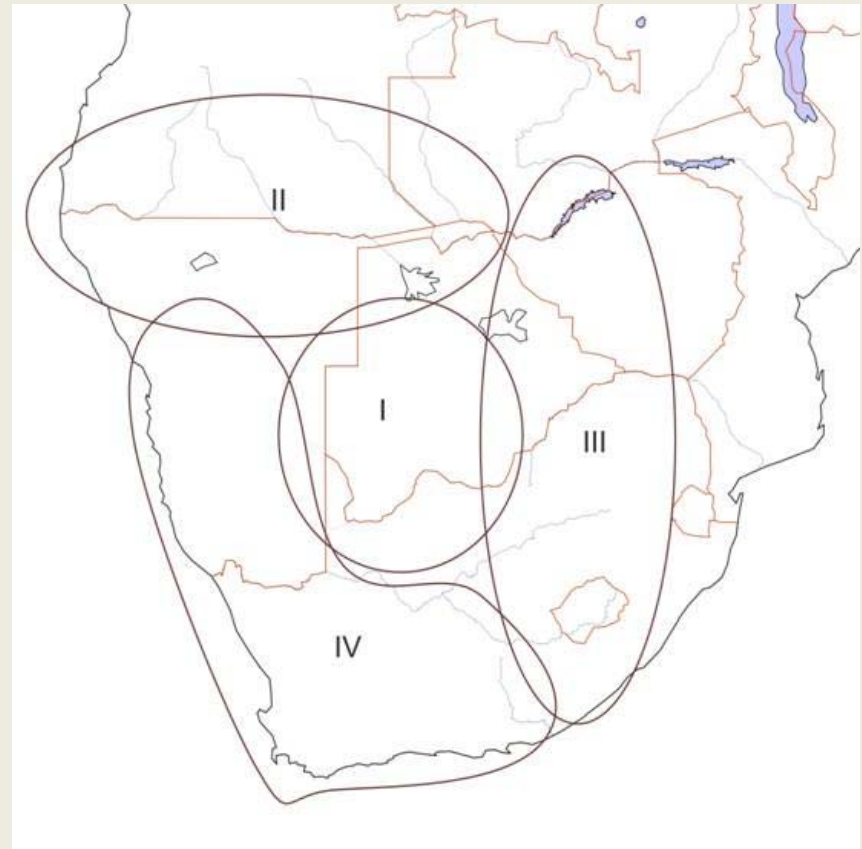


3rd Day (Saturday, May 16): Thematic panels according to chronology and questions

- (8) Kalahari Basin prehistory after the advent of pastoralism
 - b. People
- 14:00-15:00: Panel (8b)
- Sadr: Pros of cultural diffusion of pastoralism



Diffusion of Pastoralism

- Three potential pathways (after Marek Zvelebil)
 - Folk migration of pastoralists
 - Infiltration of herders/pastoralists
 - Diffusion of livestock without accompanying herders.
- Some examples...

Folk migration*

- Bantu migrations.
- A new set of material traits (Iron Age) appear, with no precursor in southern Africa.
- Disjunction clearly visible.
- Extensive and persistent.



* Often involves assimilation of locals by migrant folk.

Infiltration

- distinguished by the smaller number of people involved.
- Infiltrators are few and have low archaeological visibility.

Diffusion

- New traits (e.g., livestock) move from hand to hand; they diffuse without a parallel movement of people.
- Horses in North America.

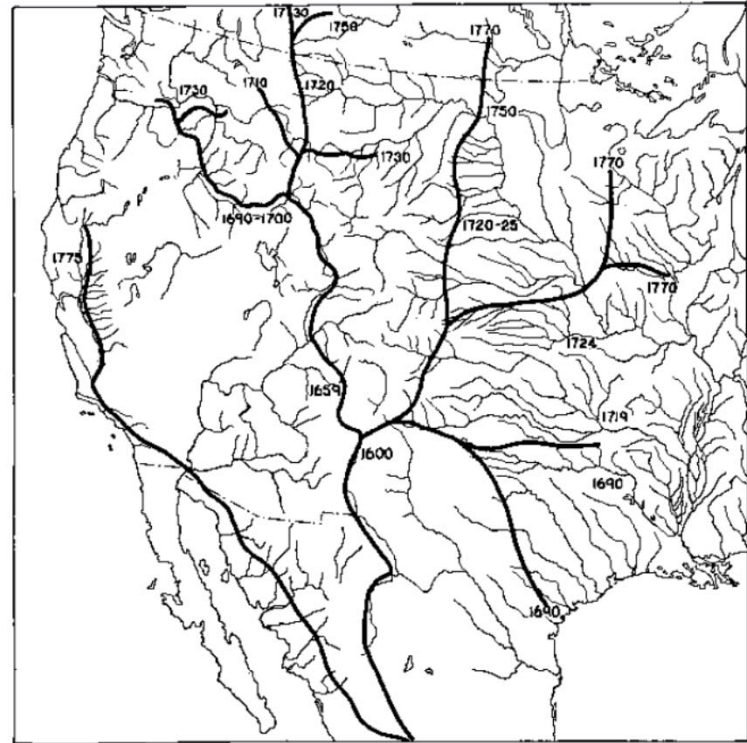


FIG. 1. Map showing the northward spread of the horse in western United States. Lines indicate the approximate routes followed by horses; the dates, the approximate time the horse reached each area.

Haines 1938, American Anthropologist

The three pathways

- Are three points on a continuum of how many people accompany the trait

<u>many</u>	<u>few</u>	<u>none</u>
<u>migration</u>	<u>infiltration</u>	<u>diffusion</u>

- All three pathways can be active in the same event.

Lithic Evidence

Discontinuity Model

- Change in composition of stone tool assemblage after arrival of pottery/livestock.
- can indicate **immigration** or **infiltration**.
- Depends on how widespread and persistent the lithic changes were.

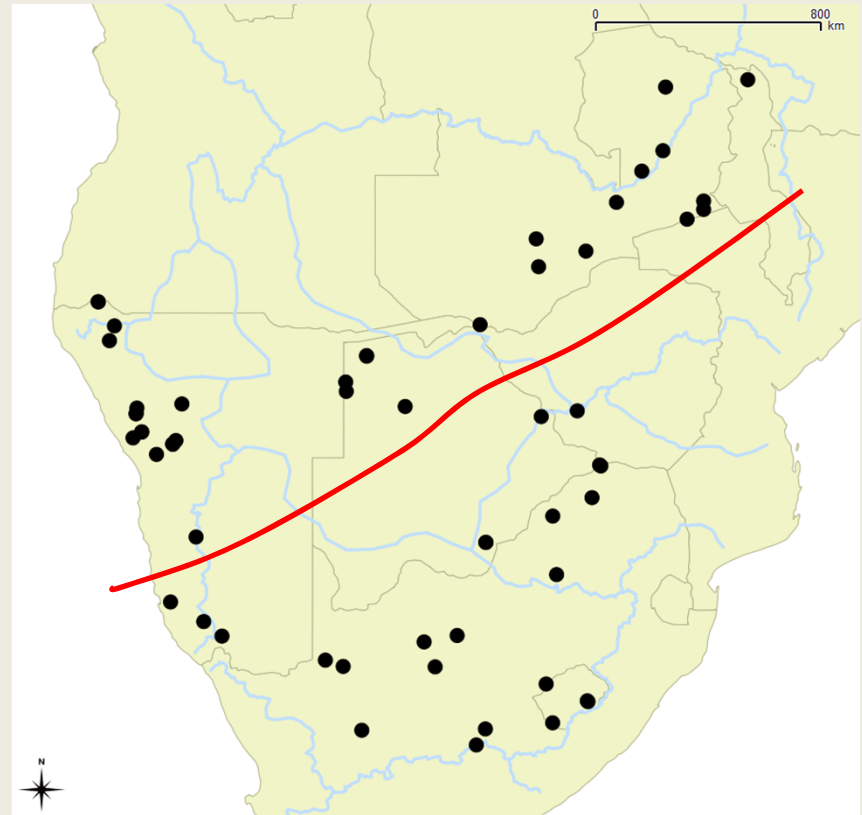
Continuity Model

- Stone tool assemblage unchanged after arrival of pottery/livestock.
- May suggest **diffusion** of pottery/livestock.

Phase 2: Interior Southern Africa by 2 kya

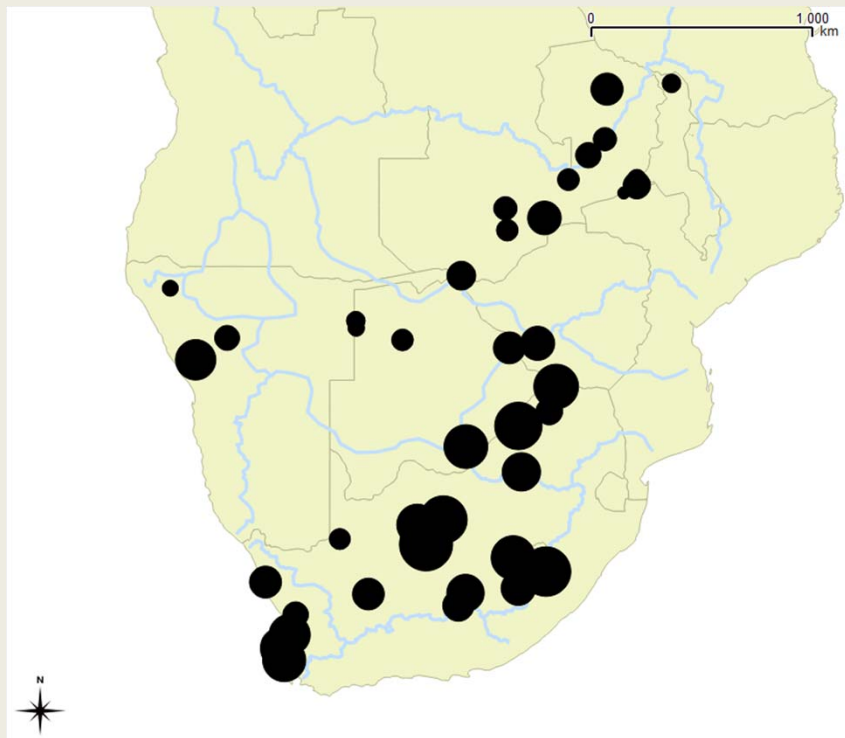
- North of the red line
 - Backed tools > scrapers
- South of the red line
 - Scrapers > backed tools

(Deacon, H.J. 1972; Deacon, J. 1974, 1984; Phillipson 1976, 1977; Jacobson 1978; Wadley 1979).

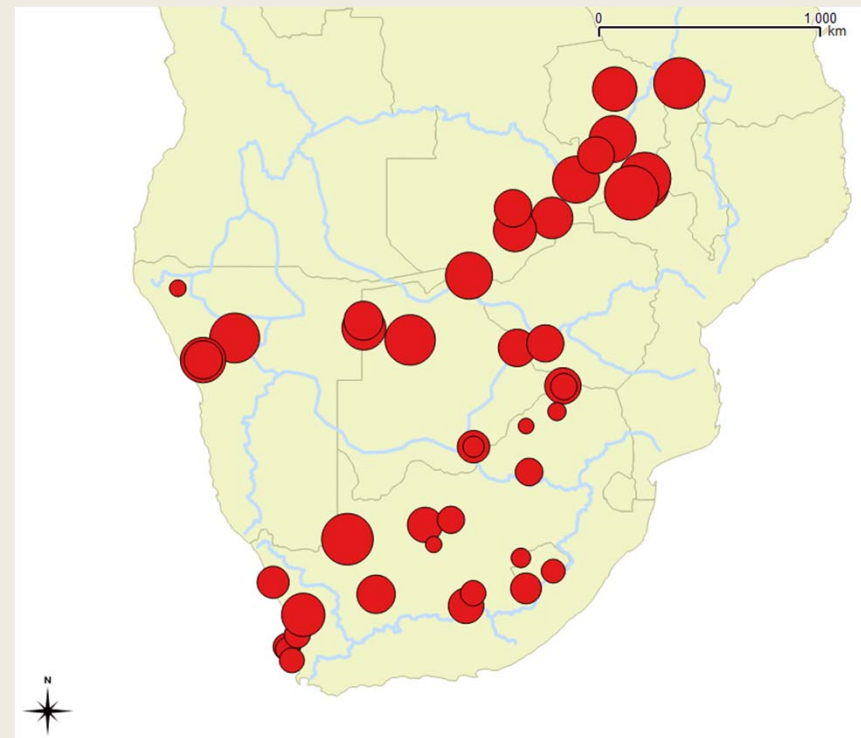


Phase 2

Scraper %

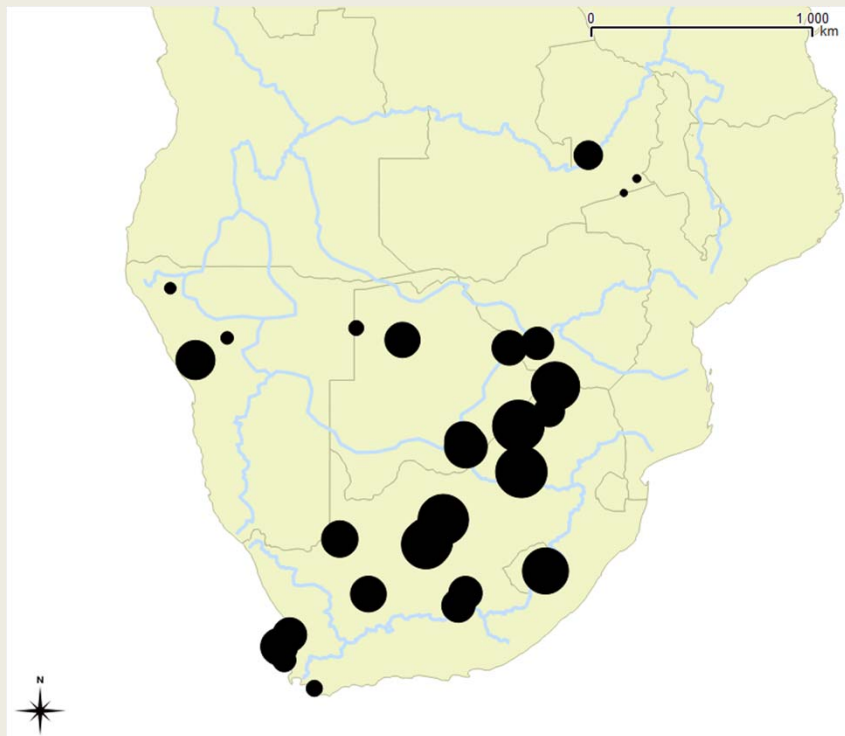


Backed %

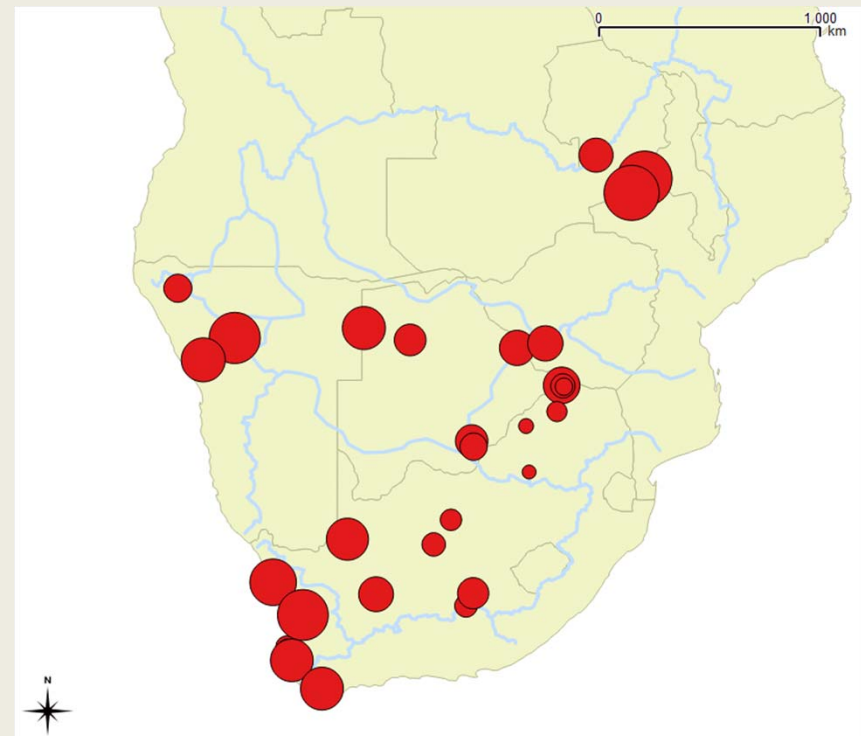


Phase 3

Scraper %



Backed %



9 Sites West Coast of Southern Africa, plus Geduld

ID	ident	layers	phase	SCR%	BCK%	ADZ%	OTH%	FT%	N FT
1	bakoond	1_6	3	17.65	58.82		23.53	1.57	17
2	bakoond	>7	2	60.00	20.00		20.00	3.45	5
3	buzz	1_7	2	21.05	60.53	5.26	13.16	1.02	38
4	Die Kelders	1_12	3	8.47	59.32		32.20	0.90	59
5	geduld	1_7	3	5.17	84.48	1.72	8.62	0.34	58
6	geduld	8_14	2	20.00	80.00			0.14	10
7	KBB	1_11	4	15.15	6.06	3.03	75.76	0.14	33
8	KBB	12_16	3	19.05		14.29	66.67	1.20	21
9	KBG	1_21	3	44.16	15.58	7.79	32.47	2.38	77
10	KBG	22_42	2	44.00	24.00	2.00	30.00	2.61	50
11	Reception	1_6	4		69.23	7.69	23.08	1.13	13
12	Reception	7-9a	3		83.33		16.67	1.71	6
13	spoegrivier	1_5	3		70.00	10.00	20.00	1.98	20
14	spoegrivier	6_16	2	32.98	32.98	3.19	30.85	1.90	94
15	Tortoise	1_3	3	37.50		37.50	25.00	1.58	16
16	Tortoise	10_13	2	54.69	21.88	2.08	21.35	4.89	192
17	Witklip	1	4	31.25	9.38	37.50	21.88	5.03	32
18	Witklip	3	3	22.62	14.29	51.19	11.90	4.75	84
19	Witklip	4	2	48.65	18.92	32.43		4.56	37

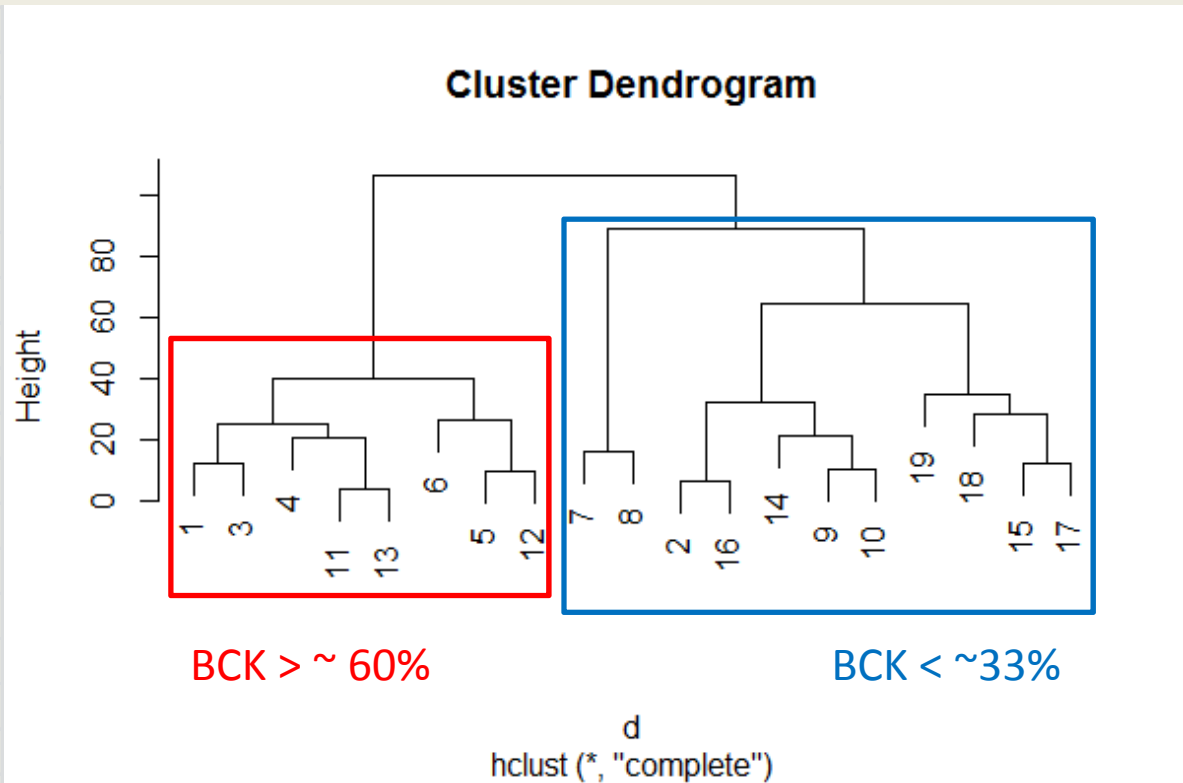
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9 Sites West Coast of Southern Africa, plus Geduld

ID	ident	phase
1	bakoond	3
3	buzz	2
4	Die Kelders	3
11	Reception	4
13	spoegrivier	3
6	geduld	2
5	geduld	3
12	Reception	3

7	KBB	4
8	KBB	3
2	bakoond	2
16	Tortoise	2
14	spoegrivier	2
9	KBG	3
10	KBG	2
19	Witklip	2
17	Witklip	4
18	Witklip	3
15	Tortoise	3



Thank you Jayson Orton

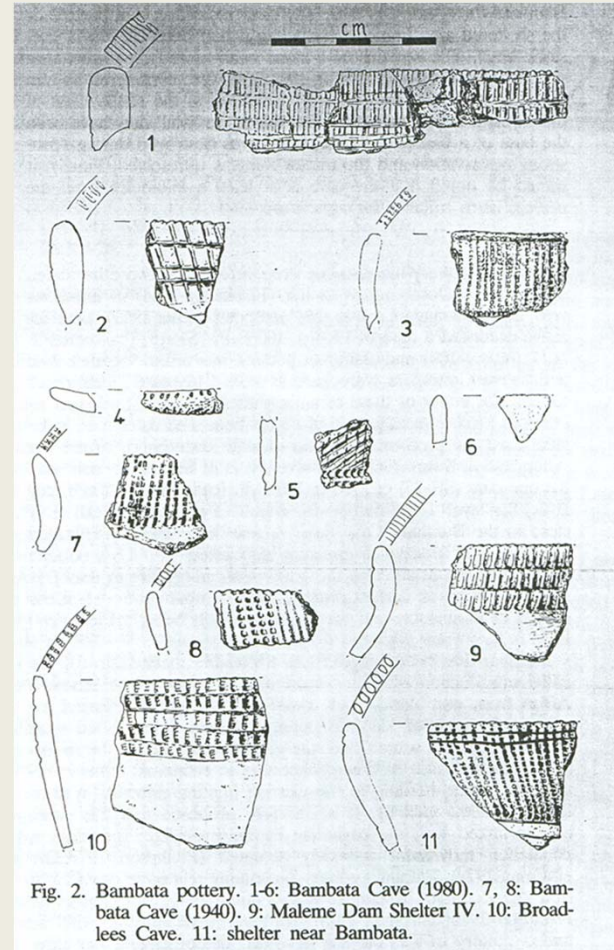
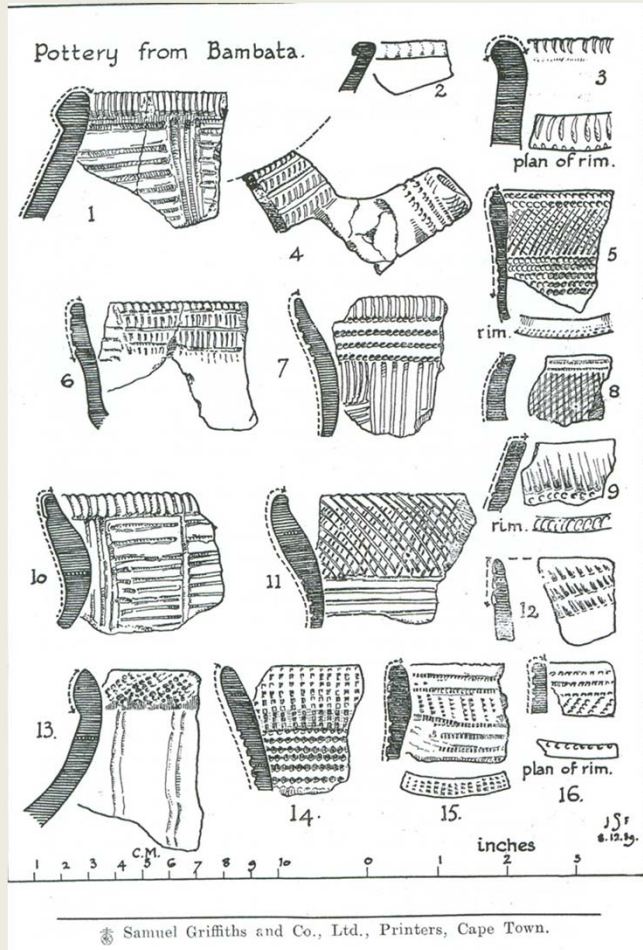
Khoekhoe pastoralist migration?

- Lithics don't tell what language the stone tool makers spoke.
- Scale of change looks more like infiltration than migration:
 - on West Coast a few hundred sites remained in scr>bck tradition
 - Half a dozen sites show the new bck>scr tradition
- But the early sheep sites are all among these half a dozen
 - Spoegrivier and Die Kelders have bck>scr in phase 3.
 - Geduld et al. bck>scr in both phases 2 and 3

Next Infiltration was bigger and came
from a different direction

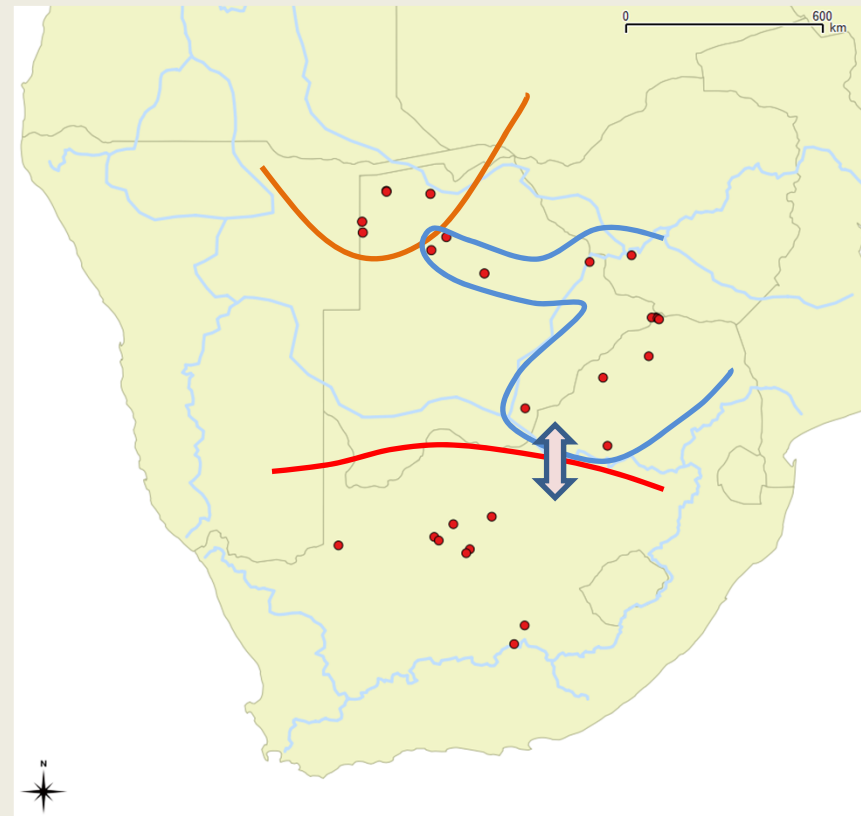
- The Bambata Event

Bambata Pottery



Phase 3: Bambata Infiltration towards Lake Ngami

- Along Makgadikgadi, Boteti to Ngami
- Clearly scr>bck infiltration into bck>scr tradition



Infiltrate to Lake Ngami*

- At Toteng associated with early cattle and sheep bones
- And a scr>bck stone tool assemblage typical of LRB
- Overlying Phase 2 layers of back>scr assemblage typical of Kalahari basin.

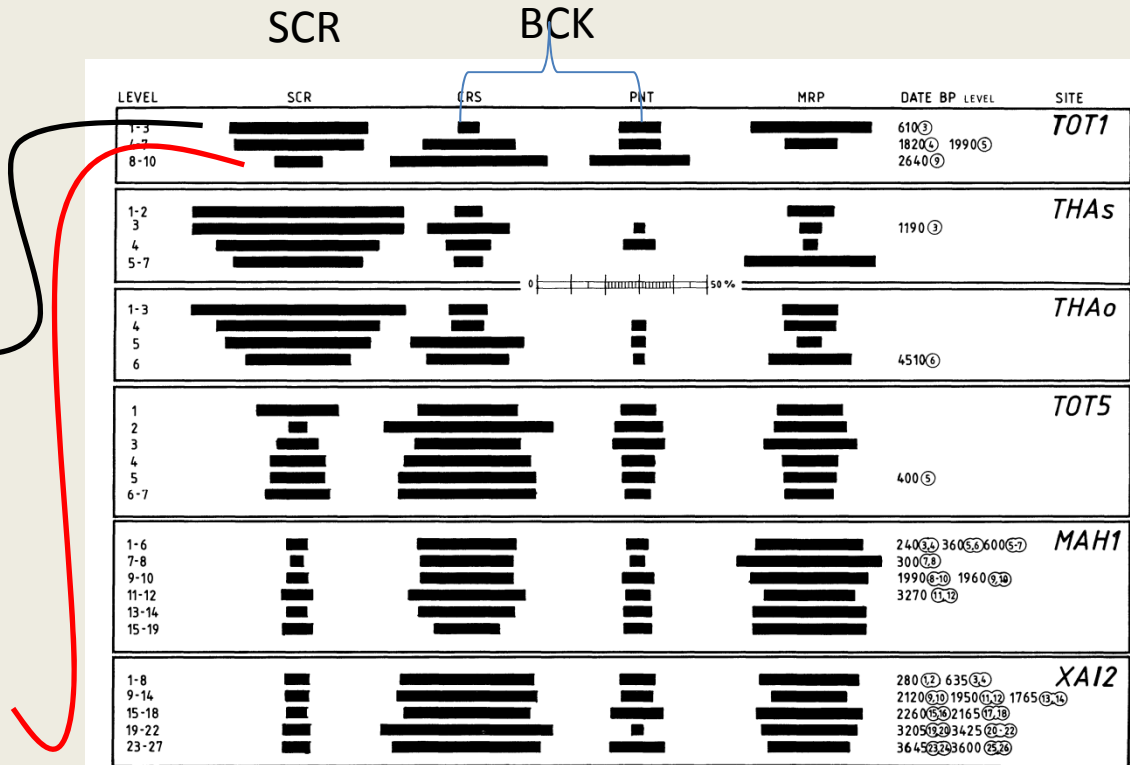
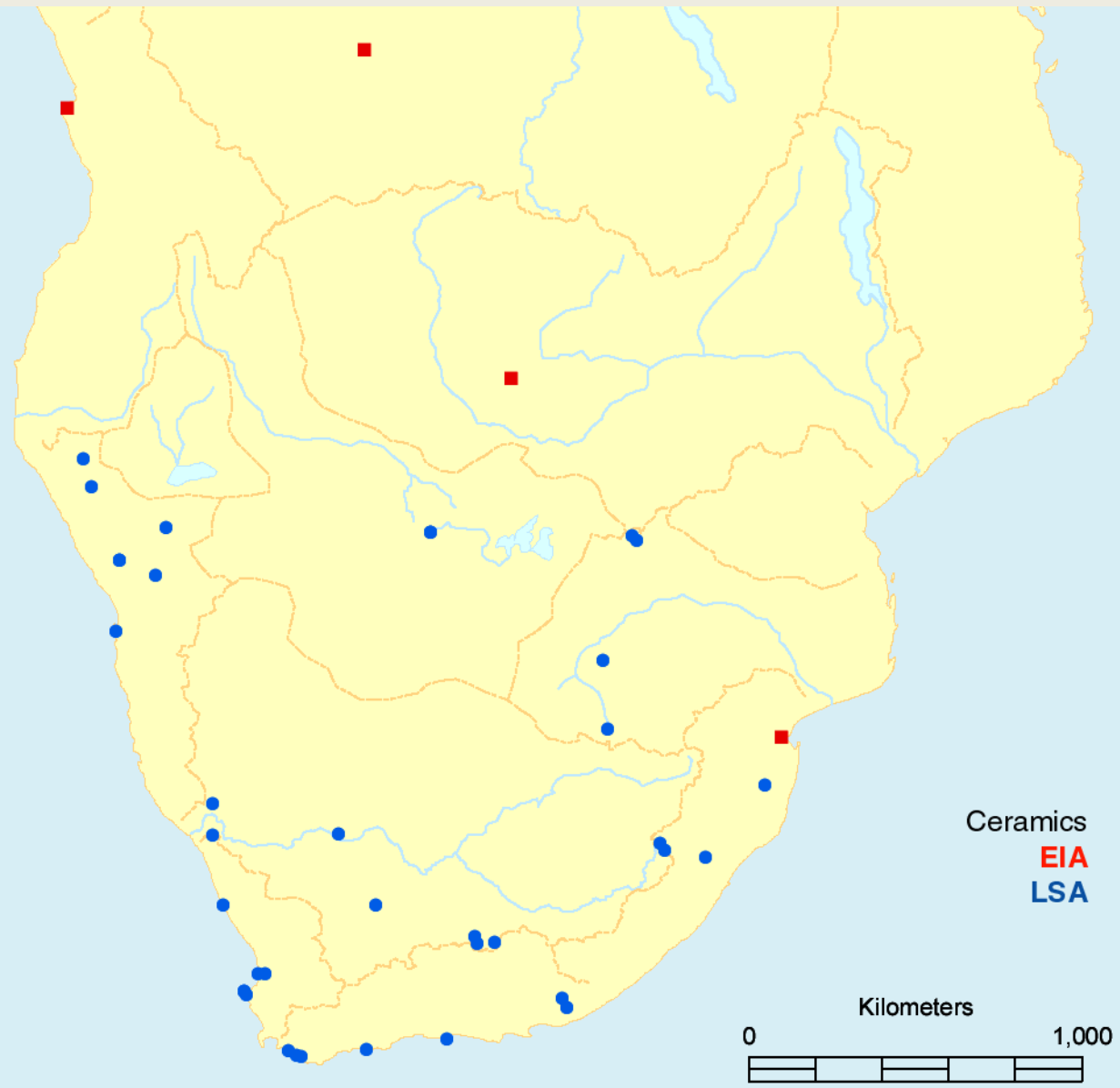


FIG. 4. Changes in frequencies of formal tool types through time at six LSA sites from Botswana. The tool types (columns) are (from left to right) scrapers, crescents (or segments), points and other backed pieces (excluding backed scrapers and crescents), and miscellaneous retouched pieces. TOT1 and 5, Toteng, and THAs and THAo, Thamaga sites, as in figure 3. MAH1, Mahopa 1; XAI2, Yellen and Brooks's Xai Xai 2. To make sample sizes adequate, each row in the chart may include more than one site level. These are clearly marked.

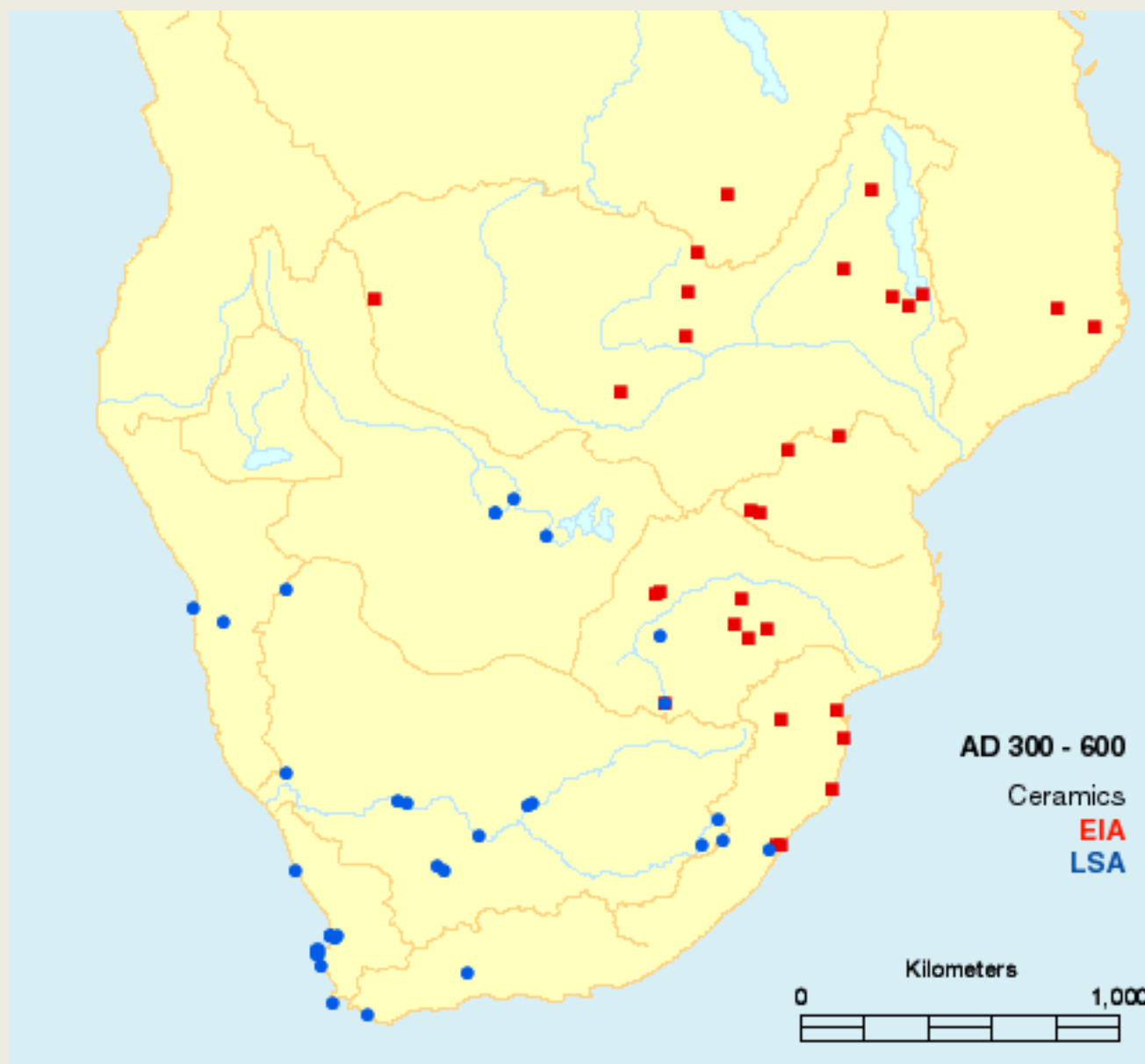
Sadr 1997 CA

* With paintings of loin cloths?

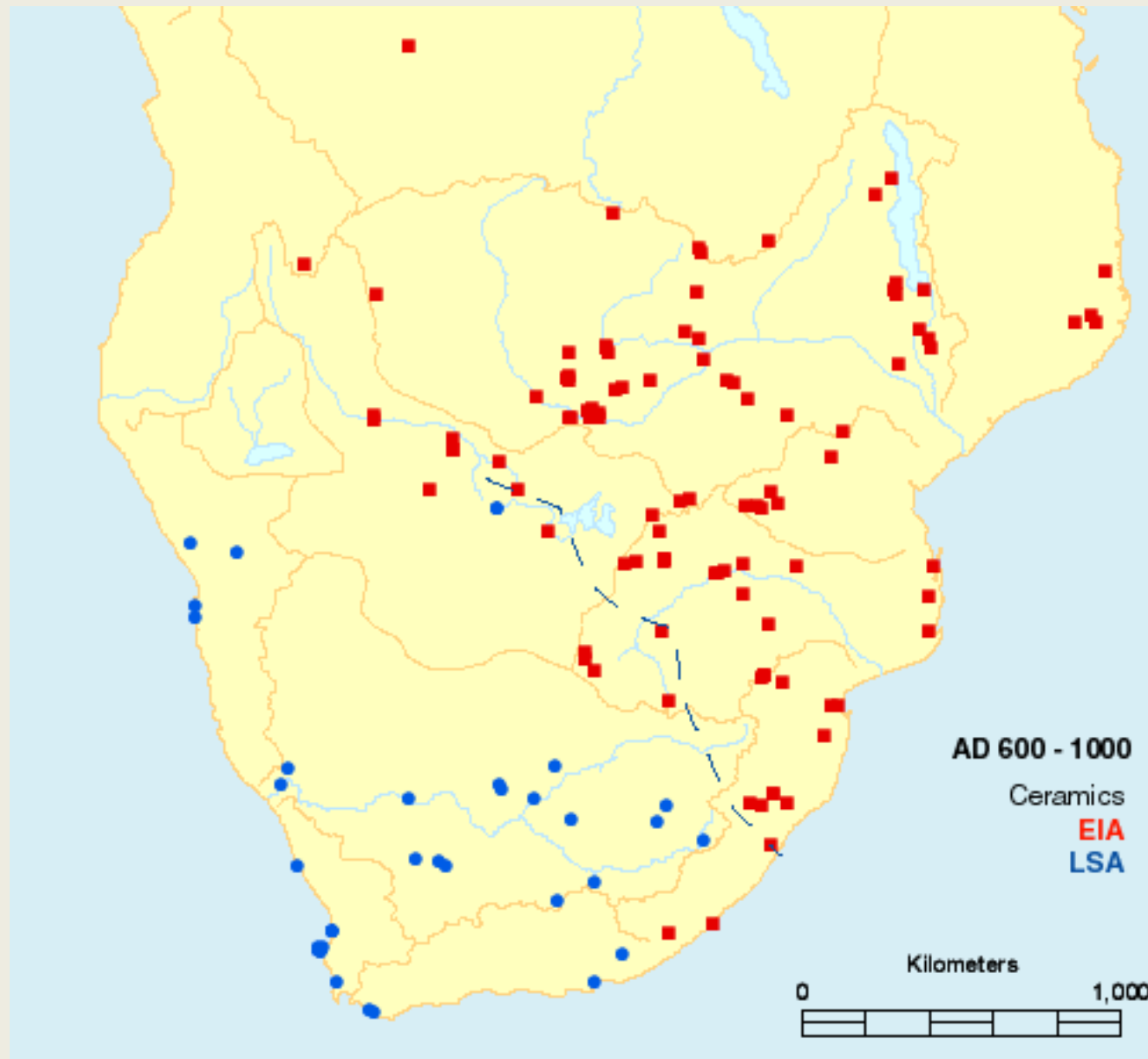
Phase 2-3 boundary: 300 BC – AD 300



Phase 3 middle: AD 300-600

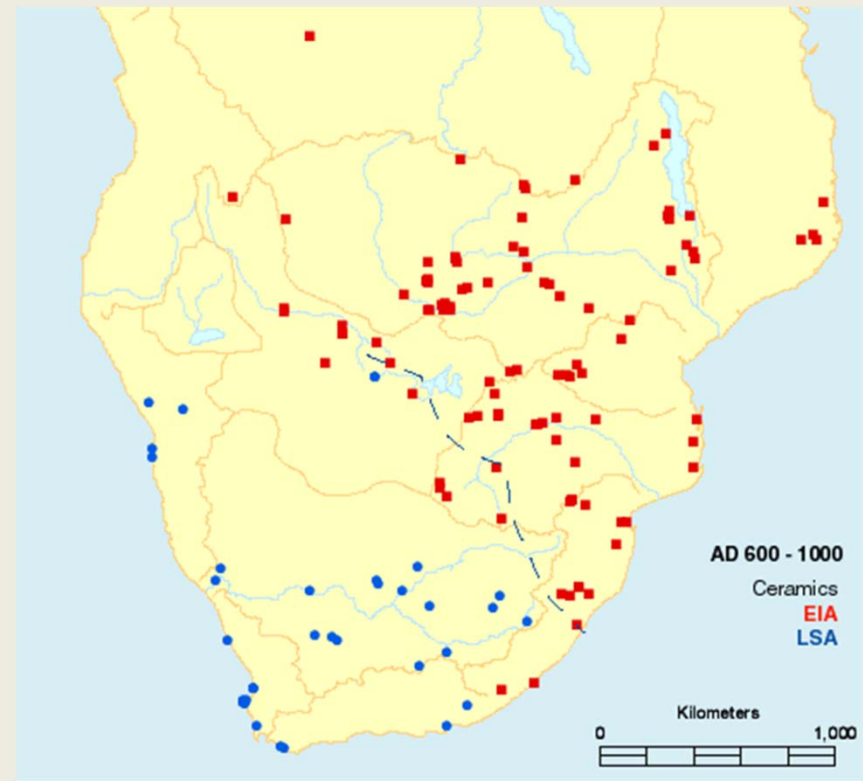


Phase 3 Late: AD 600-1000



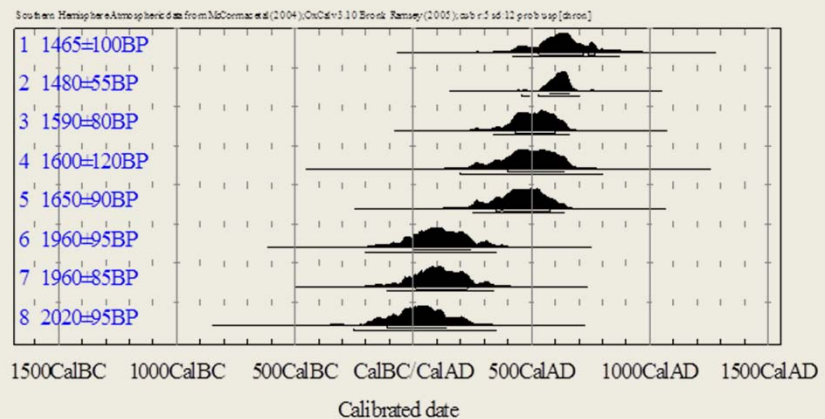
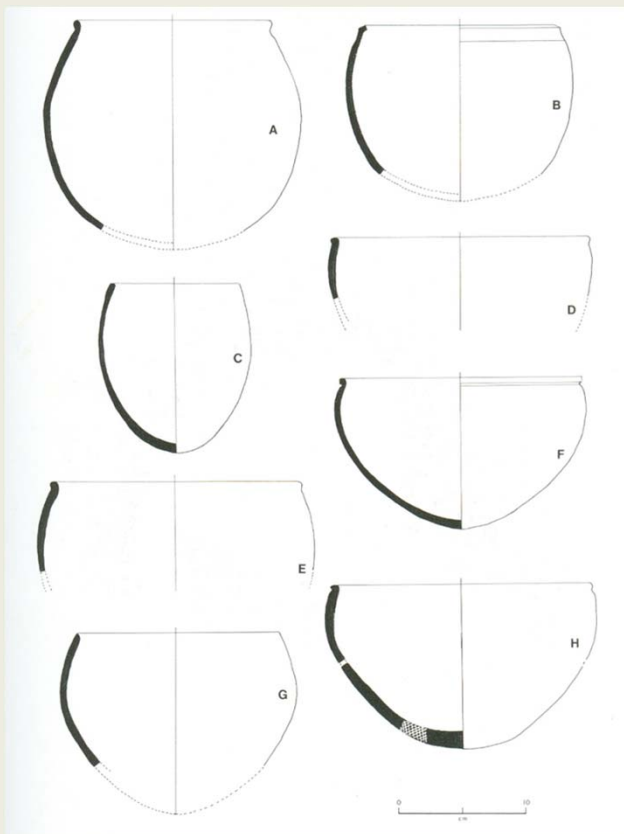
After mid-first millennium AD

- No more Bambata pottery
- But decorative elements thereof resurface in the ORB, and on the west and south coasts of South Africa.

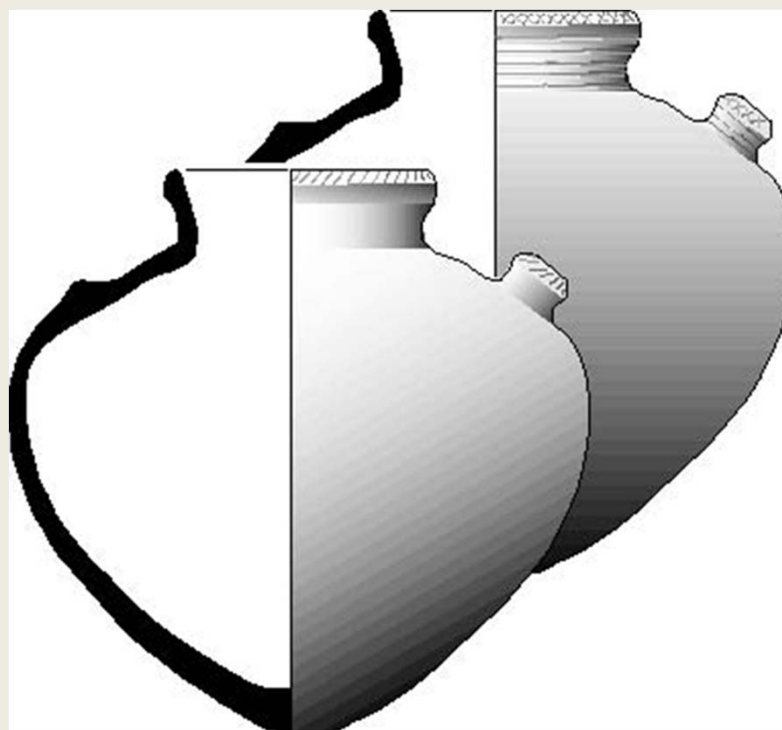


“Bambata” infiltration at Die Kelders

First two or three centuries AD



Mid-first millennium AD



What else infiltrated with the Bambata event?

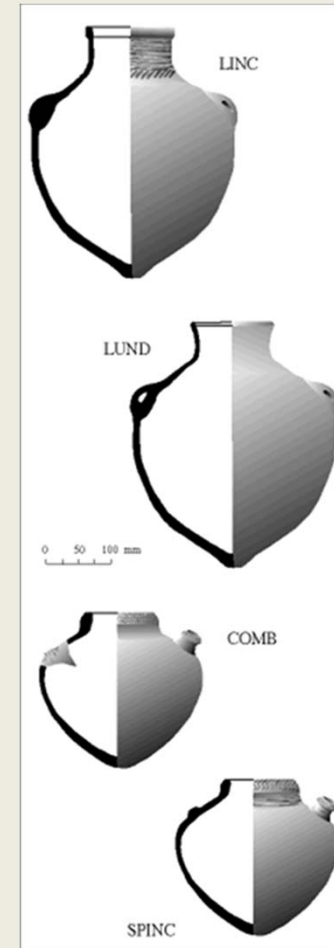
- On West Coast stone tools become few and more informal

		SCR	SCR%	BCK	BCK%	OTH	FT	FT%	N Lithics
DK	P2	0	0.0	2	0.2	1	3	0.3	1149
DK	P1	5	0.1	33	0.6	18	56	1.0	5366

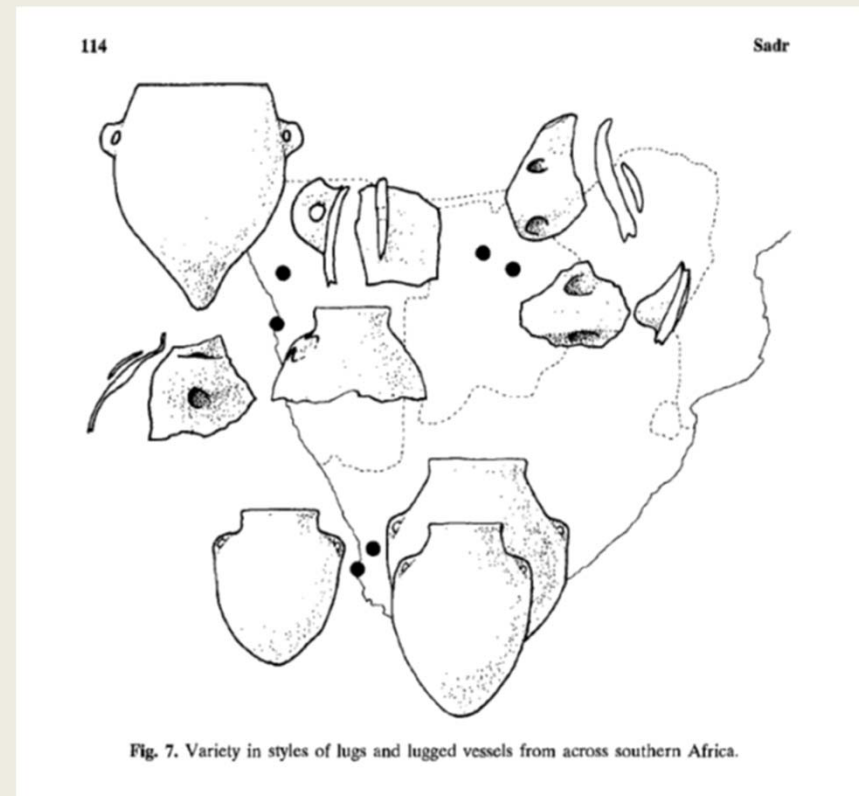
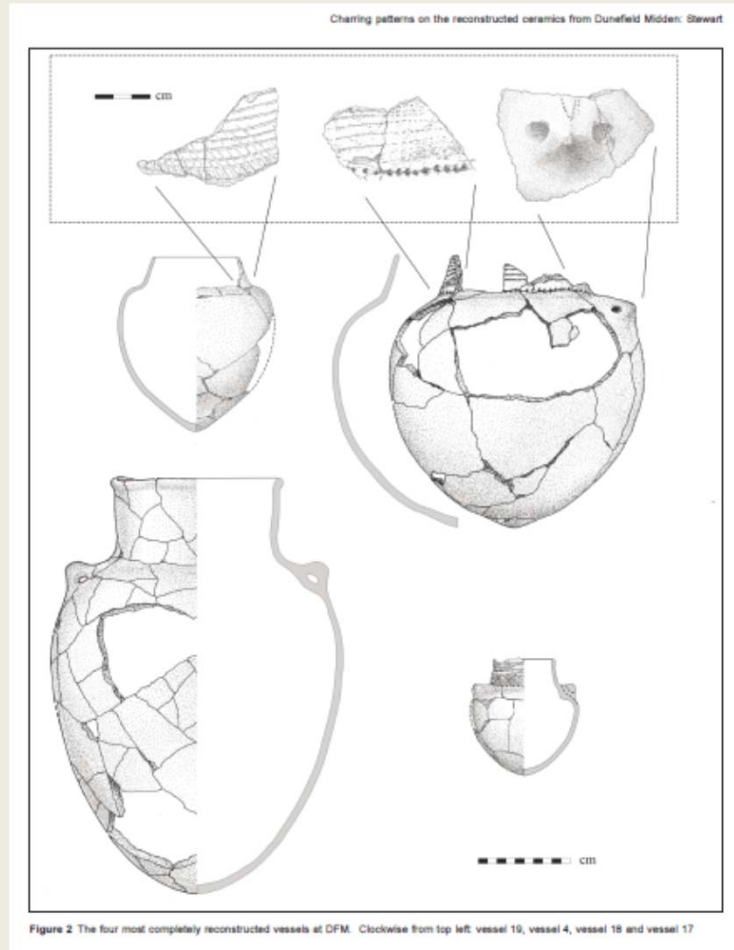
- At KBA, complex hunter-gatherers, feasting economy
 - NB. At Bambata signs of food storage in Phase 2, *sine qua non* of complex hunter-gatherers

Next infiltration was even bigger...

- Phase 3 to 4 transition, ca. AD 1000
- Lugged pots
 - Extend from Northern Namibia and Botswana to the ORB and south and west coasts of South Africa



Varieties of Lugged Pots*



* There are varieties of lugged vessels in the K2/Mapungubwe transitional ceramic types

What else spread with the lugged pots?

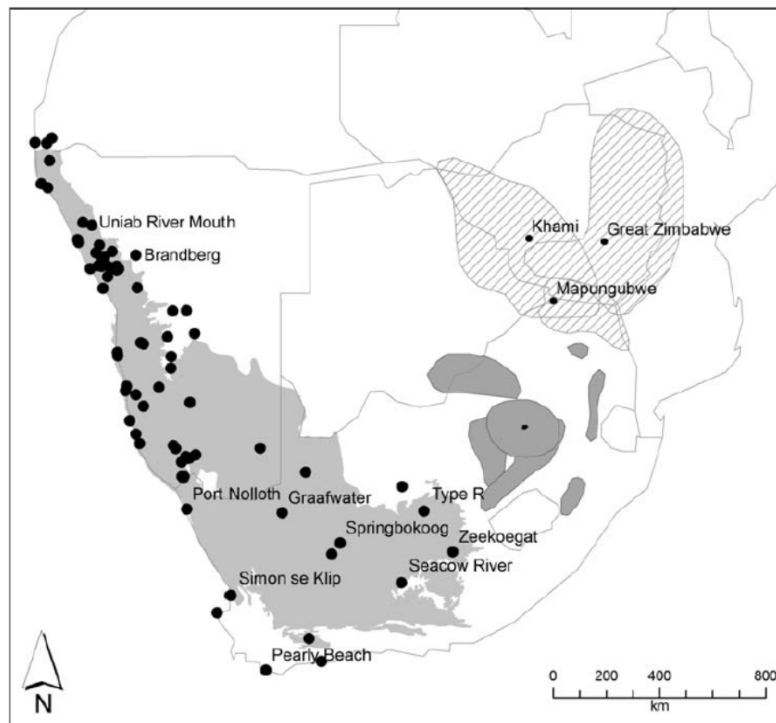


Figure 1. Map of southern Africa showing modern country boundaries and the areas with Zimbabwe pattern (simple hatched shapes) and Central Cattle Kraal-walling (black outlined grey shapes). The black point in the centre of the central CCK shape pinpoints the Suikerbosrand Nature Reserve. The distribution of Later Stone Age stone structures is indicated with open circles and the names refer to places mentioned in the text. The grey area shows the extent of the Nama Karoo, Succulent Karoo and Namib Desert biomes in South Africa and Namibia.

- Stone walled structures to control movement of animals.
- Increased trade activities (e.g., specularite).
- Increased political complexity (e.g., Mapungubwe, GZ).
- Intensive cattle pastoralism?

Which infiltration/migration
brought Khoekhoe?

ancient DNA will tell