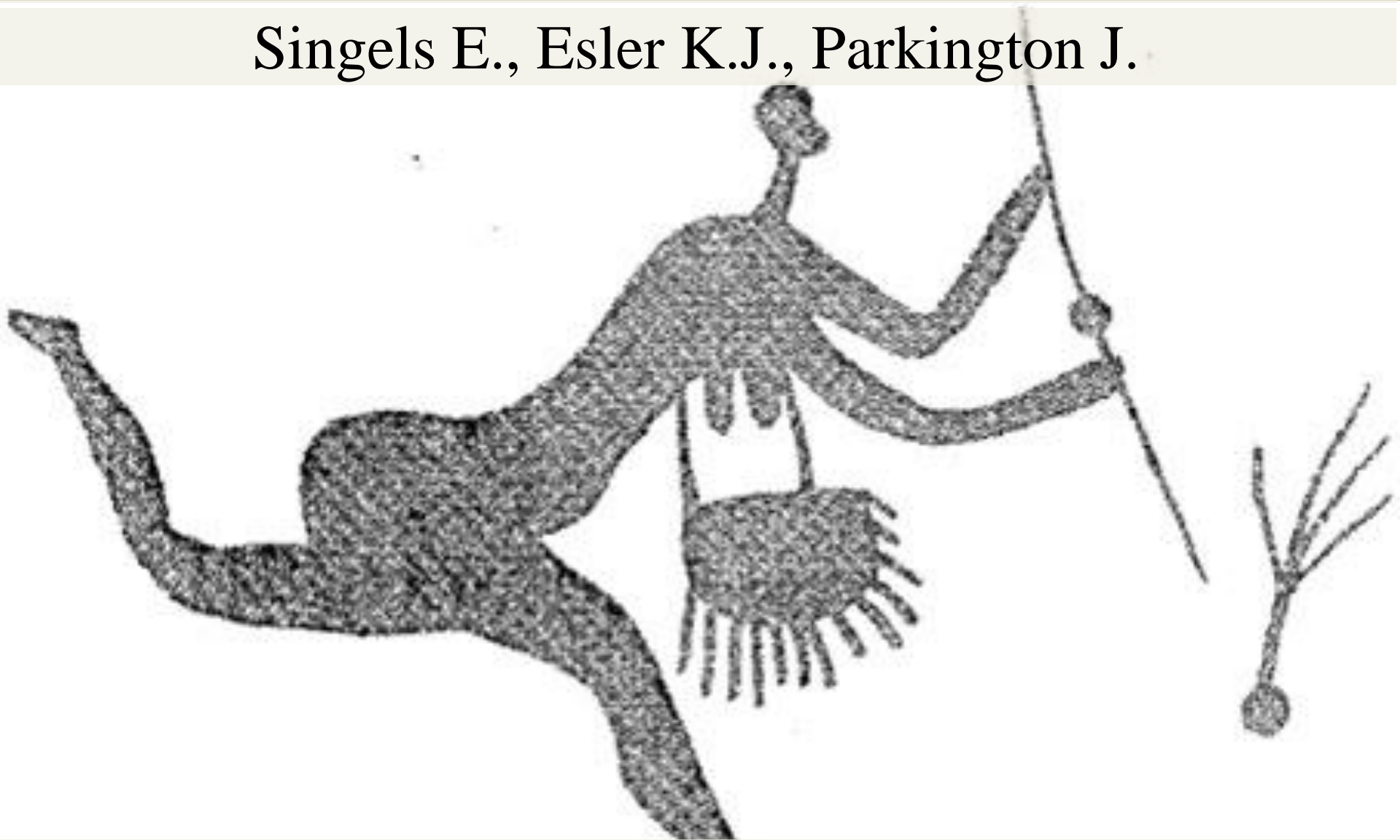


# Geophytes in time and space

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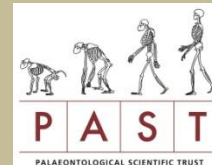
image from Vinnicombe, 1976

# Resources available for survival

- Protein Resources: Aquatic/Terrestrial
- Wood Resources
- Plant Resources?
  1. Fruit/Vegetables
  2. **Geophytes (Underground Storage Organs)**



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Rhizomes



Corms



Tubers





# Geophyte foraging in time:



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**P A S T**

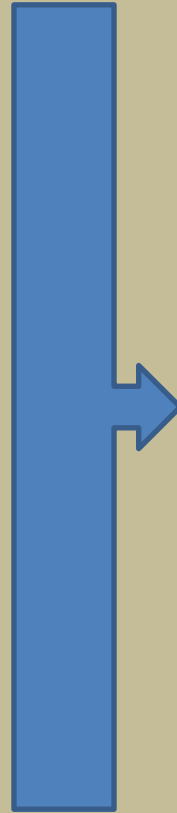
PALAEONTOLOGICAL SCIENTIFIC TRUST



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# Quintessential for geophyte foraging

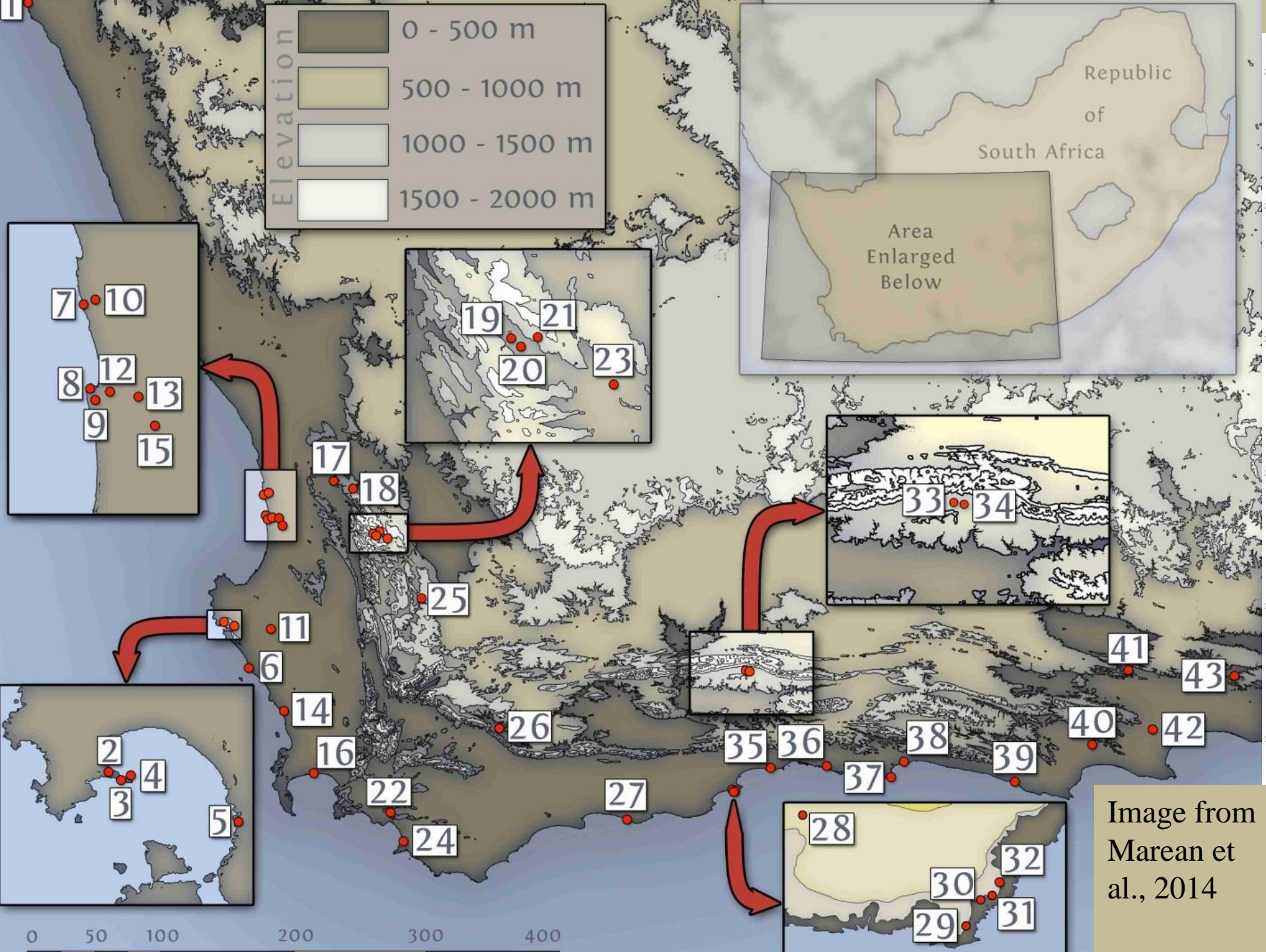
- Botanical knowledge: taxa and veg types
- Knowledge of climate
- Tools
- Processing



Centuries of knowledge and experience





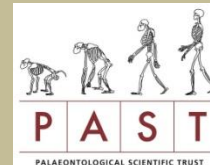


# Evidence in the Stone Age Cape

- Geophyte remains
- Digging Sticks
- Digging Stones
- Adze



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# Geophyte remains

- Vast amount of evidence in LSA
- Mostly inland sites

Courtesy of Neil Rusch

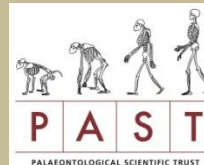




# Digging Stick ,Bored Stones and Adze

- Digging Stick: sharpened constantly
- Adze had to be developed
- Bored stone for extra momentum
- Time consuming to produce

Bleek and Lloyed,  
1911







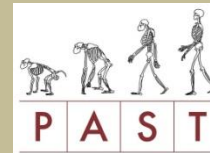


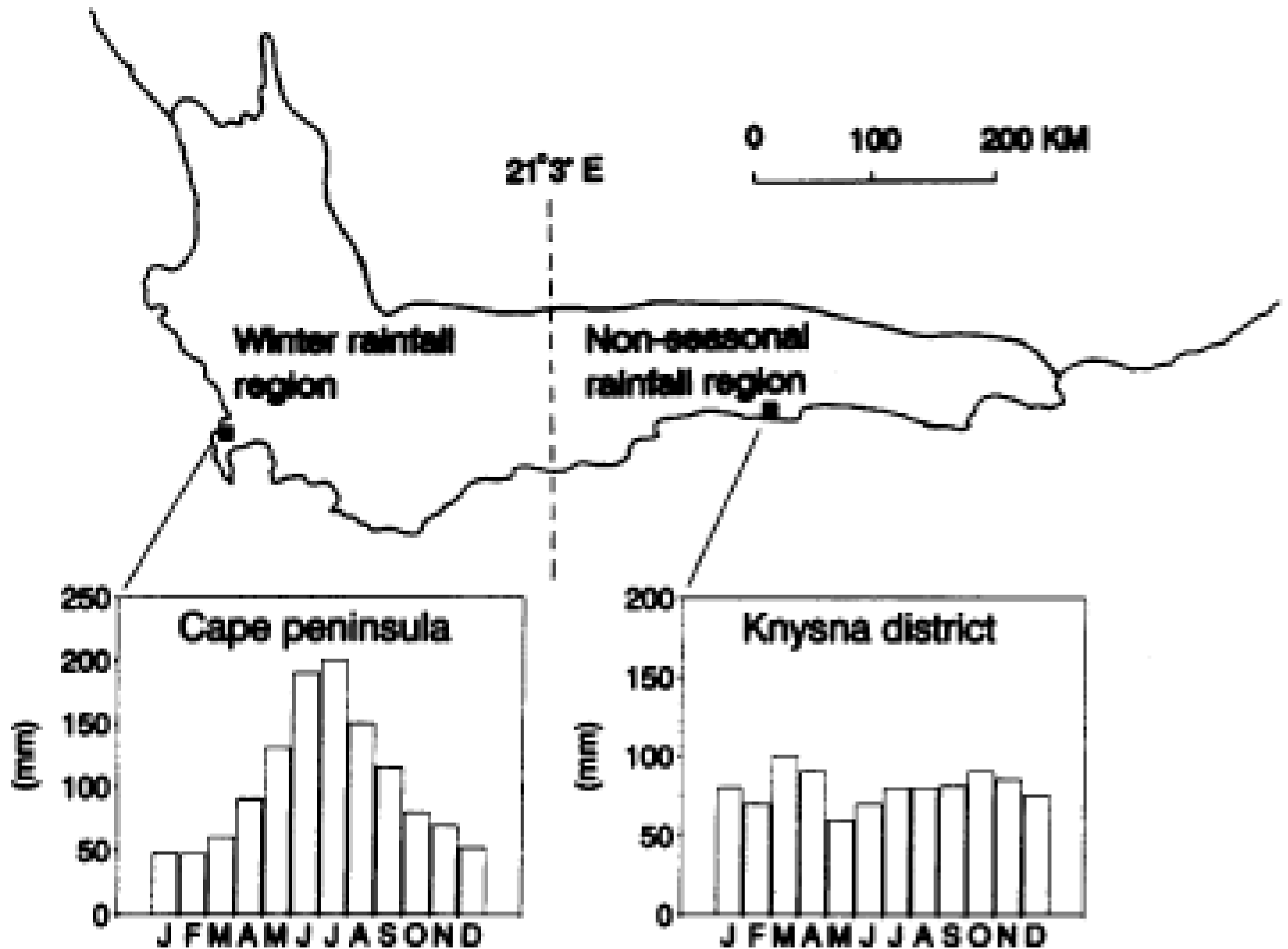
# Geophyte resources and space

- How would geophyte foraging vary over the GCFR
- Various rainfall regimes: Diversity and Phenology



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# Phenology in time and space



# West Coast, South Coast, Eastern Cape



Atlantic Ocean

Indian Ocean

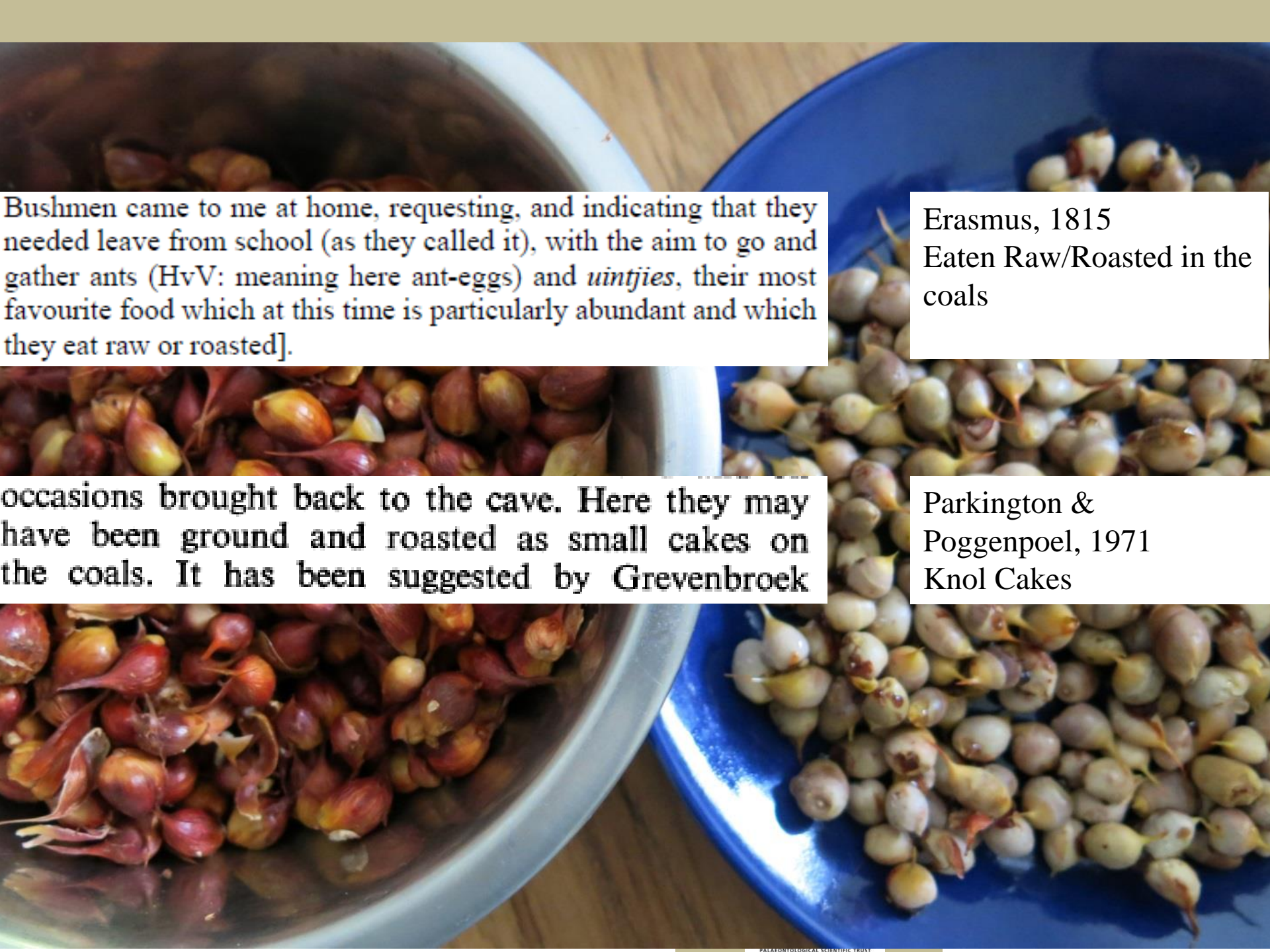


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Bushmen came to me at home, requesting, and indicating that they needed leave from school (as they called it), with the aim to go and gather ants (HvV: meaning here ant-eggs) and *uintjies*, their most favourite food which at this time is particularly abundant and which they eat raw or roasted].

Erasmus, 1815  
Eaten Raw/Roasted in the  
coals

occasions brought back to the cave. Here they may have been ground and roasted as small cakes on the coals. It has been suggested by Grevenbroek

Parkington &  
Poggenpoel, 1971  
Knol Cakes





SVP





Murray et al.,  
2001



Vincent., 1985



O'Connell et al.,  
1981



# Summary

- Rare in the MSA, widespread in LSA
- Phenology forced a narrow time frame
- Requires incrementally built knowledge
- Geophytes importance might have varied



# Acknowledgments

- Funding sources: National Resource Foundation, Palaeontological Scientific Trust
- Fynbos Forum for this opportunity
- All collaborators involved
- Wonderful supervisors











