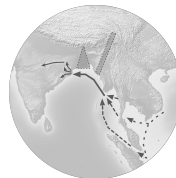
Austroasiatic Etymology

- **run(-)kub/g* 'uncooked husked rice'
- **baba* 'paddy'
- **(h)oXy* 'foxtail millet, *Setaria italica*'
- **guXm* 'to winnow'
- **er* 'to winnow'
- **Vnrij* / **VnreXj* 'pestle'
- **si(X)m* 'chicken'
- **gale* 'ear of paddy' (not in Zide & Zide)

No Austroasiatic Etymology

- **saXʔl* 'mortar'
- **gaŋ(-)gay* 'sorghum (*Andropogon sorghum*)'
- **ə-rig* 'small millet (*Panicum miliare*)'
- **deray* 'ragi (*Eleusine coracana*)'
- **kodaXj* 'horsegram (*Macrotyloma uniflorum*)'
- **rVm* 'black gram (*Vigna mungo*)'
- **uXli/uXla* 'mango (*Mangifera indica*)'
- **kaj'-er* / **kag'-er* 'unripe mango'
- **taŋ* 'cow'
- **boŋtel* 'buffalo'

Items without AA etymologies also lack
apparent Indo-Aryan or Dravidian sources.
Forms according to Zide and Zide (1973, 1976)



Summary: Linguistic Evidence

Linguistic geography points to a locus in and around the Mahanadi-Brahmani Delta in the Odisha coastal plains at around 3.5–4 kya.

The established local population had already had some agriculture, but the AA speakers brought rice agriculture and related farming techniques and other components.

AA speakers established themselves as the socially dominant group, the more numerous locals (speaking a language without initial consonant clusters) acquired AA speech while retaining various South Asian structural features.

The resulting proto-Munda culture and language later dispersed into the hinterlands, leaving no direct linguistic trace in the delta lowlands.



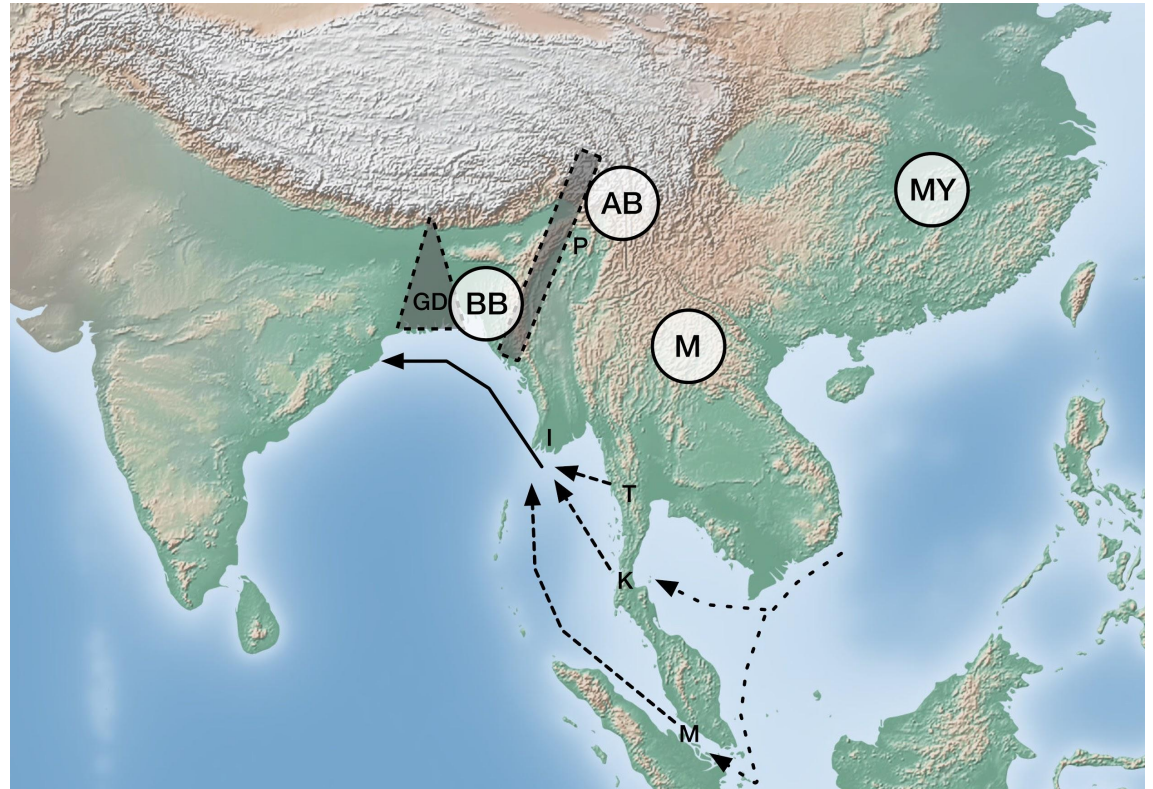
Austroasiatic Homeland

Proposals put the AA homeland East of the Ganges- Brahmaputra Delta, a major ecological barrier.

All proposals acknowledge migrations to the Nicobar islands and the Malay Peninsula.

Those southern migrations necessarily came to the Andaman Sea coast and used watercraft for rivers and ocean navigation.

This gives ancient AA speakers means & opportunity to bypass the barriers faced by overland routes.



BB Bay of Bengal, AB Assam-Burma border, MY middle Yangtze, M Mekong;
GD Ganges Delta, P Patkai range



Archaeological Evidence



Eastern Wetland Tradition

- rice
- two to three pulses
- two to four millets
- cattle and buffalo
- different from the agriculture that spread west to east in the Ganges Plain



Eastern Wetland Tradition

“[t]he situation of Golbai—merely 20 km from the Bay of Bengal—and its unique Neolithic-Chalcolithic assemblage hints at Southeast Asian landfall on the eastern Indian sea board in the 2nd–1st millennia BC.”

Gupta (2005:22)



[Uwe Dederig, India relief location map](#),
additions by authors, [CC BY-SA 4.0](#)



Summary: Archaeological Evidence

Extensive pre-historic maritime contact between the Munda homeland region and Southeast Asia is well established and the archaeological evidence for an early connection between this area and Southeast Asia is pervasive and comes from human remains, artifacts, and crop plants.

The evidence for this early maritime contact is much more tentative than in the late pre-historic (early Metal-Age) period and in particular the dating of the evidence is not well established.

Nonetheless, evidence suggests an early maritime contact that supports a maritime linkage between the proto-Munda homeland and the Southeast Asia.

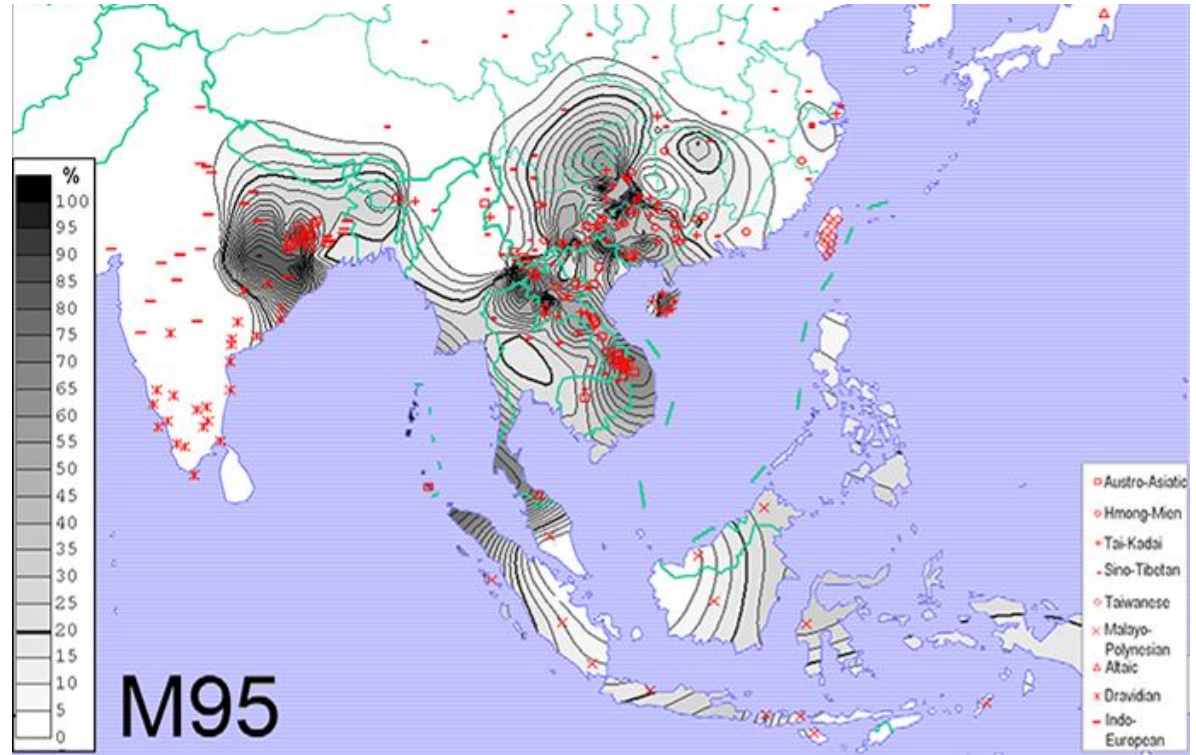


Genetic Evidence

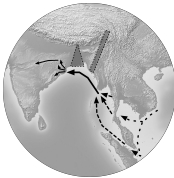


Genetics of Munda populations

- O2a1-M95 (60%)
- nested in SEA clade
- mtDNA purely SA
- admixture occurred 2–3.8 kya
- male-specific founder event
- Munda, Khasi differ
- Aslian: Identity by Descent



[\(Cai et al. 2011:5\)](#)



Summary: Genetic Evidence

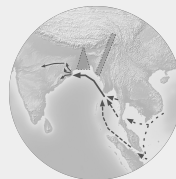
Munda populations are Indian populations with a Southeast Asian component that was introduced by a small male Austroasiatic founder population, with no particular connection to Khasi.

The indigenous South Asian population was less influenced from ANI populations from the Northwest than all current dominantly ASI populations.

The admixture has been dated to either the Neolithic or Chalcolithic in a location that had not yet experienced Indo-Aryan influx.

The evidence corroborates the hypothesis of a Munda homeland in the Mahanadi Delta at around 3.5–4 kya (2000–1500 BCE).

Additional slide for Web publication



Conclusions



Linguistics

Archaeology

Genetics

AA language in SA

Contact SA/MSEA

SEA Y-Haplogroup in SA

3.5-5 kya

3500 cal BP

2–3.8 kya

Mahanadi Delta

Mahanadi Delta

Hill regions adjacent to
Mahanadi Delta

large number of L2

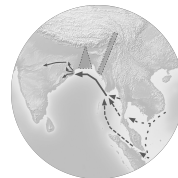
“SEA landfall”

male-specific founder
event

no contact with IA

distinct from Ganges
tradition

no ANI DNA



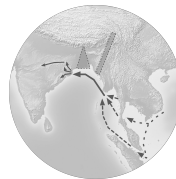
Summary

Pre-Munda speakers were an AA Mainland SEAsian community practising rice and millet agriculture, during/after the Late Neolithic Transition.

The pre-Mundas arrive in the Mahanadi Delta around **1500 BCE**.

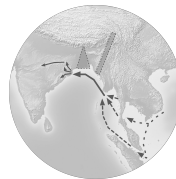
Proto-Munda developed once the pre-Mundas encountered a local South Asian population (speaking a language without initial consonant clusters). The sub-stratum speakers acquired and adapted AA lexicon and cultural features, forming a new distinctive speaker community.

The **Munda languages** dispersed from the coastal plains along the major rivers into the Eastern Ghats, the Chota Nagpur Plateau, and from there as far west as the Satpura Hills.



How to disprove the Munda Maritime Hypothesis

1. Demonstrate that Munda and Khasi are closely related within AA
2. Demonstrate a (pre-)historic presence of Munda languages in Assam, the Himalayas, or northern Ganges Plain.
3. Demonstrate the existence of Munda loanwords in early Sanskrit (Vedic Sanskrit)
4. Show that Austroasiatic was not yet present in coastal MSEA during the late Neolithic.

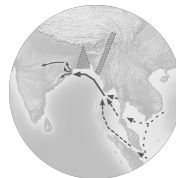


Resources

Slides: Rau, Felix and Paul Sidwell 2019. "The Maritime Munda Hypothesis."
ICAAL 8, Chiang Mai, Thailand, August 29-31, 2019.
[doi:10.5281/zenodo.3365316](https://doi.org/10.5281/zenodo.3365316).

Paper: Rau, Felix and Paul Sidwell 2019. "The Maritime Munda Hypothesis."
Journal of the Southeast Asian Linguistics Society 12.2 (2019): 31-53
<http://hdl.handle.net/10524/52454> (available September 2019)

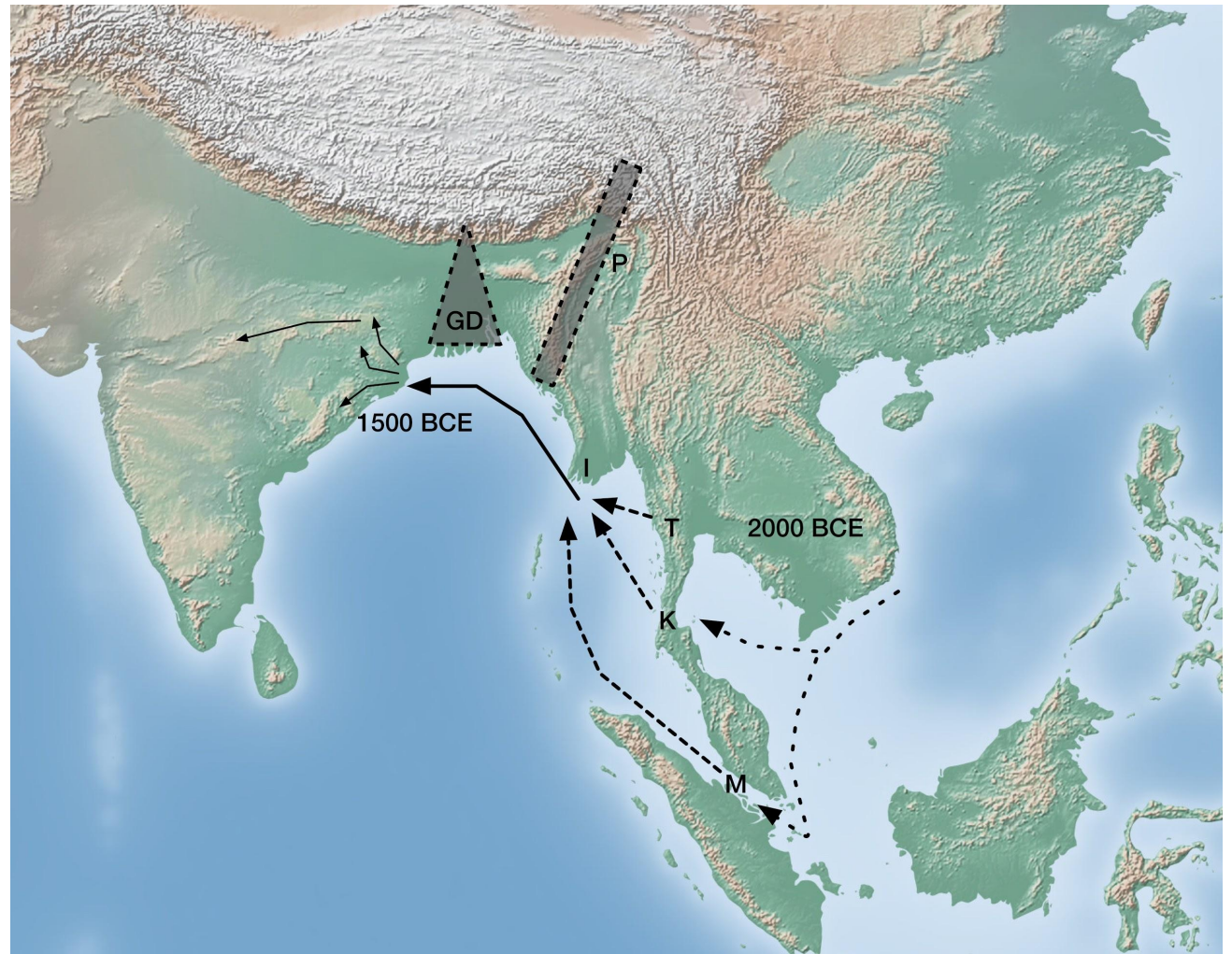
Bibliography: [Zotero list "Maritime Munda"](#)



Questions & Discussion



The Maritime Munda Hypothesis



Abbreviations

AA Austroasiatic (language)

ANI Ancient North Indian (gene pool)

ASI Ancient South Indian (gene pool)

BP Before Present (dated by carbon dating)

IA Indo-Aryan

kya thousand years ago"

L2 second language

MSEA Mainland Southeast Asia

mtDNA Mitochondrial DNA

SA South Asia(n)

SEA Southeast Asian(n)

Additional slide for Web publication

