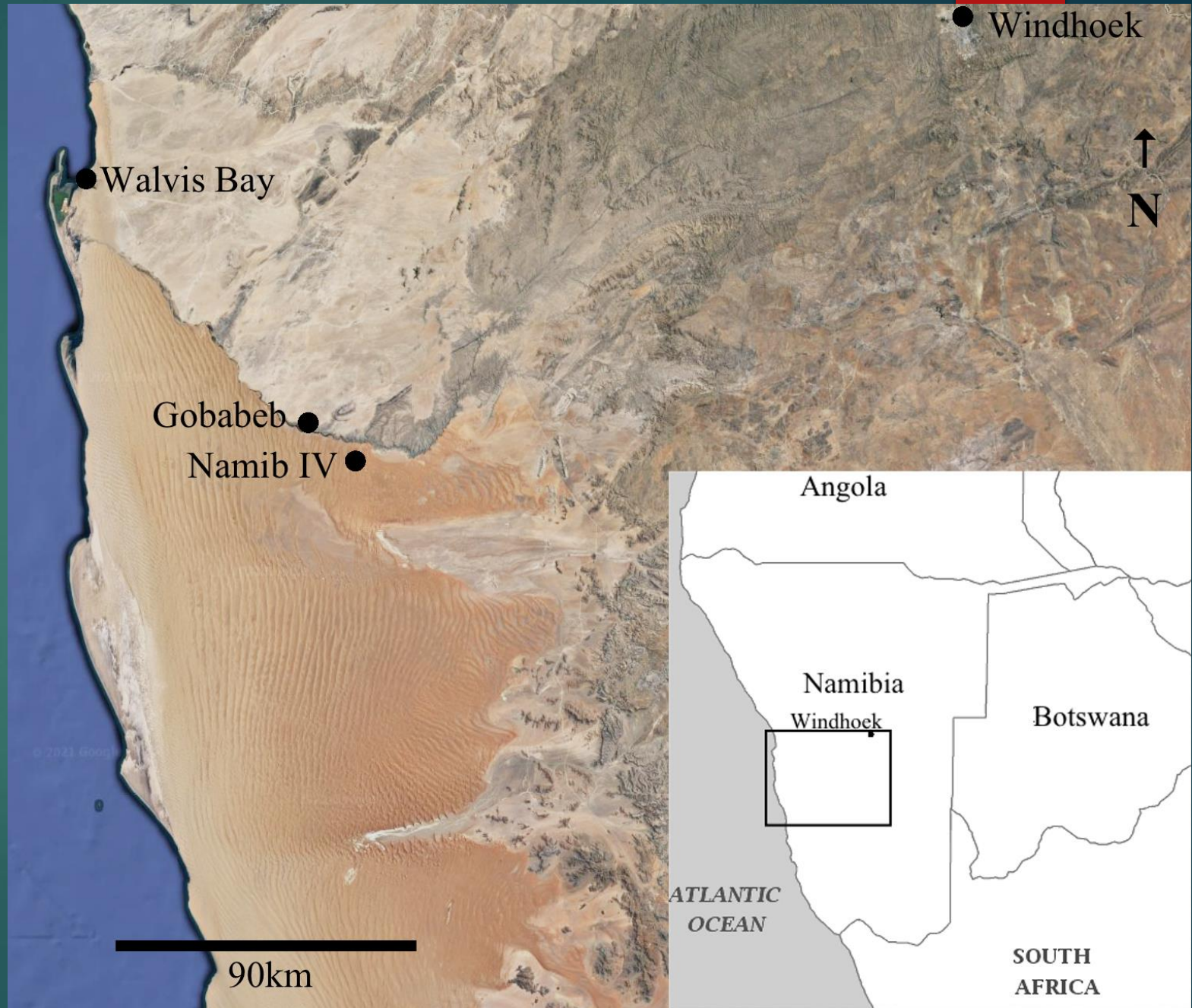


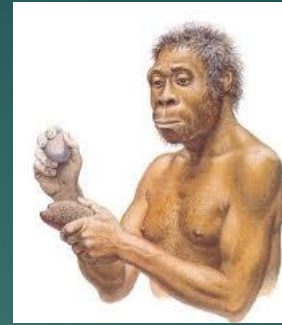
Hominid Occupations of the Northern Sand Sea

GEORGE M. LEADER, PH.D.
THE COLLEGE OF NEW JERSEY



Namibia, Northern Sand Sea





Homo ergaster/erectus



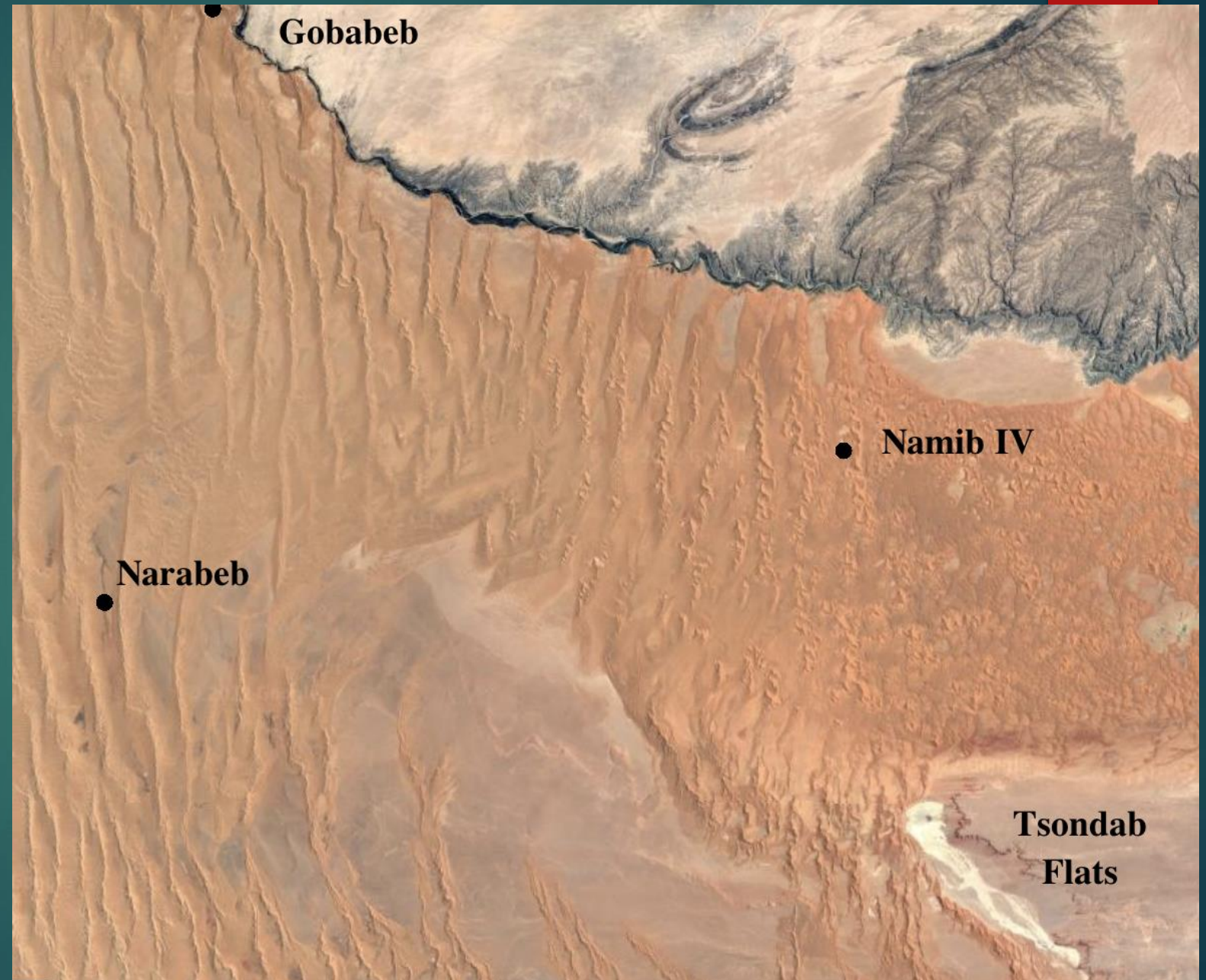
Homo sapiens

How did human
ancestors adapt
culturally to this
environment?

Starting
point sites:

Namib IV ←

Narabeb ←



First: Look at Shackley's papers from 1980, 1982, and 1985.

- ▶ What were her methods of collection?
- ▶ What does she say about the total "n" of the tool types at the site?
- ▶ What does she say about site formation and how does she date the site?
- ▶ What does she conclude?

An Acheulean industry with *Elephas recki* fauna from Namib IV, South West Africa (Namibia)

Myra Shackley

Department of Archaeology, University of Leicester, Leicester
LE1 7RH, UK

Namib IV is located in the linear dune sea of the central Namib Desert (Fig. 1), where different generations of fossil calcrete have been exposed by sand shift in an interdune flat. Mid-Pleistocene faunal remains (including *Elephas recki*) were scattered over 62,500 m² of the valley floor, some bearing residual traces of red calcrete. The industry may be closely paralleled from certain East African sites (Olorgesailie¹, Kilombe², PDK and HEB 1/2 and 3, Olduvai Bed IV (ref. 3)), suggesting a date between 400 and 700 kyr BP. I show here that Namib IV provides the first dated evidence for the presence of Acheulean man in South West Africa, the earliest Pleistocene faunal remains from the Namib Desert and a *terminus post quem* for the ecological change from savannah to sand desert.

Randomly orientated artefacts were scattered on the present ground surface, the presence of residual calcrete patches on the ventral surface of some artefacts and bones suggesting that they

Gobabeb Research Station





Proceed 10km south to
Namib IV

Namib IV

What should we look for?

- ESA
- MSA
- Fossil Faunal deposit



Namib IV team:

- George Leader
- Rachel Bynoe
- Ted Marks
- Kaarina Efraim
- Abi Stone
- Dominic Stratford



Random
sample of
technology.

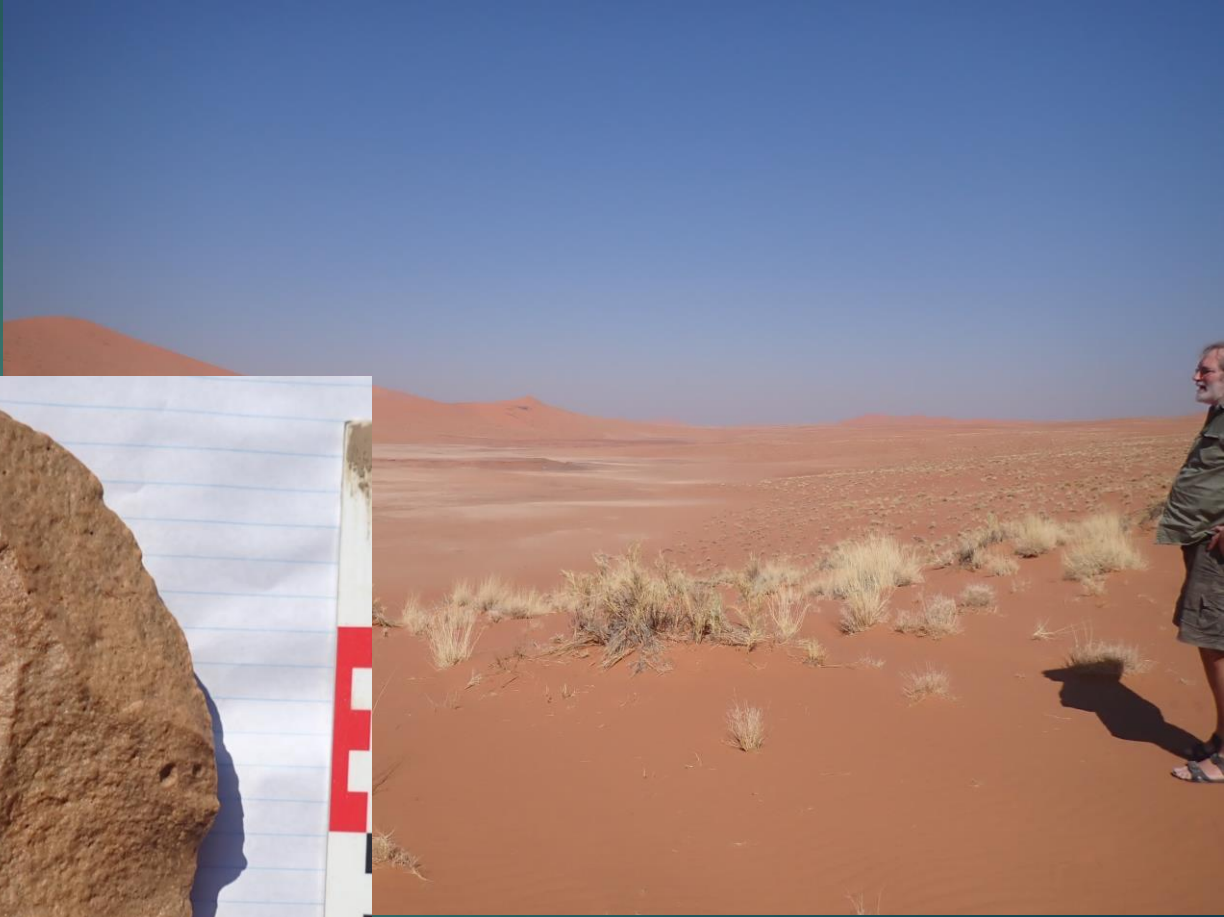
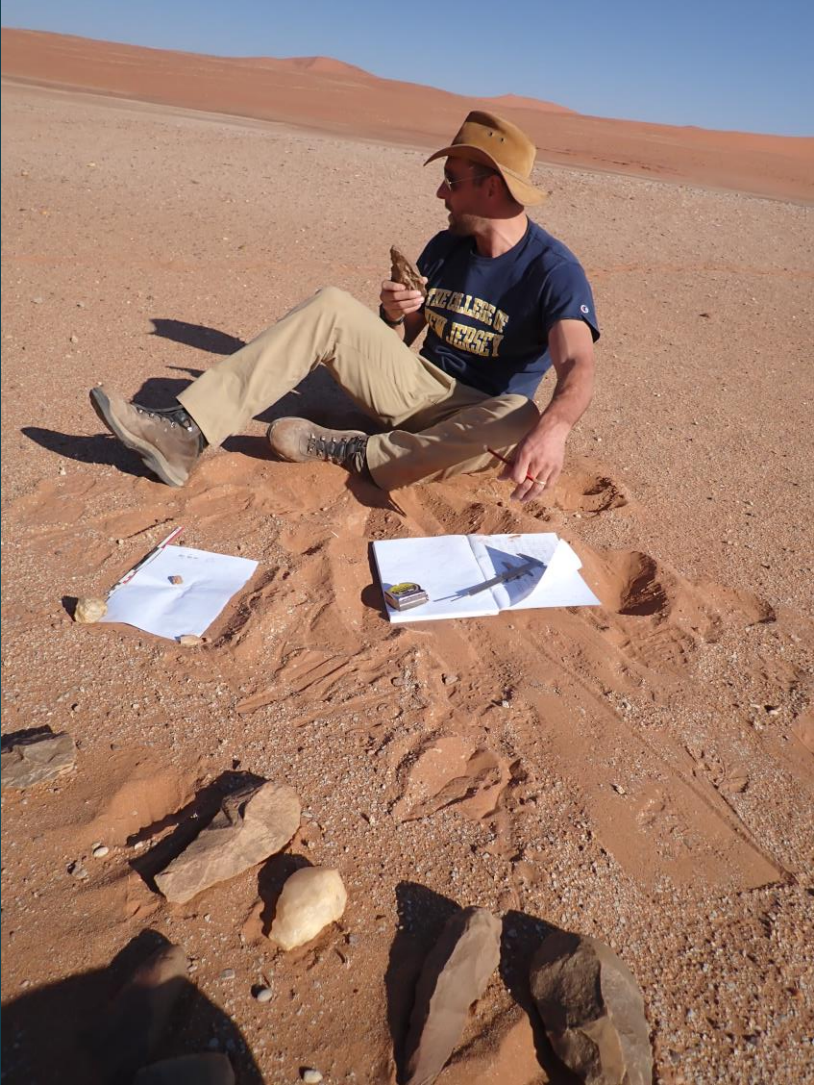
50x8m
produced 130
artifacts.

But *WHERE* on
the pan
matters!



Measure,
photo,
record...
and leave
in place



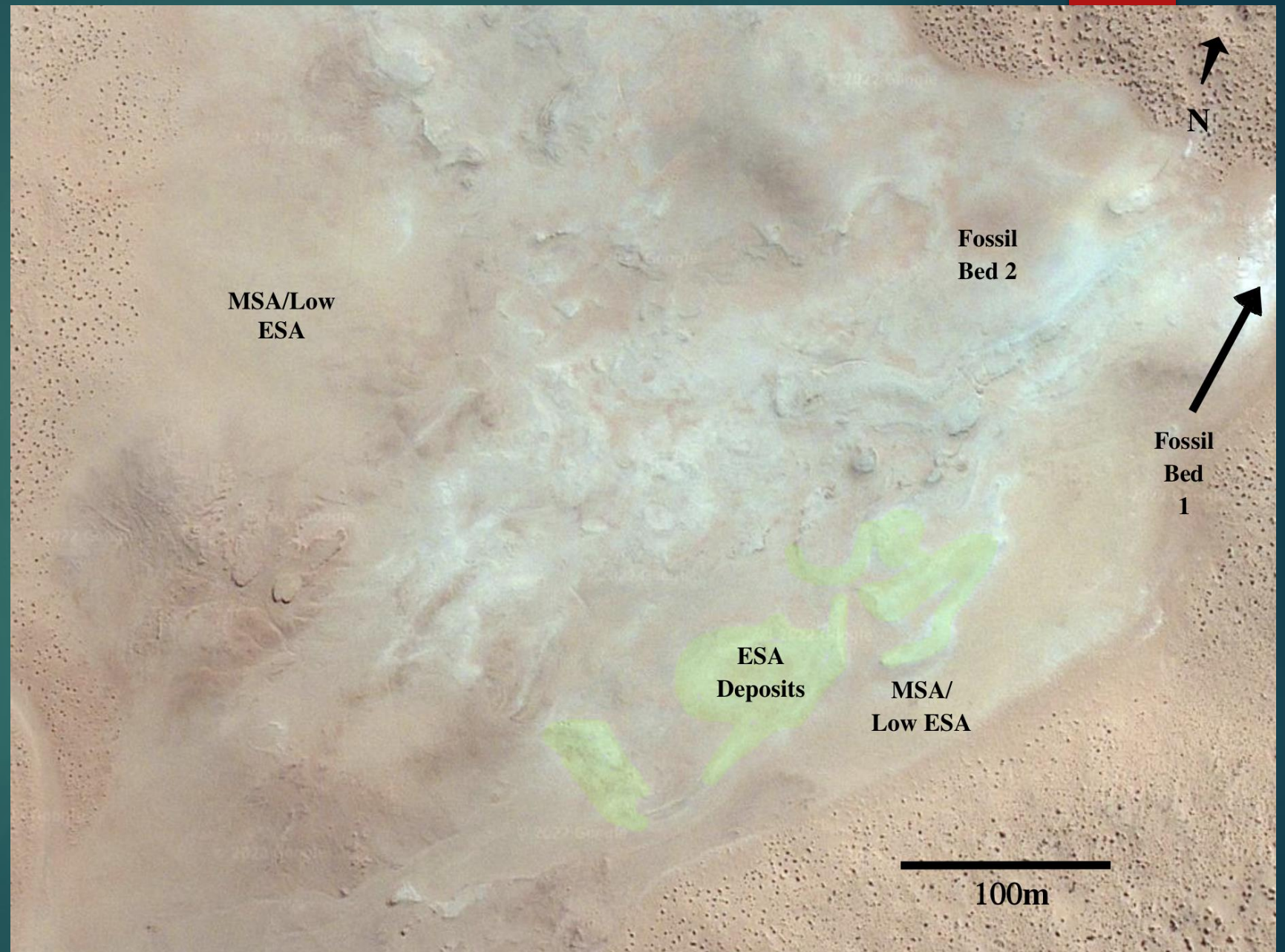


But which
tools link
with time
periods
over this
huge area?



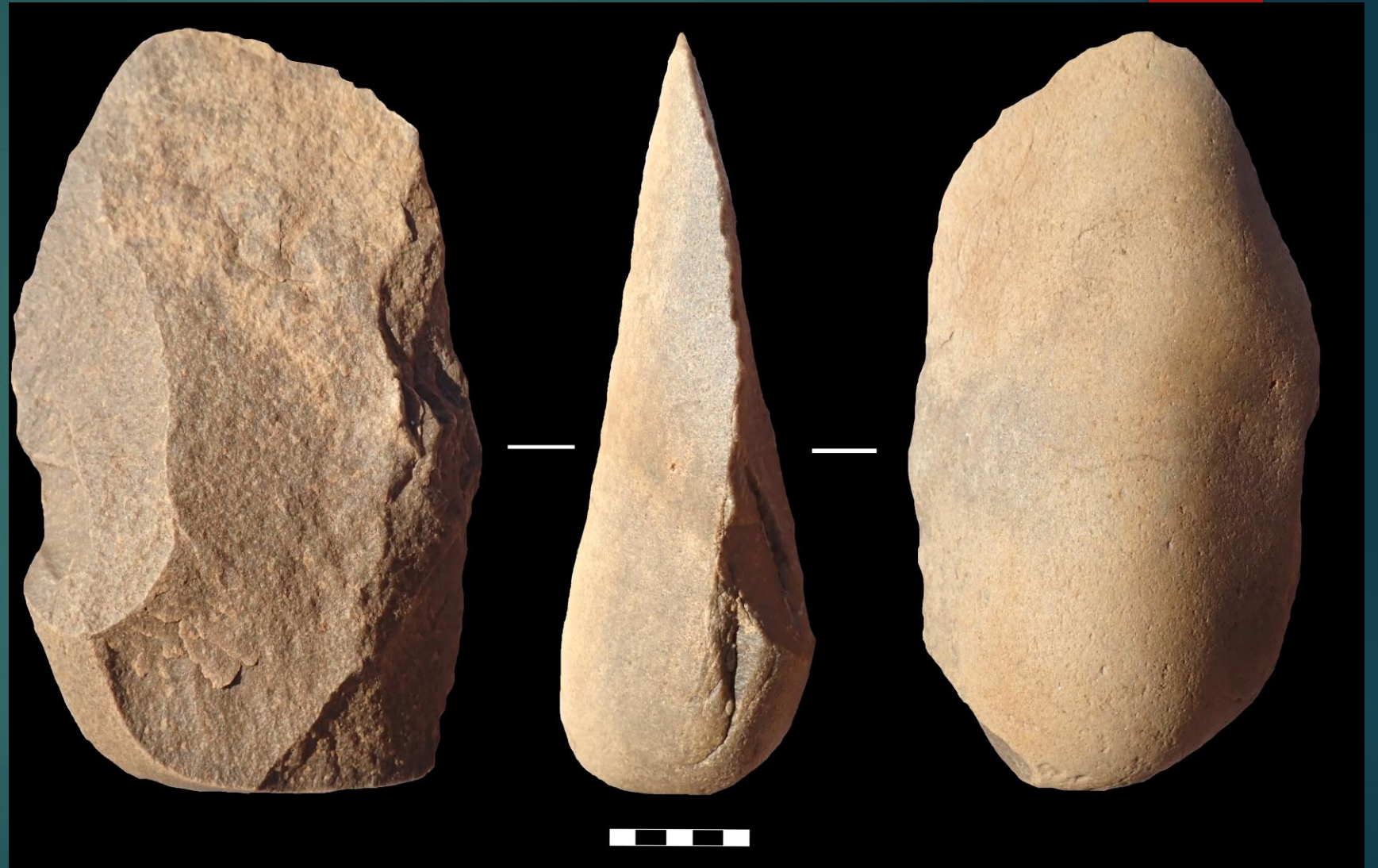
Assessment of the deposits.

Here looking at the southern area of the pan.



Bifaces are perhaps earliest (+/- 500kya).

Produced on cobbles from !Kuseb.



Cleaver 029

Minimal Shaping



Cleaver 049



Consistent production on large flakes removed from cobbles.

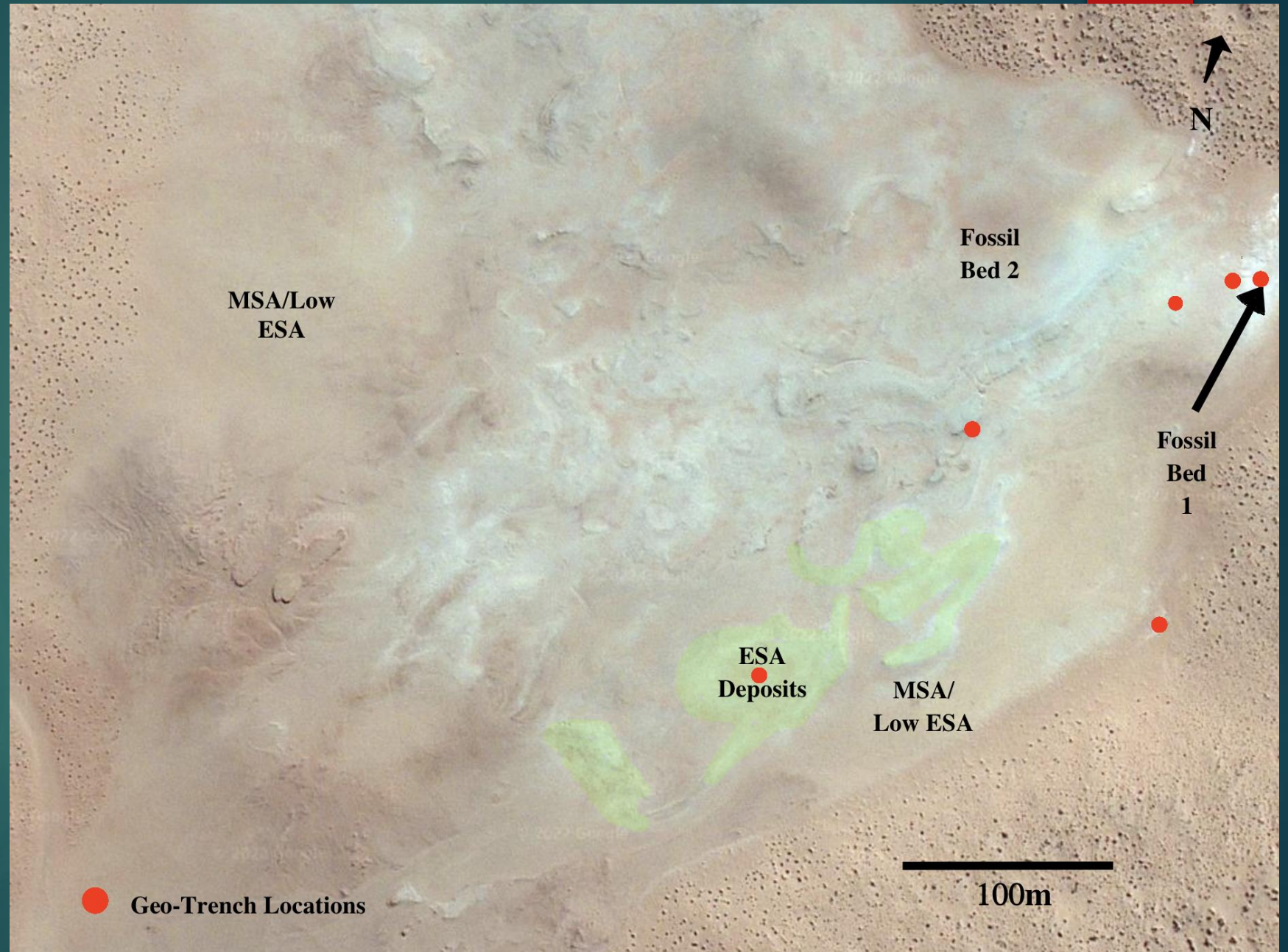


Cleaver 051

Cleaver 007

How can we link surface artifacts and deposits?

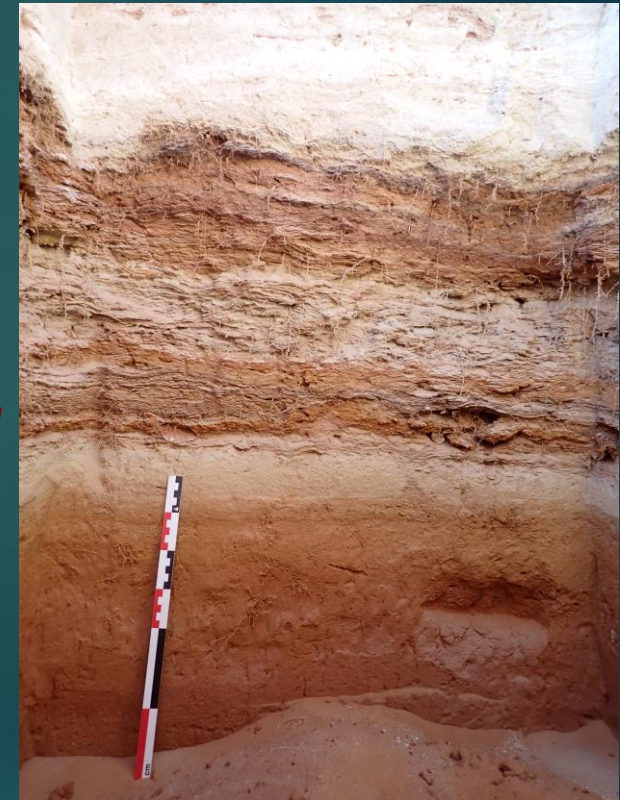
Six geo-trenches were excavated at the edges of the deposits... thus providing a contact point between the deposits.



1x1m geo-trenches provide more details.



Dr. Dominic Stratford assessing the stratigraphic layers of geo-trench 6

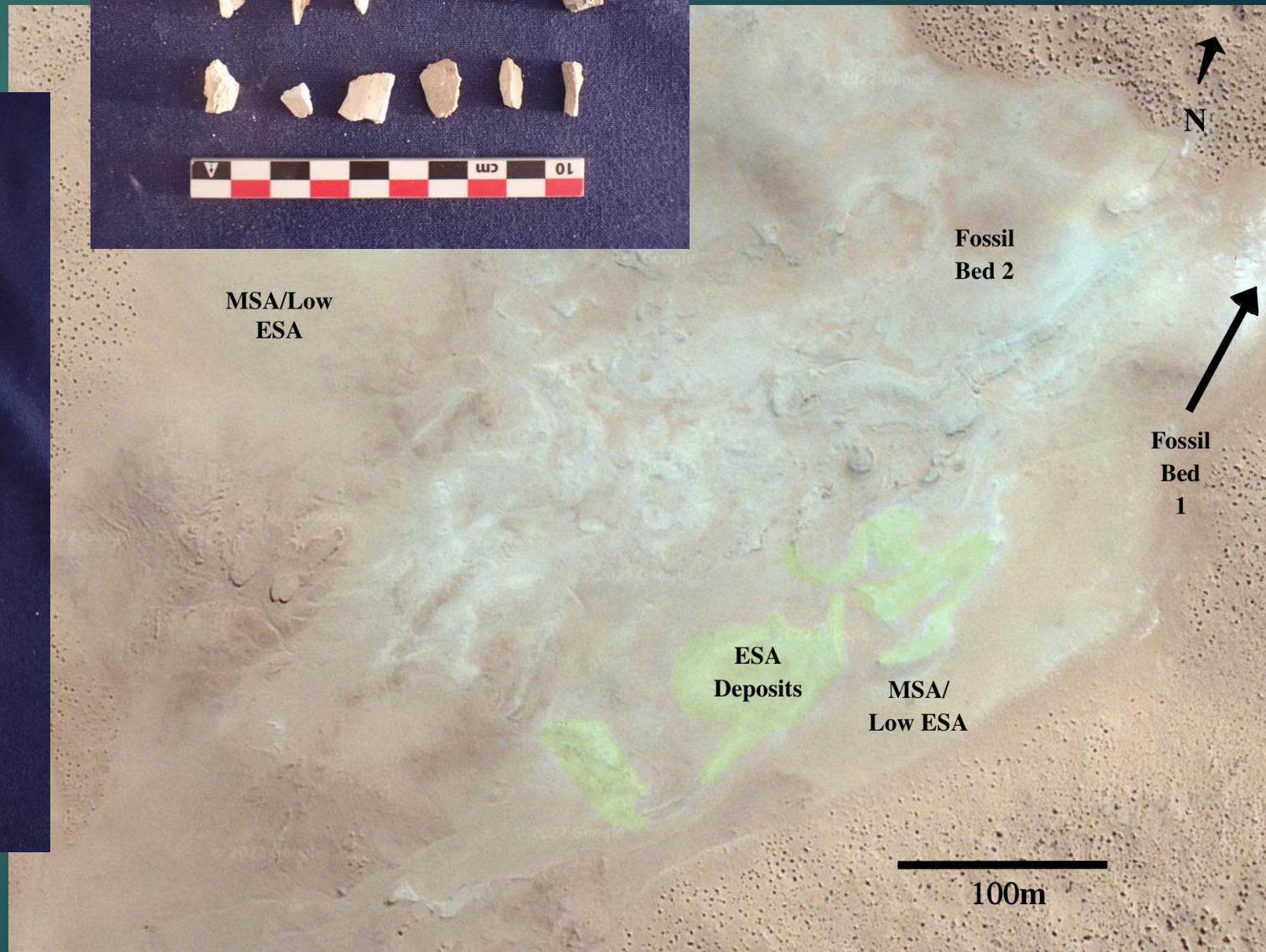


New dates.

- ▶ Dr. Abi Stone collected sediment samples for luminescence dating of the stratigraphic units.
- ▶ Calcrete presents a challenge for dating.
- ▶ Dunes at the edge of the pan were also sampled.



Fauna fossils.



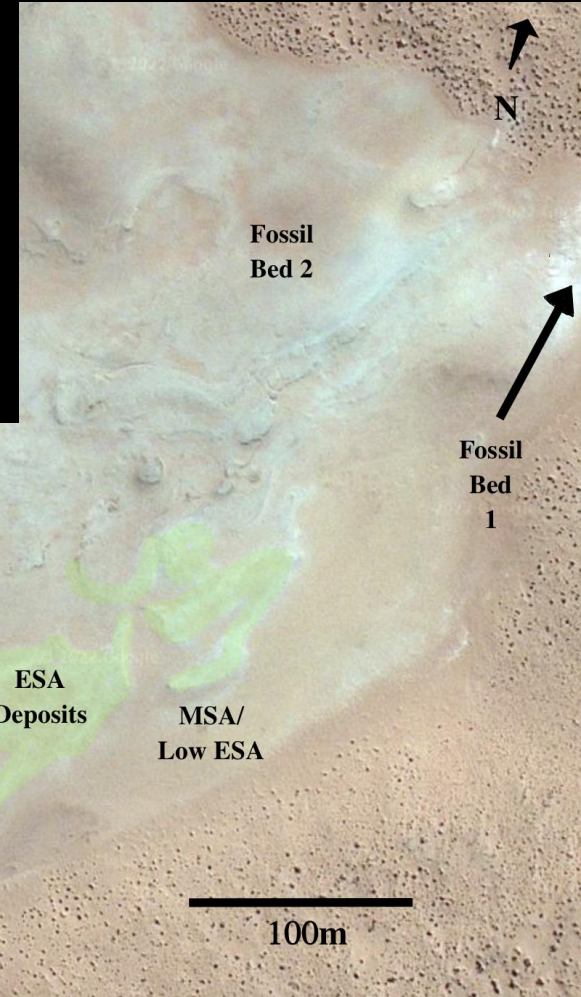
Elphas recki?

Fossil Bed 1:

Likely not
associated
with all stone
technology.



Fossil Bed 2:



Fossil Bed 2

N

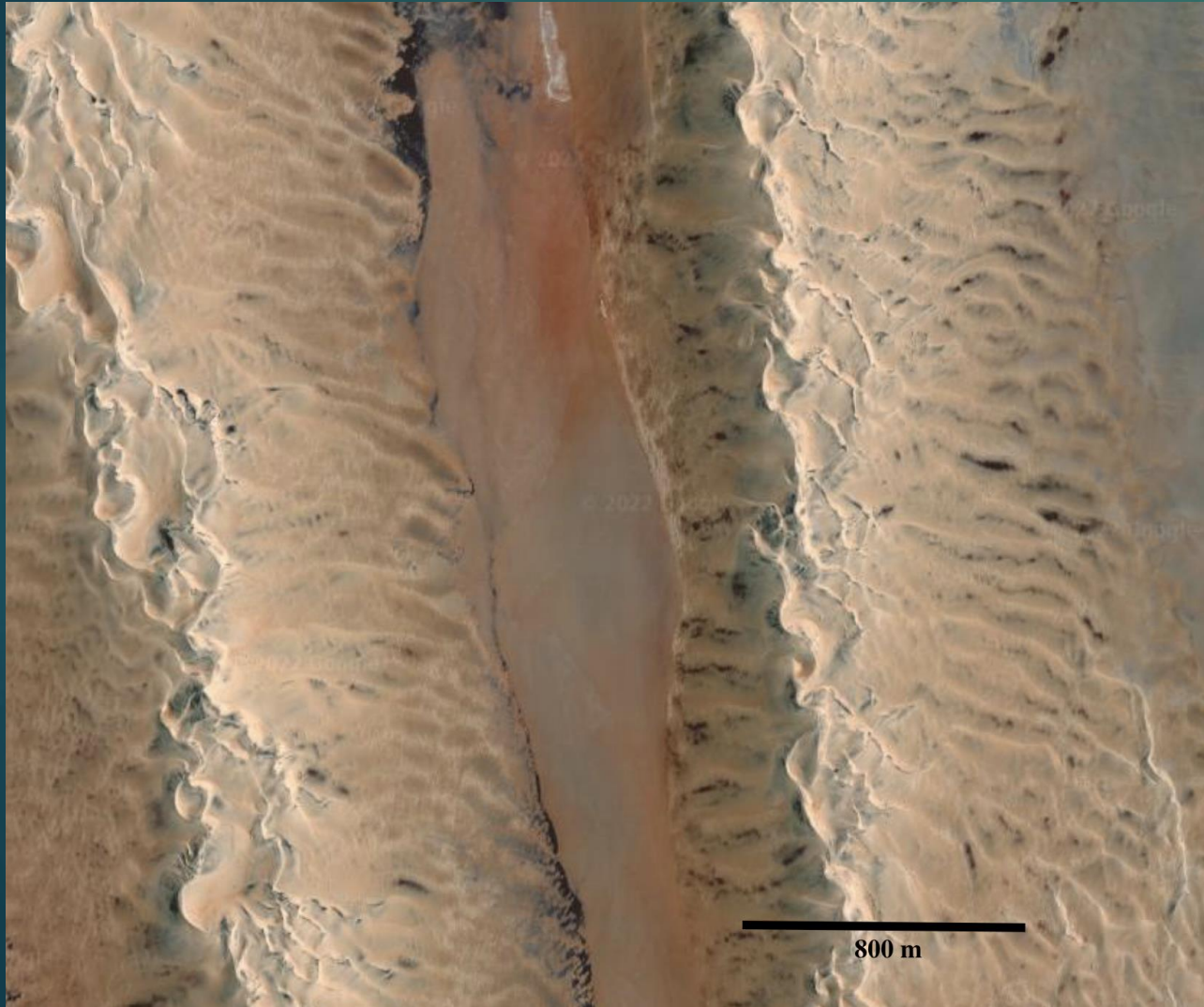
Fossil Bed 1

ESA Deposits

MSA/ Low ESA

100m

Narabeb. MSA site (Shackley reports ESA from unknown locations.)



Artifacts typical of a Middle Stone Age.

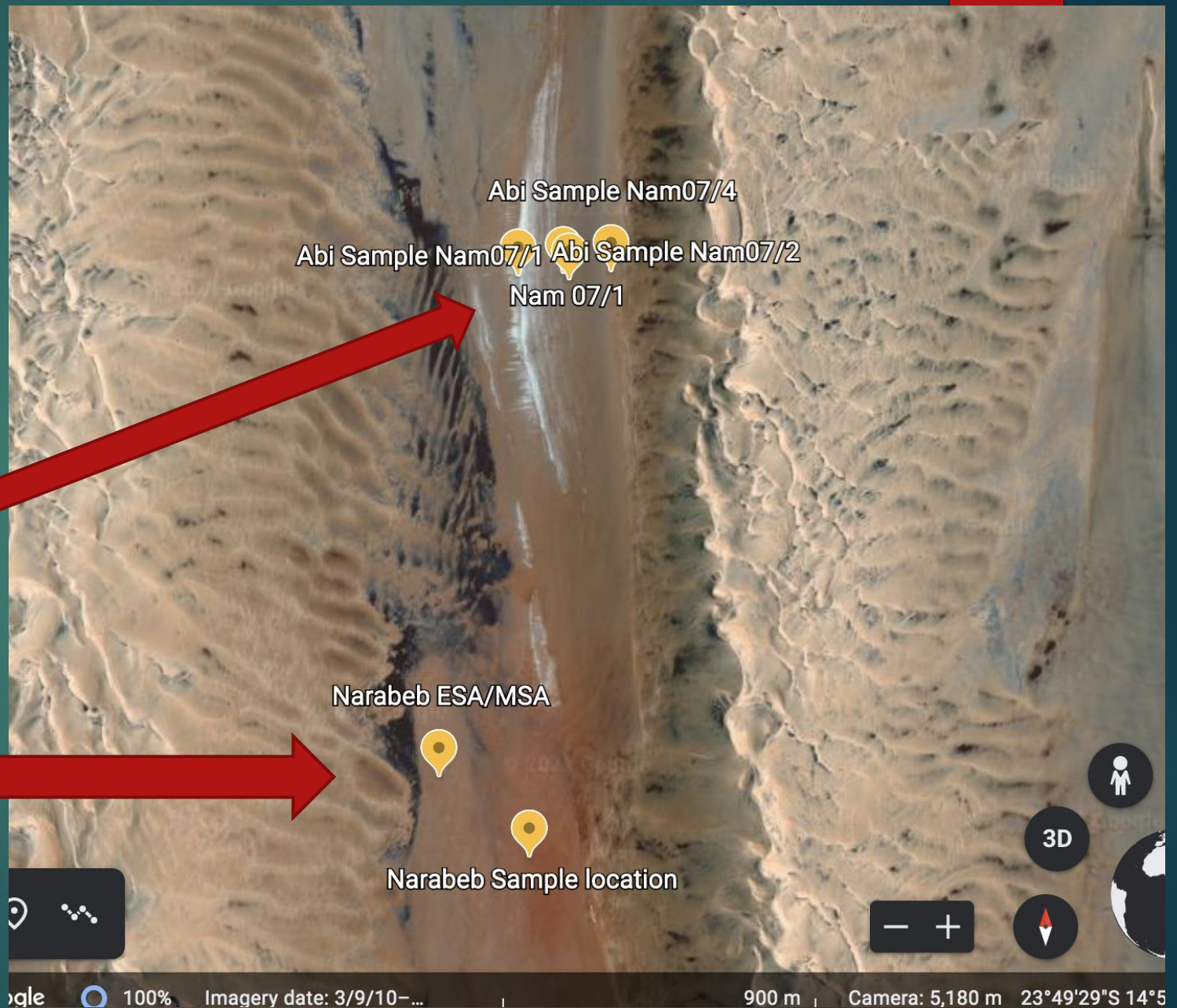


Blades, points, Levallois cores...



Abi Stone's
2012 OSL dates

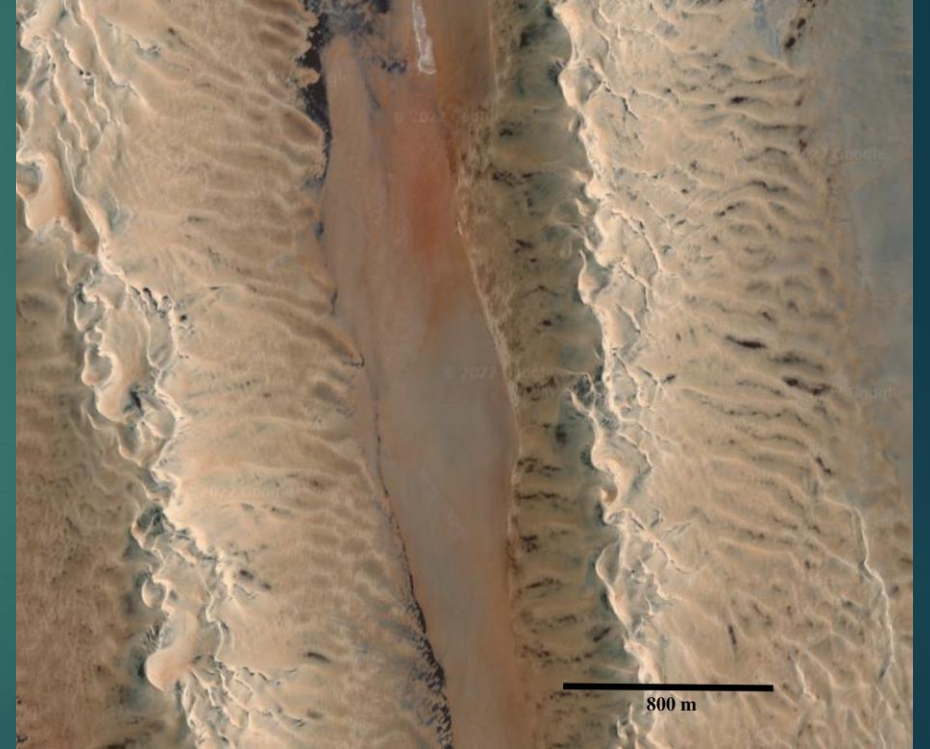
Our sample
1km away



New OSL dates and deposit analysis



Narabeb, possibly a dated Middle Stone Age site in the Sand Sea. 160-60kya!



Other forms of data at Narabeeb.



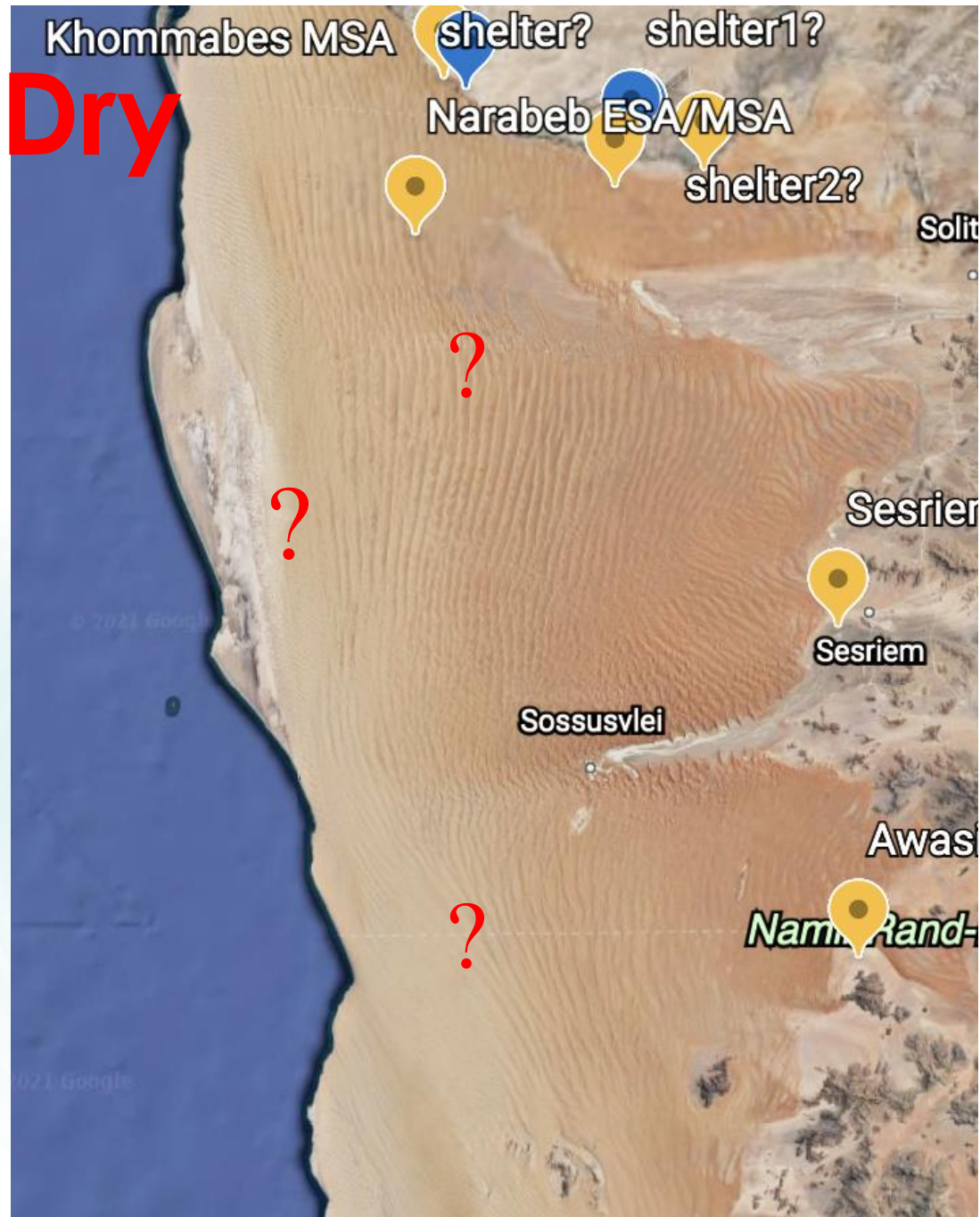
Desert varnish / microlamination



Root casts and calcrete



So what can we say about
hominids in the Sand Sea?



Namib IV

- ▶ Multiple Occupations during various periods of fluvial activity.
- ▶ Middle Stone Age technology in highest density on the lowest deposits in the southern area of the pan
- ▶ Earlier Stone Age technology in highest density on higher deposits in the southern area of the pan
- ▶ Two deposits containing fauna likely of vastly different ages and unknown association with the lithic technology.



Reassessing Shackley's collection



Thank you.

Thank you to Waldi and the Namibia Scientific Society for inviting me to talk.

Thank you to Gillian Maggs-Kölling and Eugene Marais at Gobabeb Namib Research Institute, without who these types of projects would not be possible.

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