

ARCHY 319

Archaeology of Australia

Winter 2019

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Outline

What will we do today?

Review last week

Off-campus access to online library resources

Global background

Environmental setting

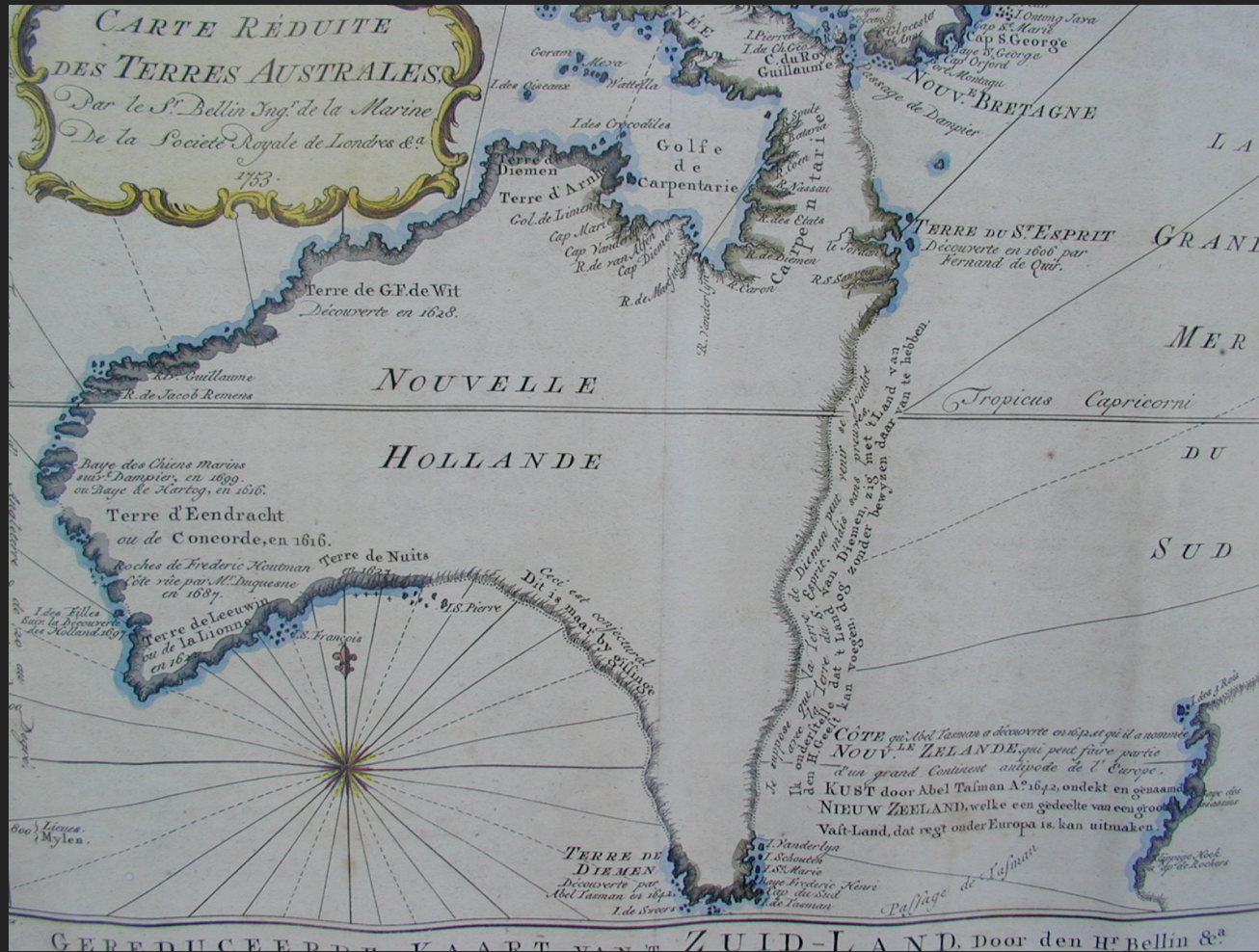
False leads: Lake George & Jinmium

Continuity

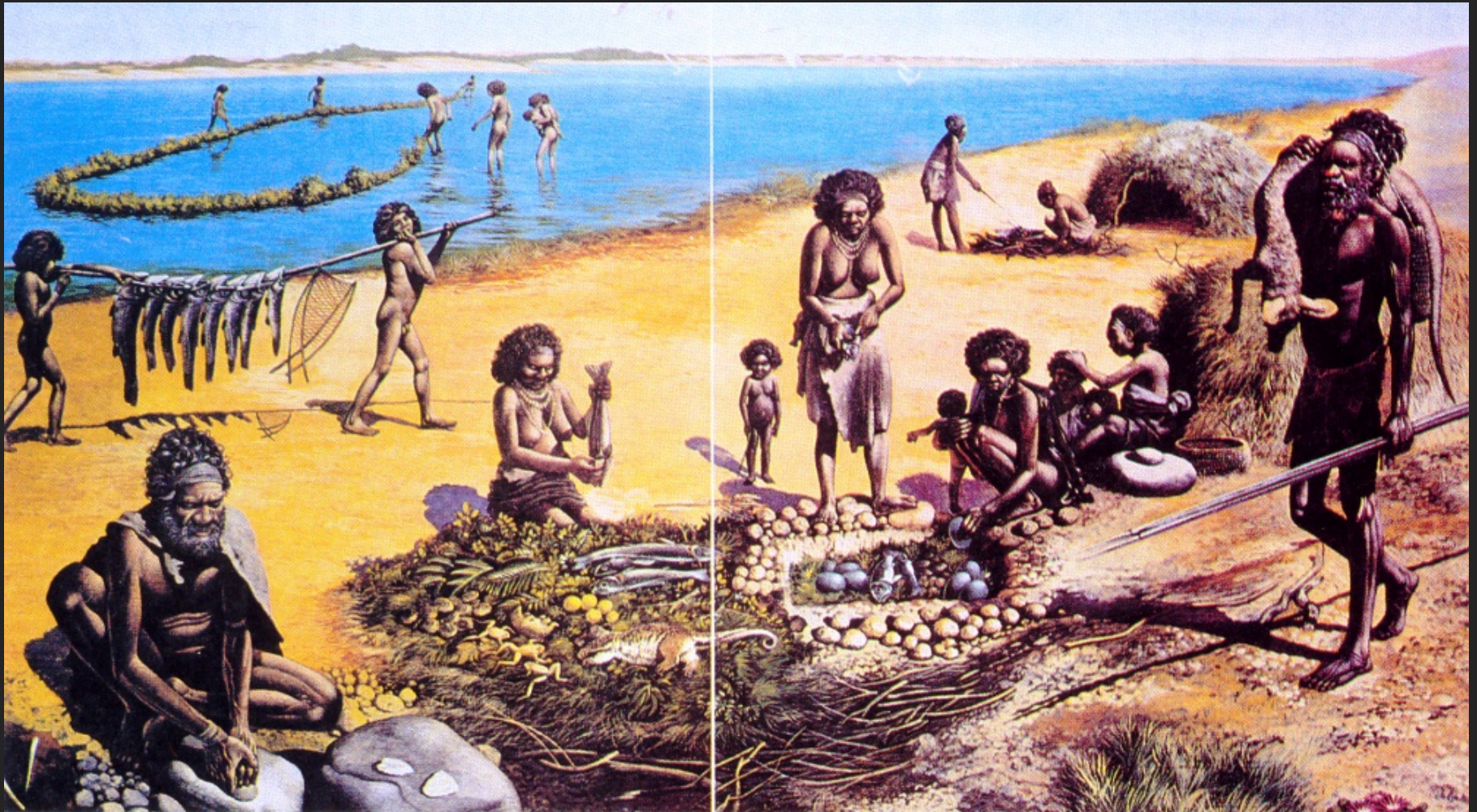
Timing: Nawalabila

**Last
week**

Q1: Why was the west coast known so well to Europeans before any permanent settlement?



Q2: Is this illustration intended to be of a modern community or an ancient one?



Q3: What is this and what are its implications for using ethnography to understand archaeological evidence

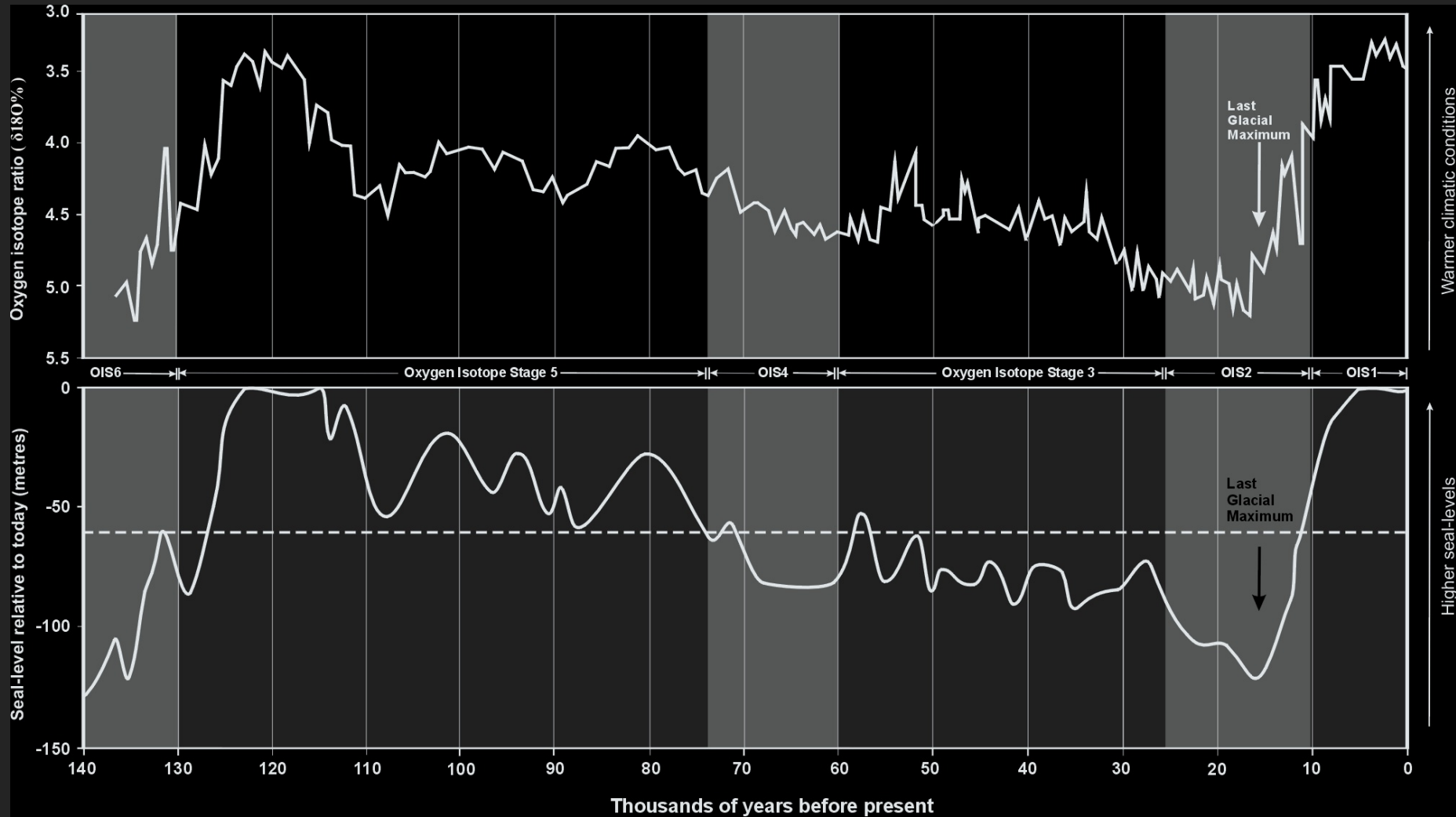


Civility

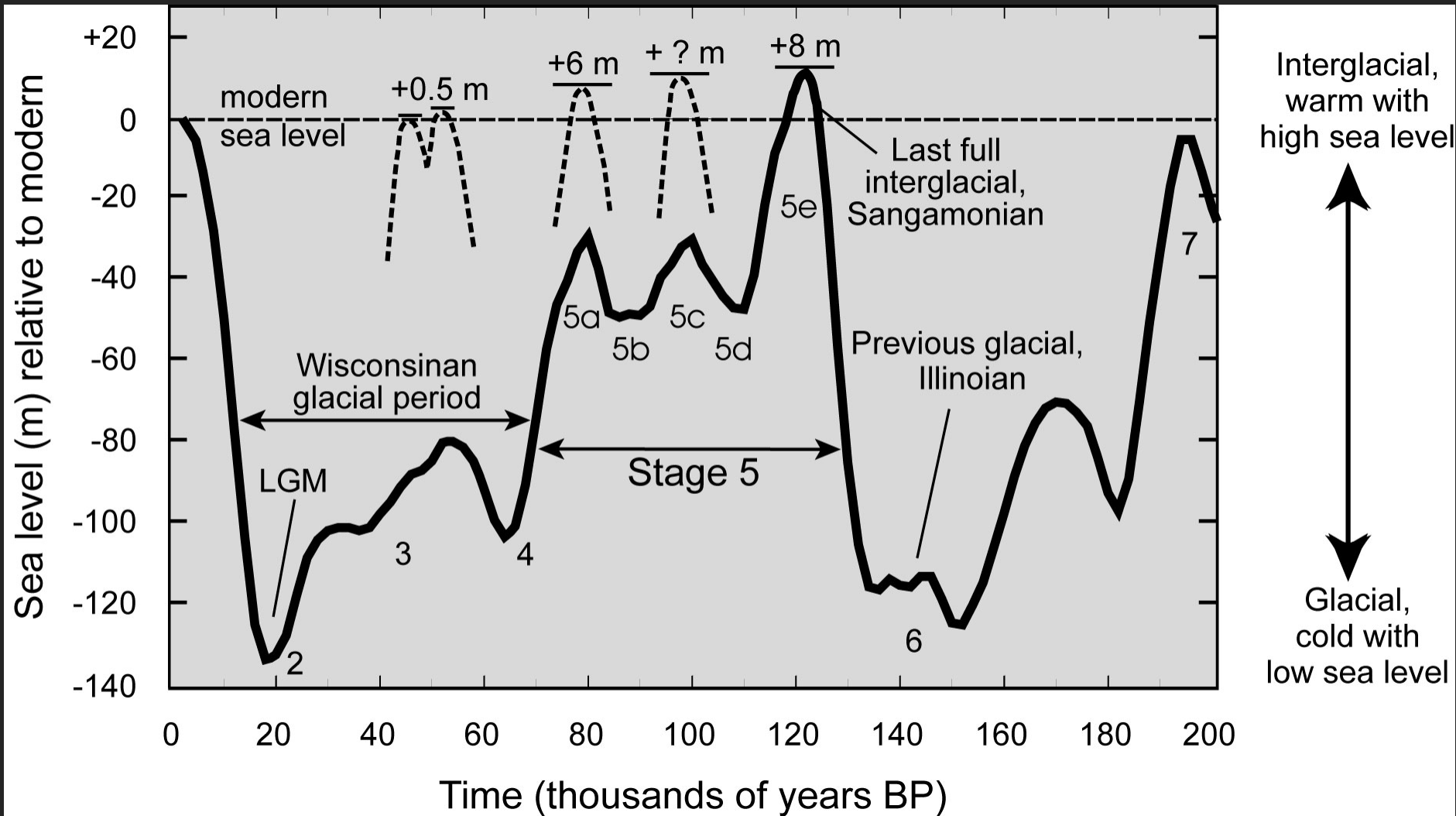
Environmental setting



Massive climate change

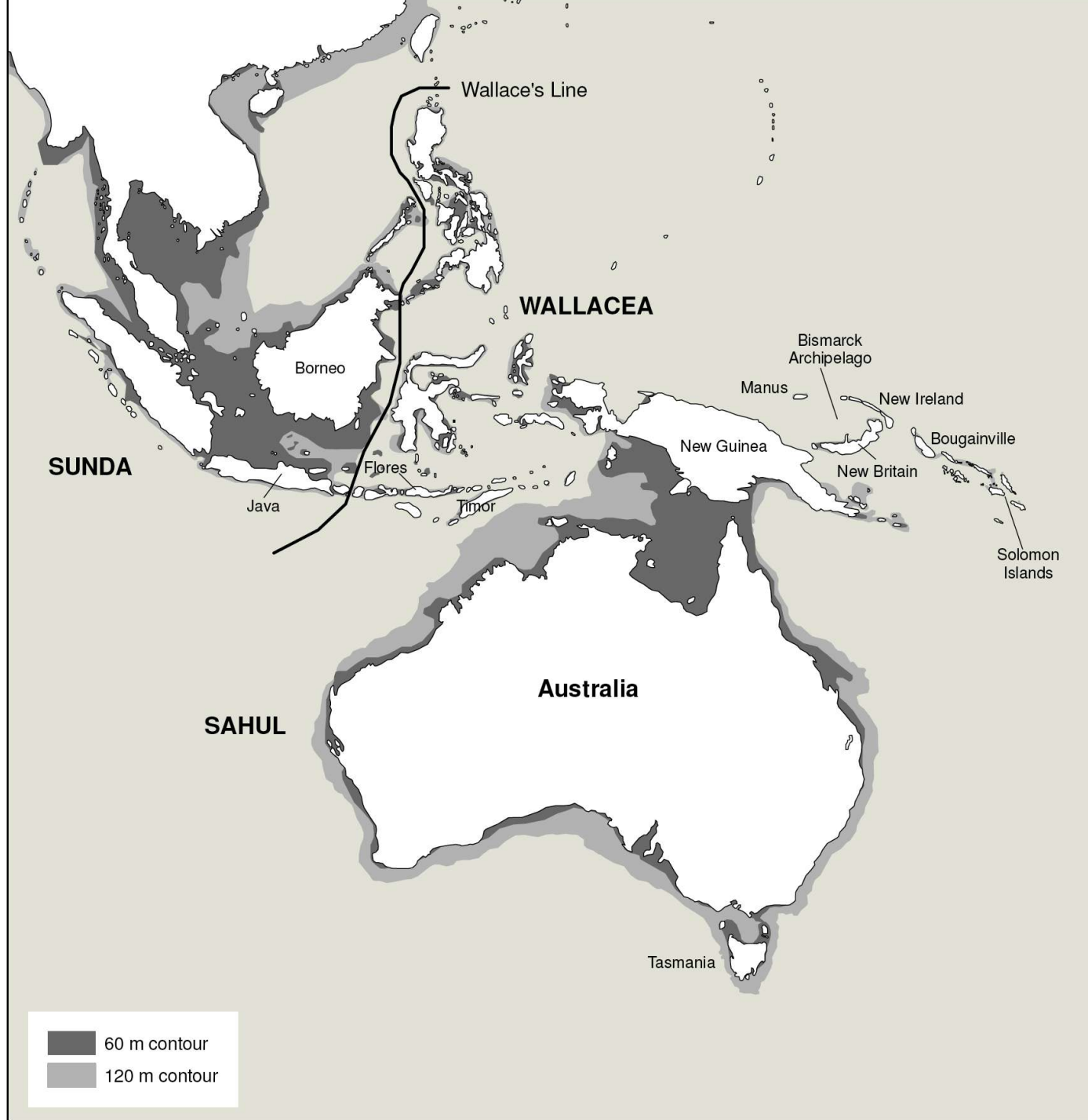


Massive climate change



Extreme sea levels

Impose limitations and create opportunities



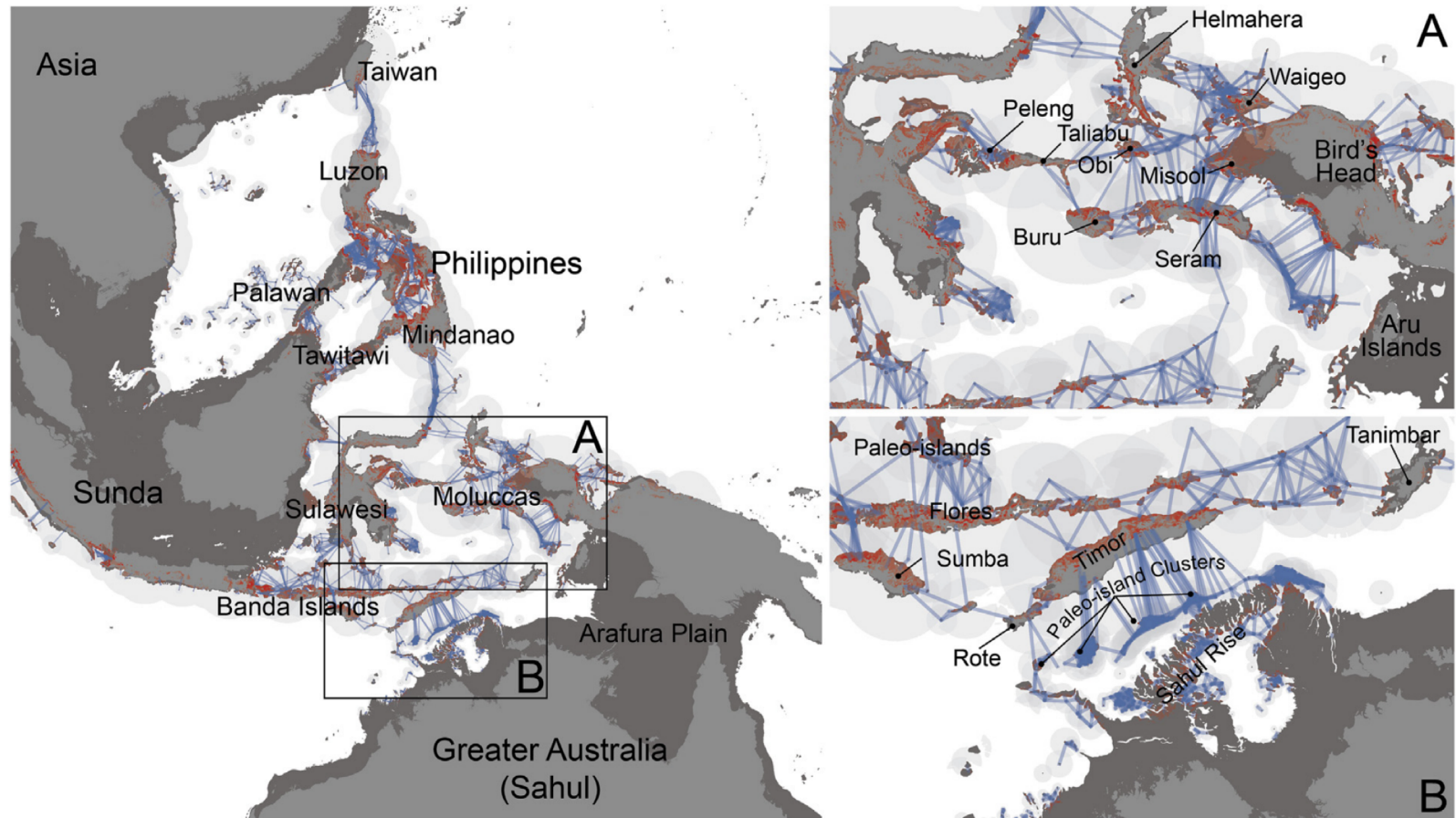


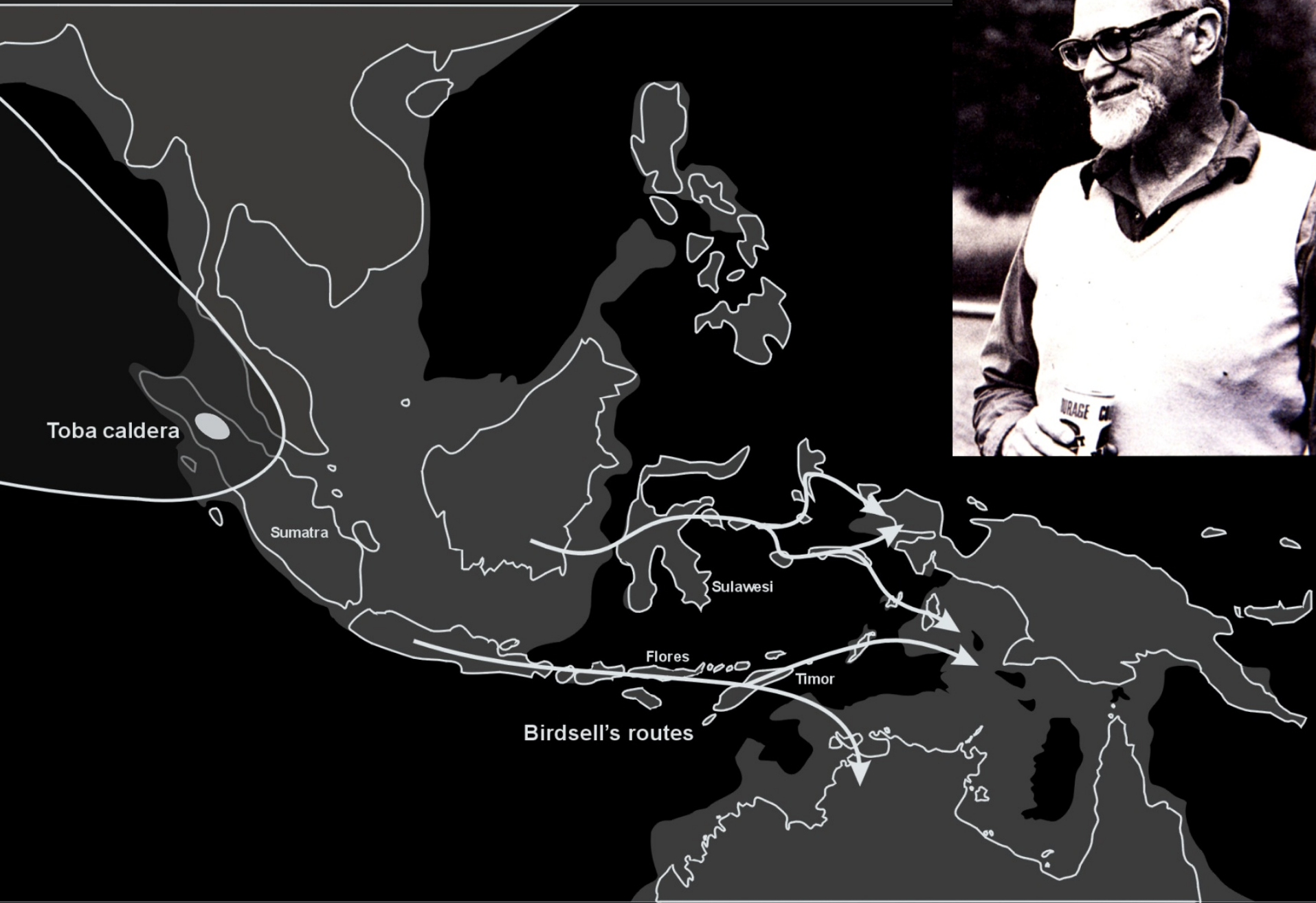
Fig. 2. Visual connectivity for ISEA shown by blue lines. Line thickness indicates weighting of visual connectivity between islands. Key features referred to in text are indicated. Pleistocene terrestrial continental extent (dark grey) is shown for 65 kya using [Lambeck and Chappell's \(2001\)](#) eustatic sea level curve, with modern extent indicated (light grey) (A) Northern Wallacean visual connectivity. (B) Southern Wallacean visual connectivity. (For interpretation of the references to colour in this figure legend, the reader is referred to the web version of this article.)



Biogeographic regions: Sunda & Sahul







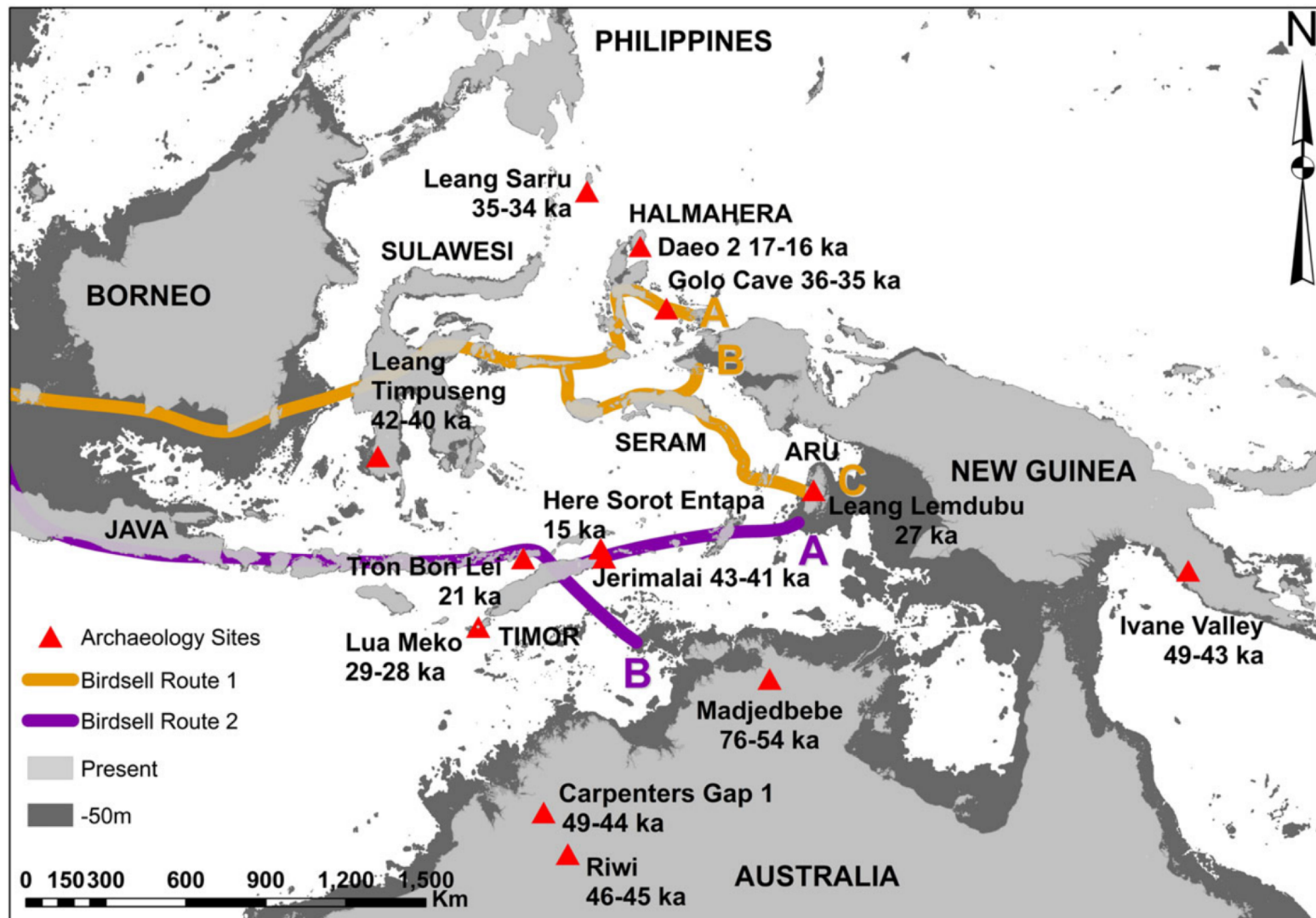


Figure 1. Map of Wallacea and neighbours showing Birdsell's (1977) potential Sahul colonization routes, and the various archaeological sites mentioned in the text. Calibrated date ranges are included in brackets, rounded to 1 ka. The extent of the continental shelf down to the -50 m bathometric contour is shaded in dark grey. [Colour figure can be viewed at wileyonlinelibrary.com]

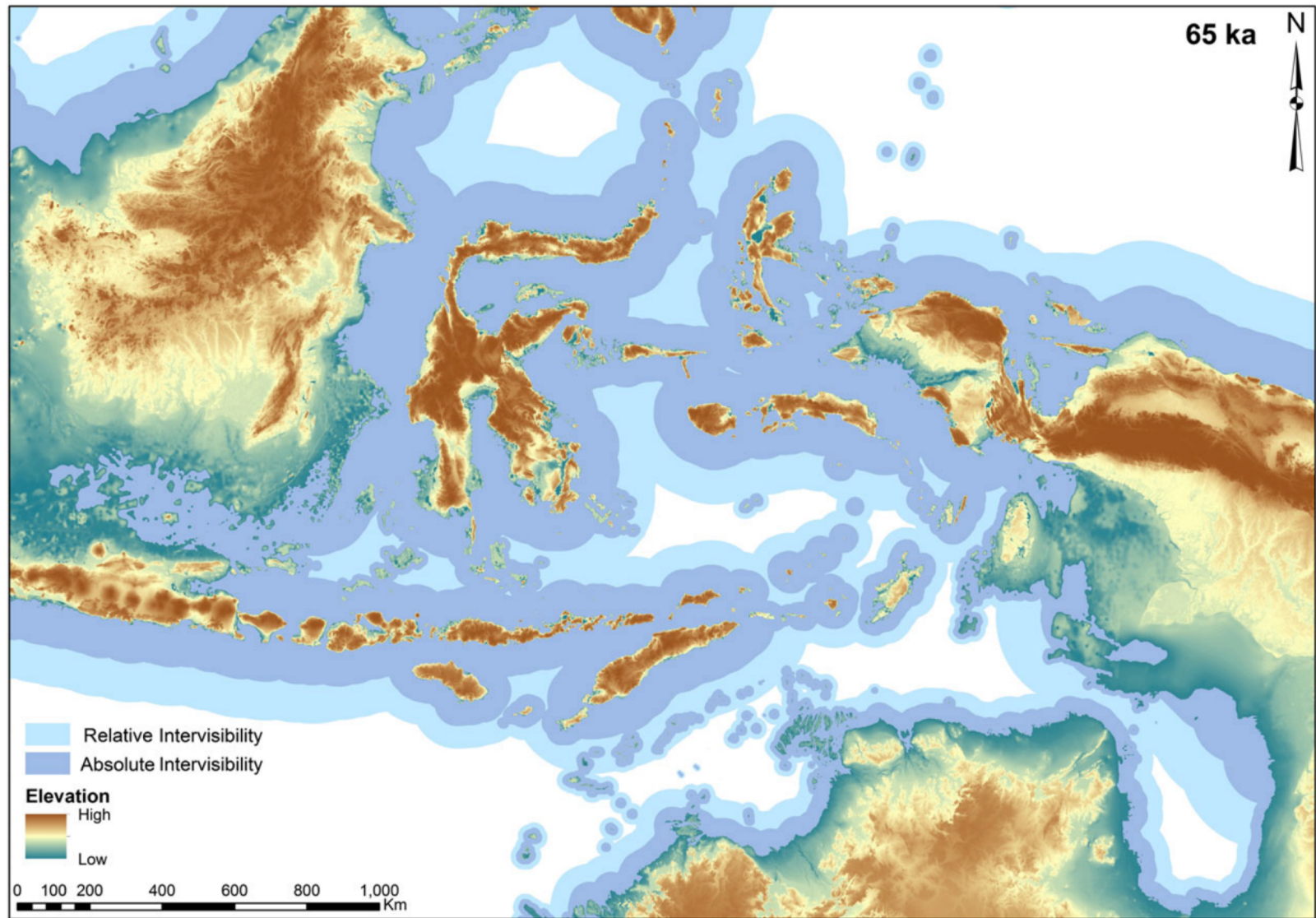
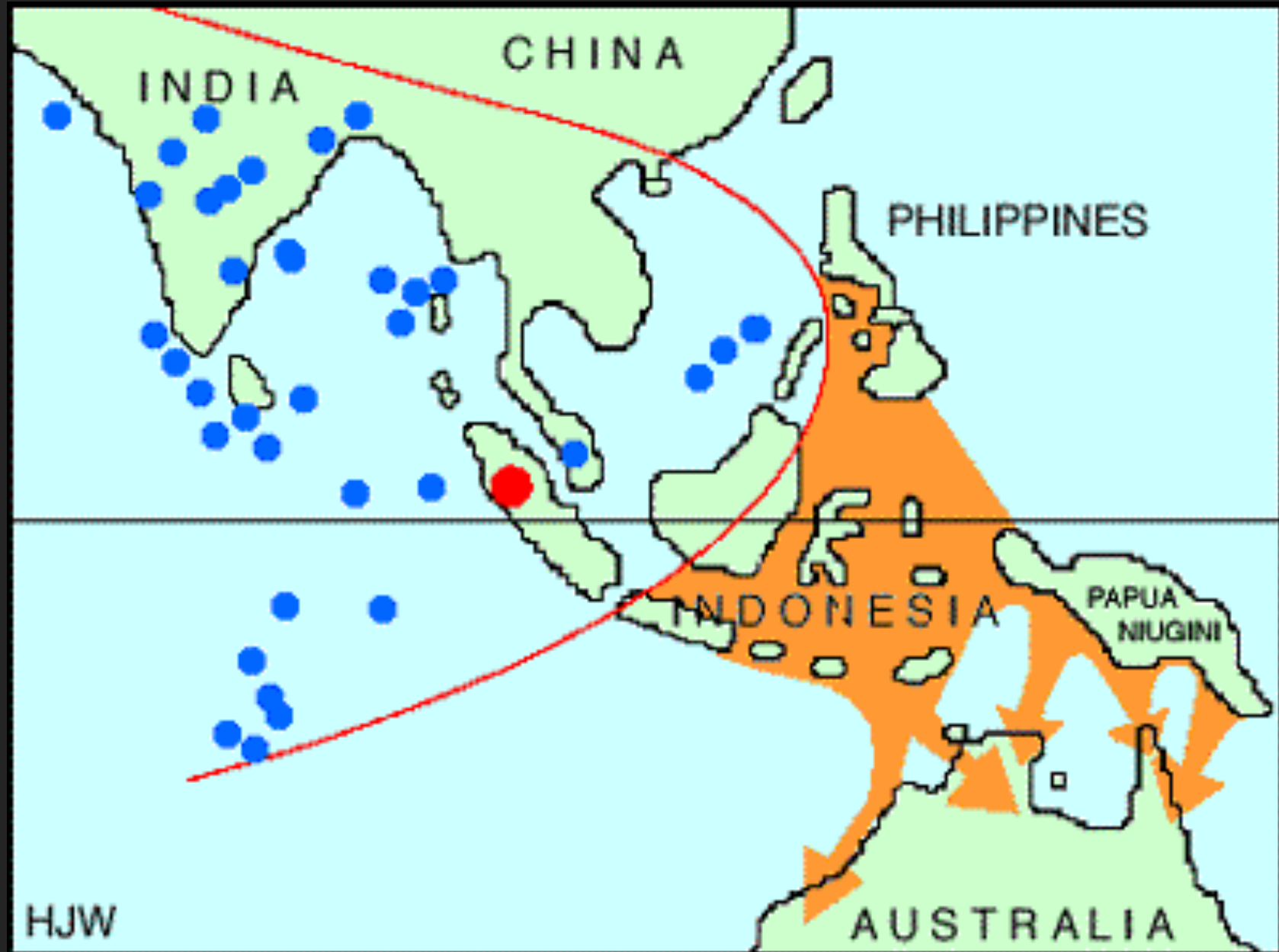


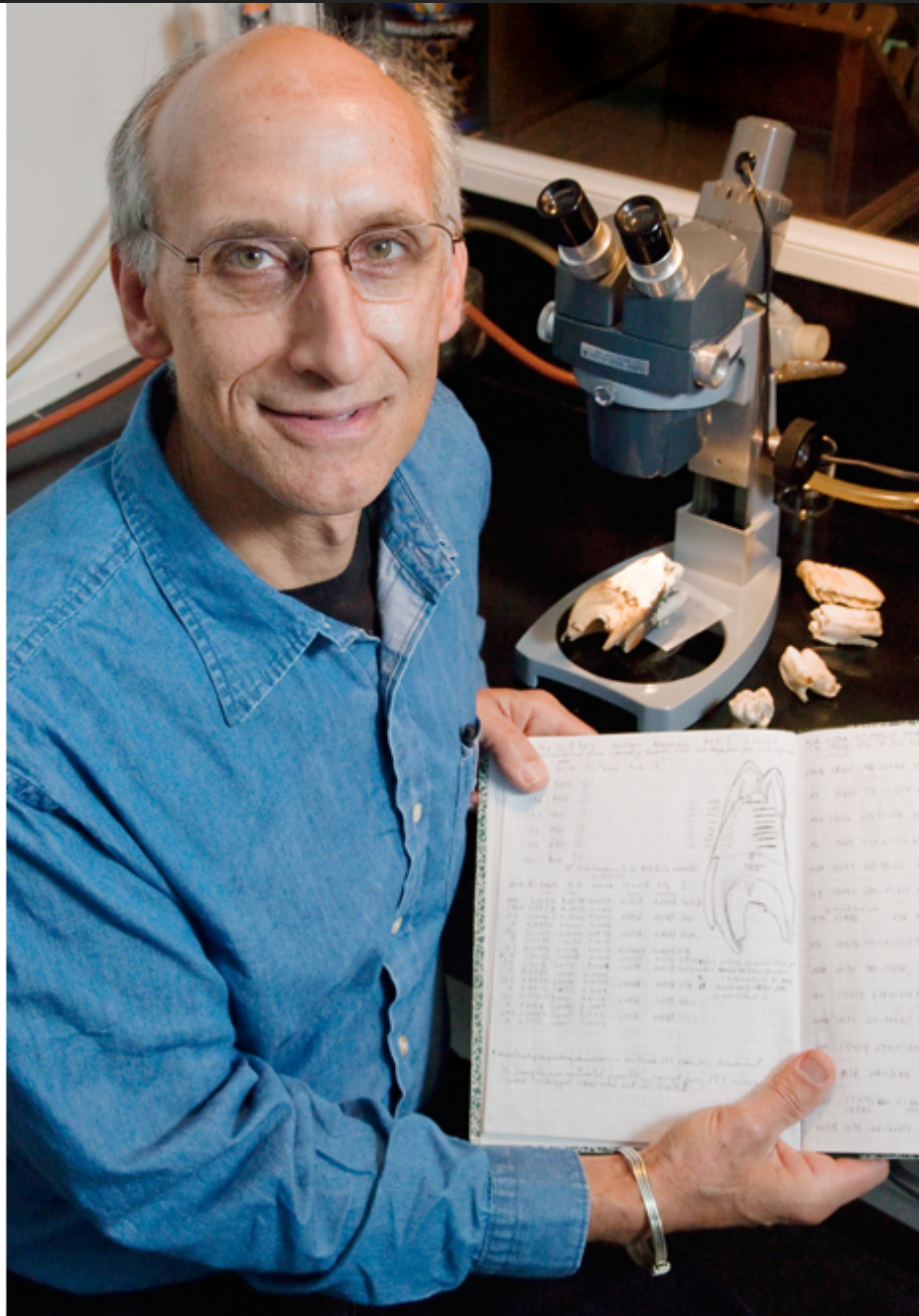
Figure 3. Palaeogeography reconstruction of the Wallacea Archipelago 65 ka ago, showing reconstructed topography and visibility buffers. The light blue buffer indicates regions of relative intervisibility, while the dark blue shows the estimated absolute intervisibility. [Colour figure can be viewed at wileyonlinelibrary.com]



Why move at all? Toba eruption 73 ka

Stanley Ambrose
claims Toba had a
bottleneck effect

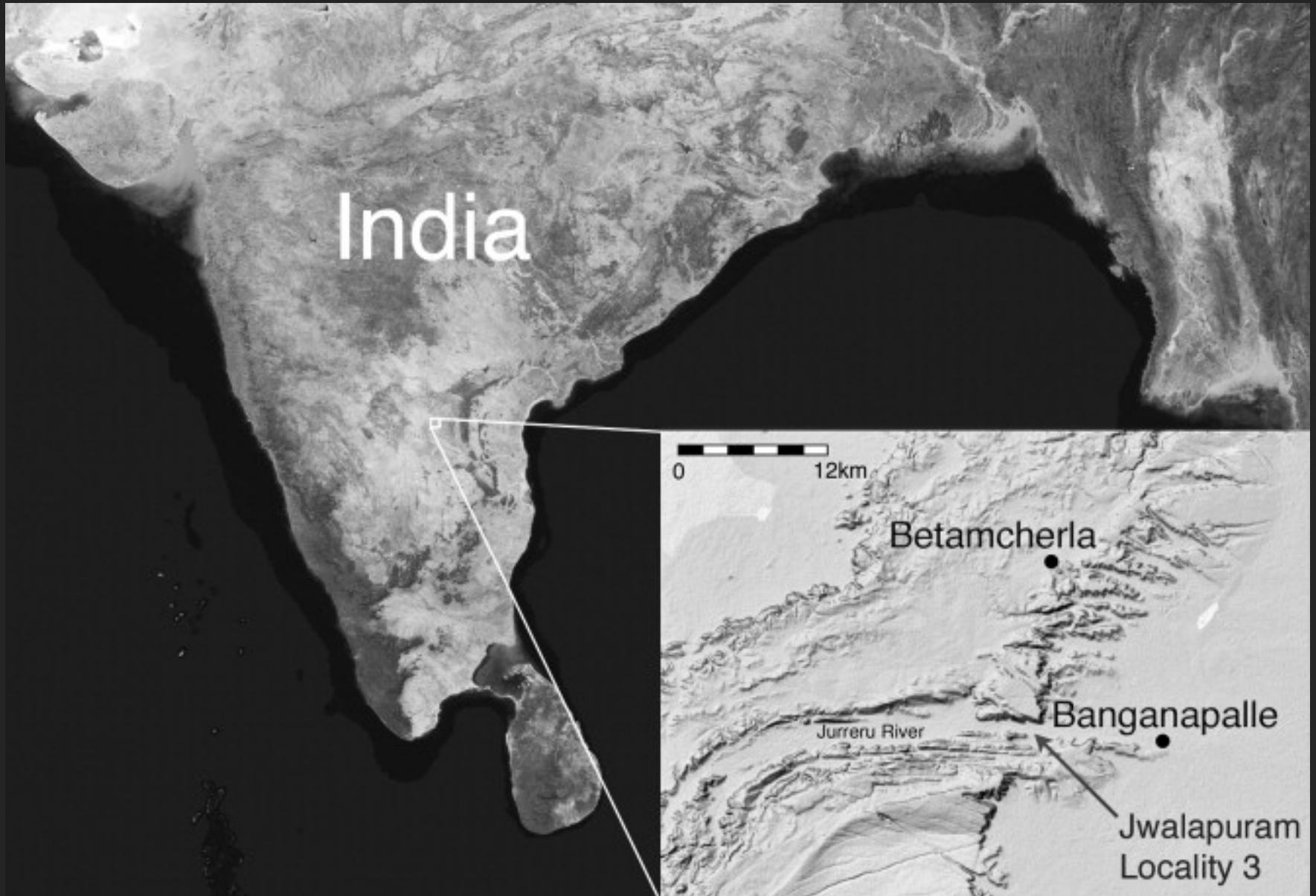
Large areas of
southeast Asia
were deforested by
lava flows, dust
and tephra ejected
from the volcano



Major isochronous change in vegetation from forest before the eruption to open woodland or grassland thereafter

Initially cooler temperatures followed by decreased tree cover and prolonged drought for at least a millennium following the Toba eruption.

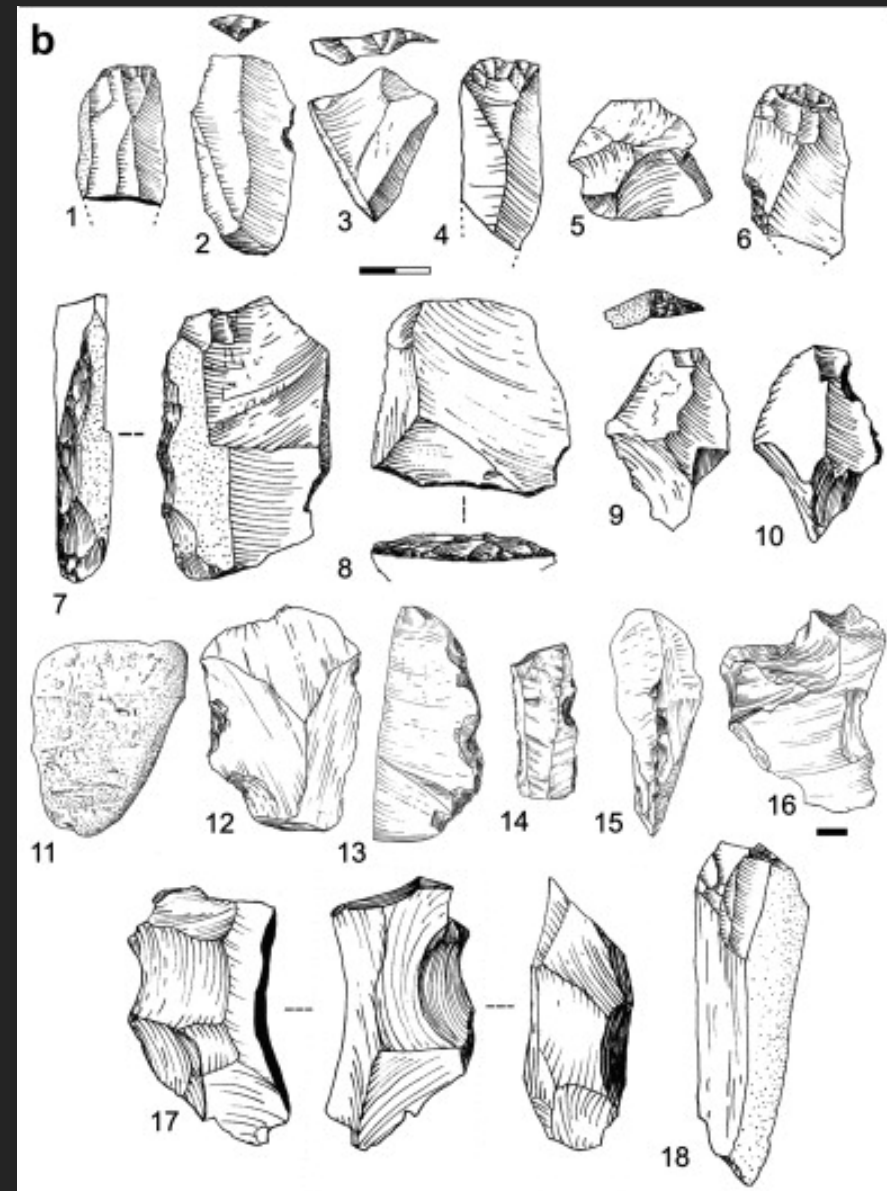
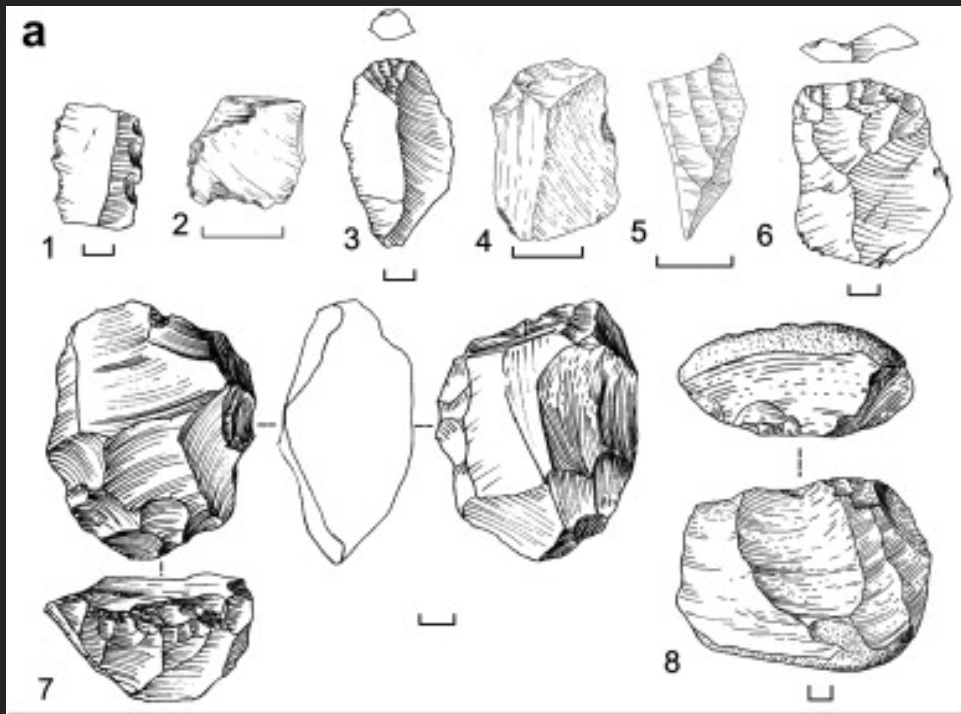
But maybe Ambrose has overstated his case...



Jwalapuram Locality 3, Southern India



Jwalapuram Locality 3, Southern India

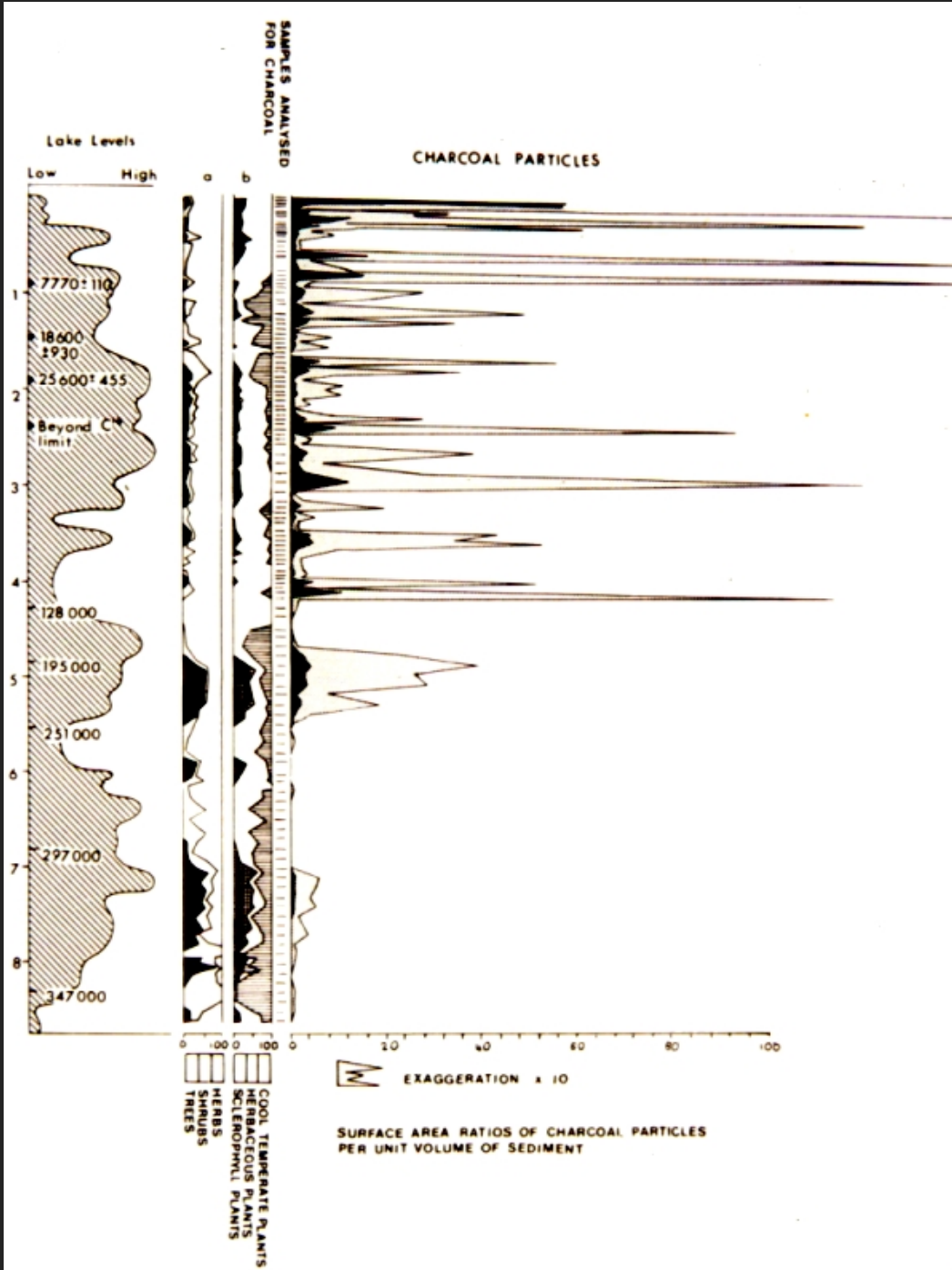


Indian human populations were probably not driven to extinction by Toba

False leads

Lake George, southeastern Australia

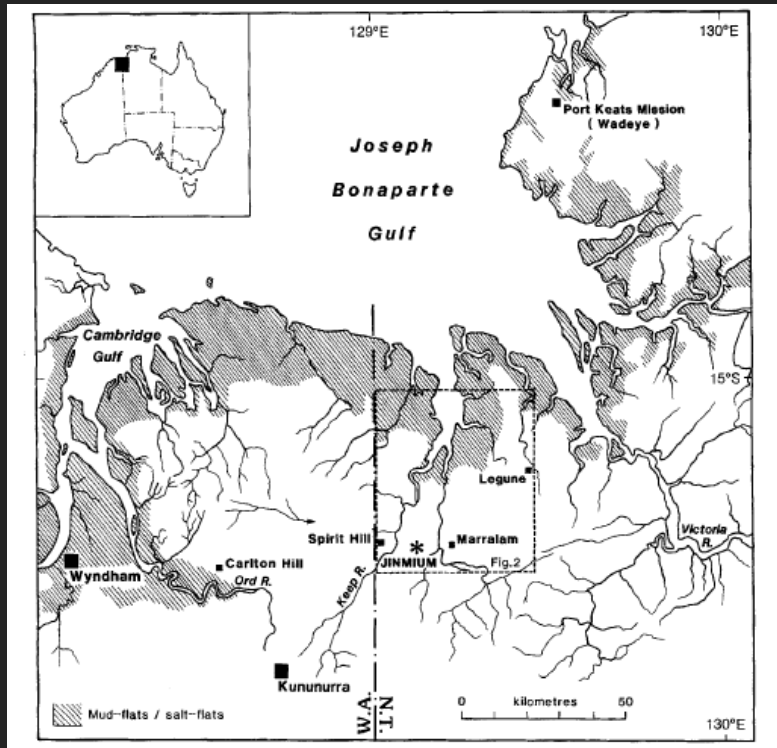
dramatic change in vegetation:
Eucalyptus woodland replaced Casuarina woodland, while fragments of charcoal increased, indicating that fires were more common



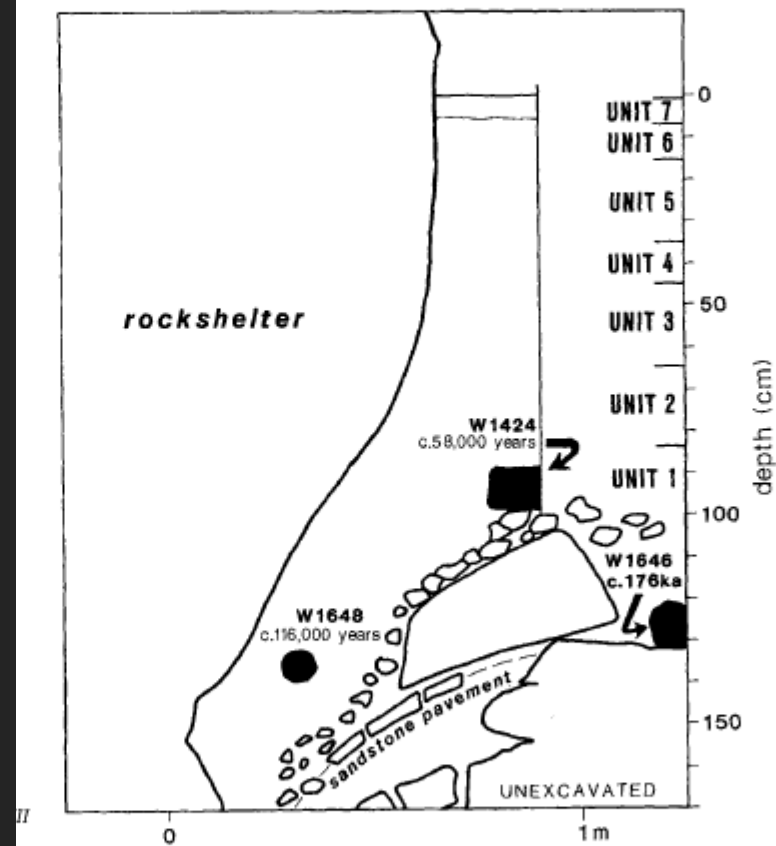
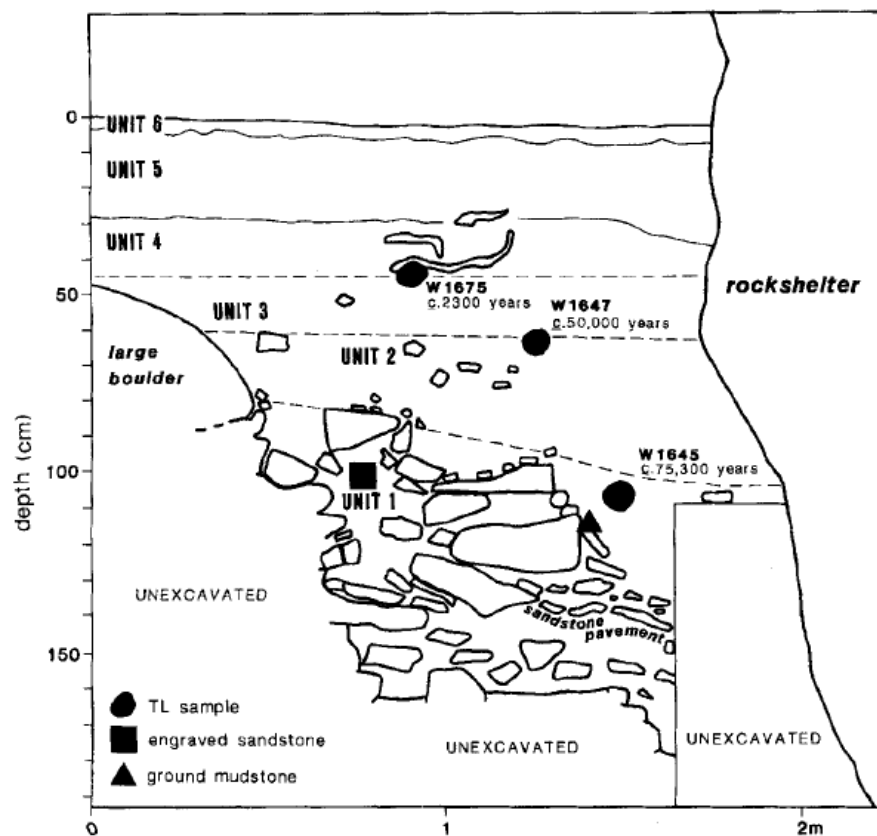


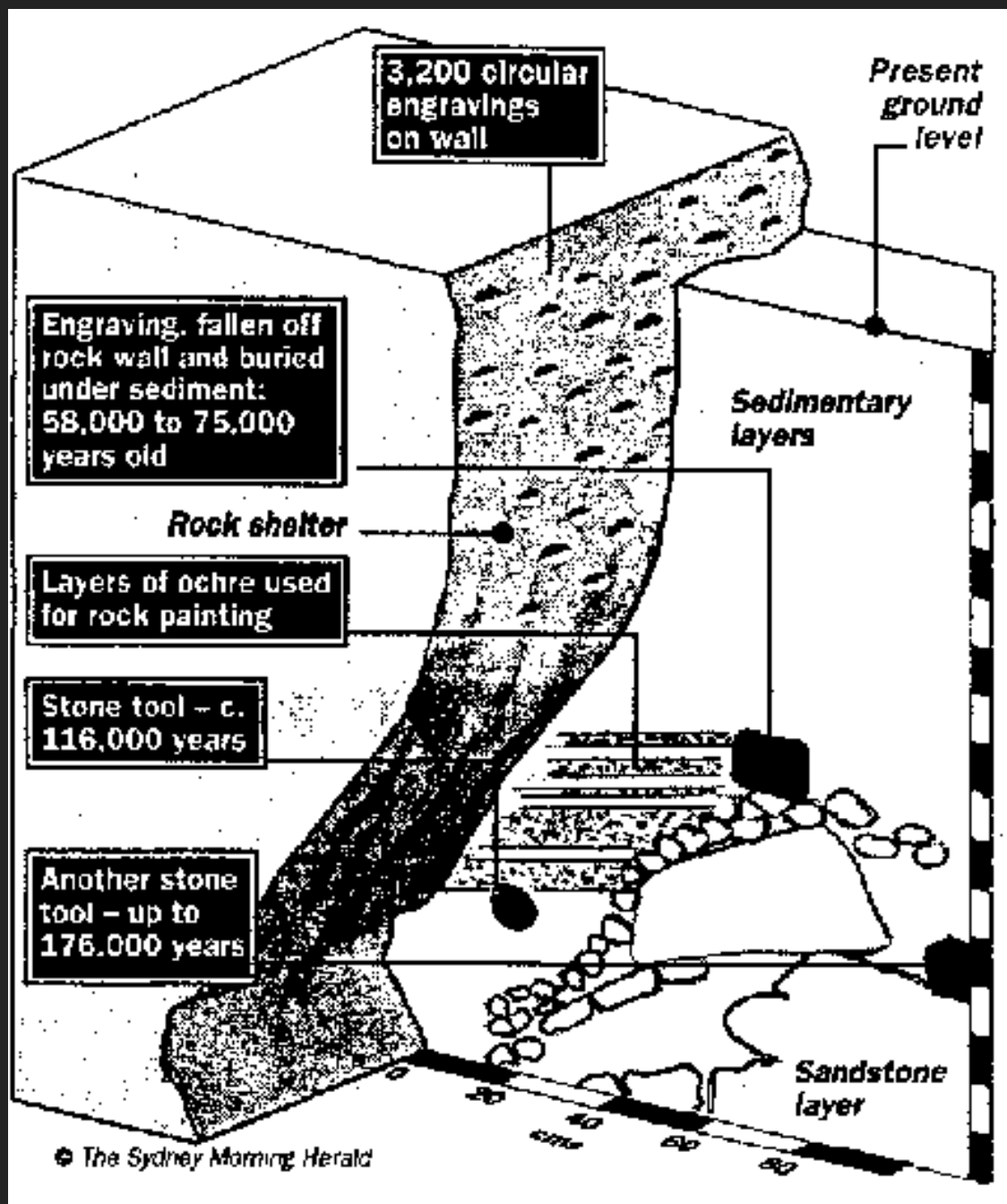
Martu man burning off spinifex, fire-stick farming, Great Sandy Desert, 1996.
Photo: Mike Smith.

Jinmium, Northern Territory



Luminescence analysis on sand grains in this shelter suggested an antiquity of 75,000 – 116,000 BP for stone artefacts.





More sophisticated OSL analyses by Nigel Spooner and Bert Roberts revealed that the sand samples were contaminated by the ancient sand grains from the rock. Jinmium was only 10,000 years old.



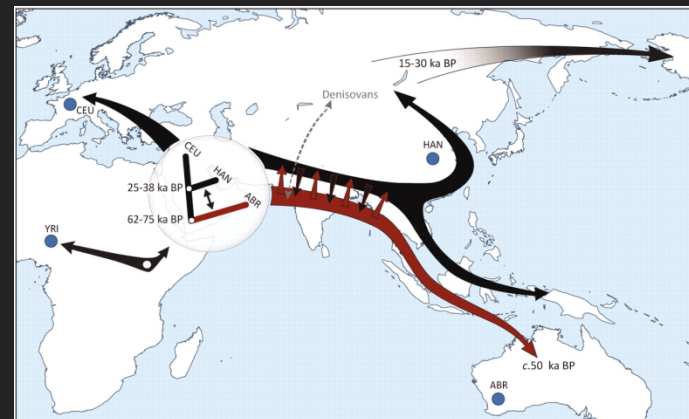
Intermission: Assignment feedback

DNA

100-year-old lock of hair donated by an Aboriginal man from southern Western Australia in the early 20th century.

Aboriginal Australians are descendants of an early human dispersal into eastern Asia, possibly 62,000 to 75,000 years ago.

This dispersal is separate from the one that gave rise to modern Asians 25,000 to 38,000 years ago.



Present-day Aboriginal Australians descend from the earliest humans to occupy Australia, likely representing one of the oldest continuous populations outside Africa.

Early settlement patterns

What are the options?

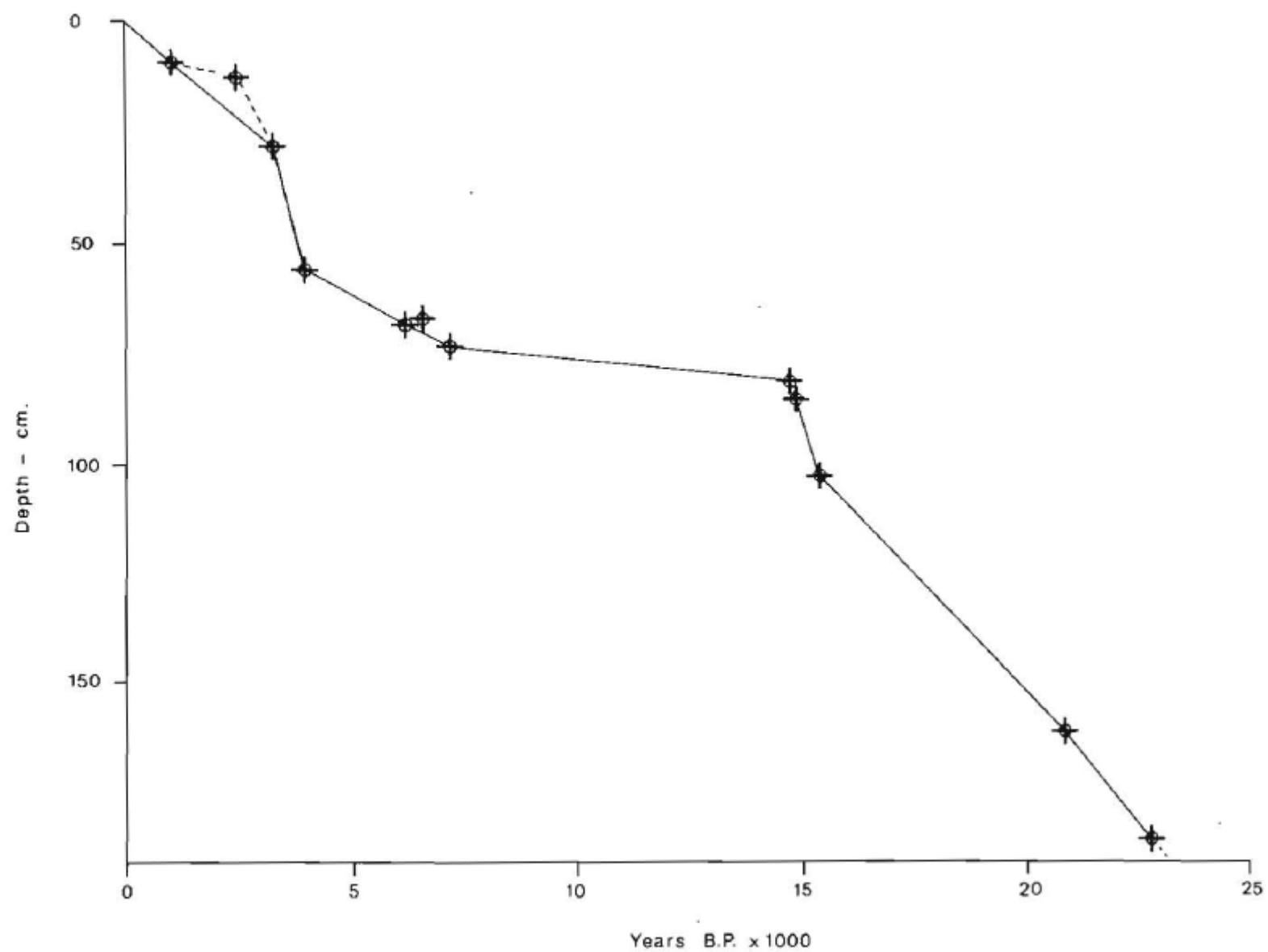


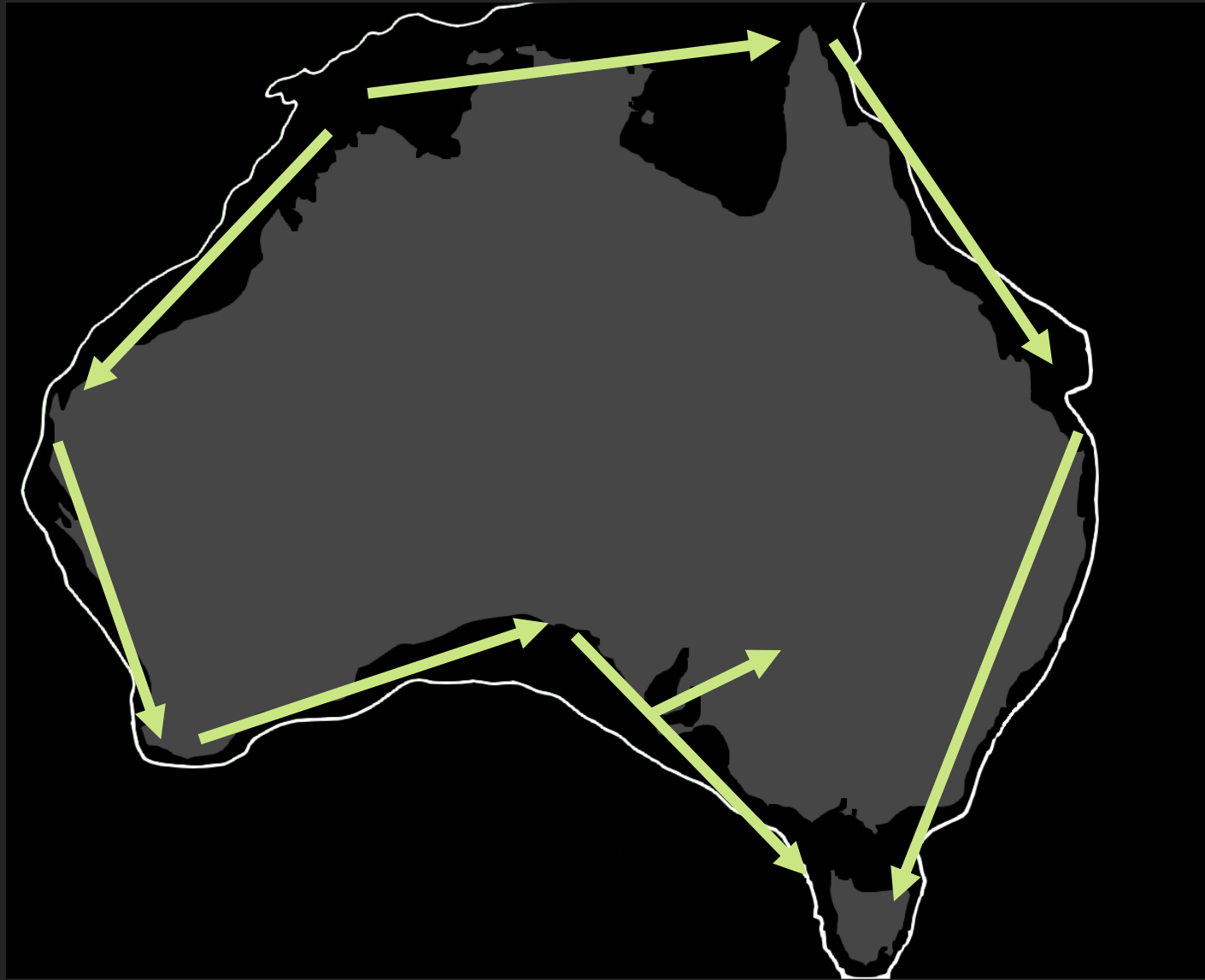




Sandra Bowdler excavated Cave Bay Cave, 1970s

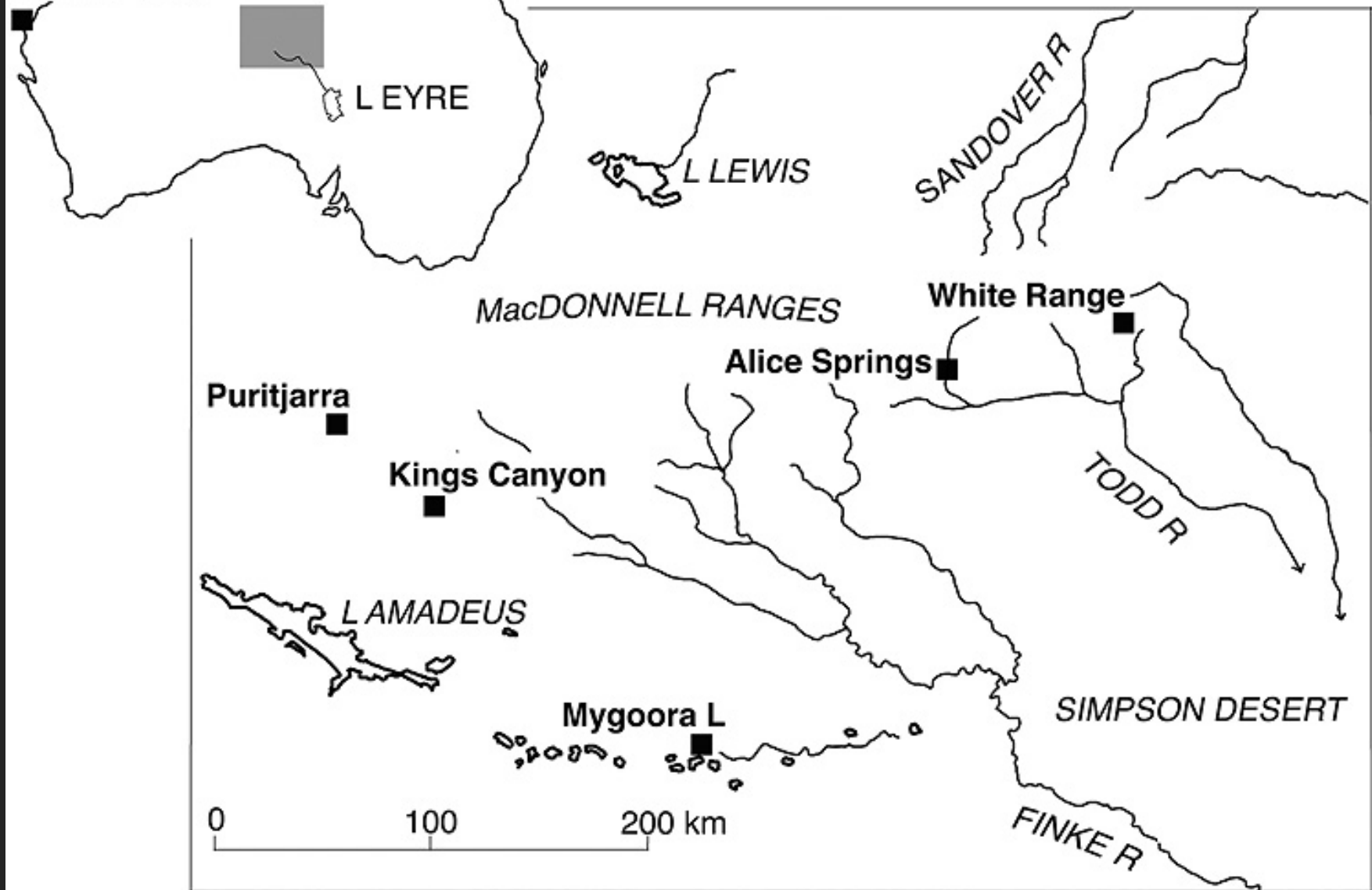






Sandra Bowdler's coastal colonisation model

Fr10/95 GC17



Puritjarra rockshelter, in the McDonald Ranges of Central Australia. Excavated by Mike Smith, 1986-90



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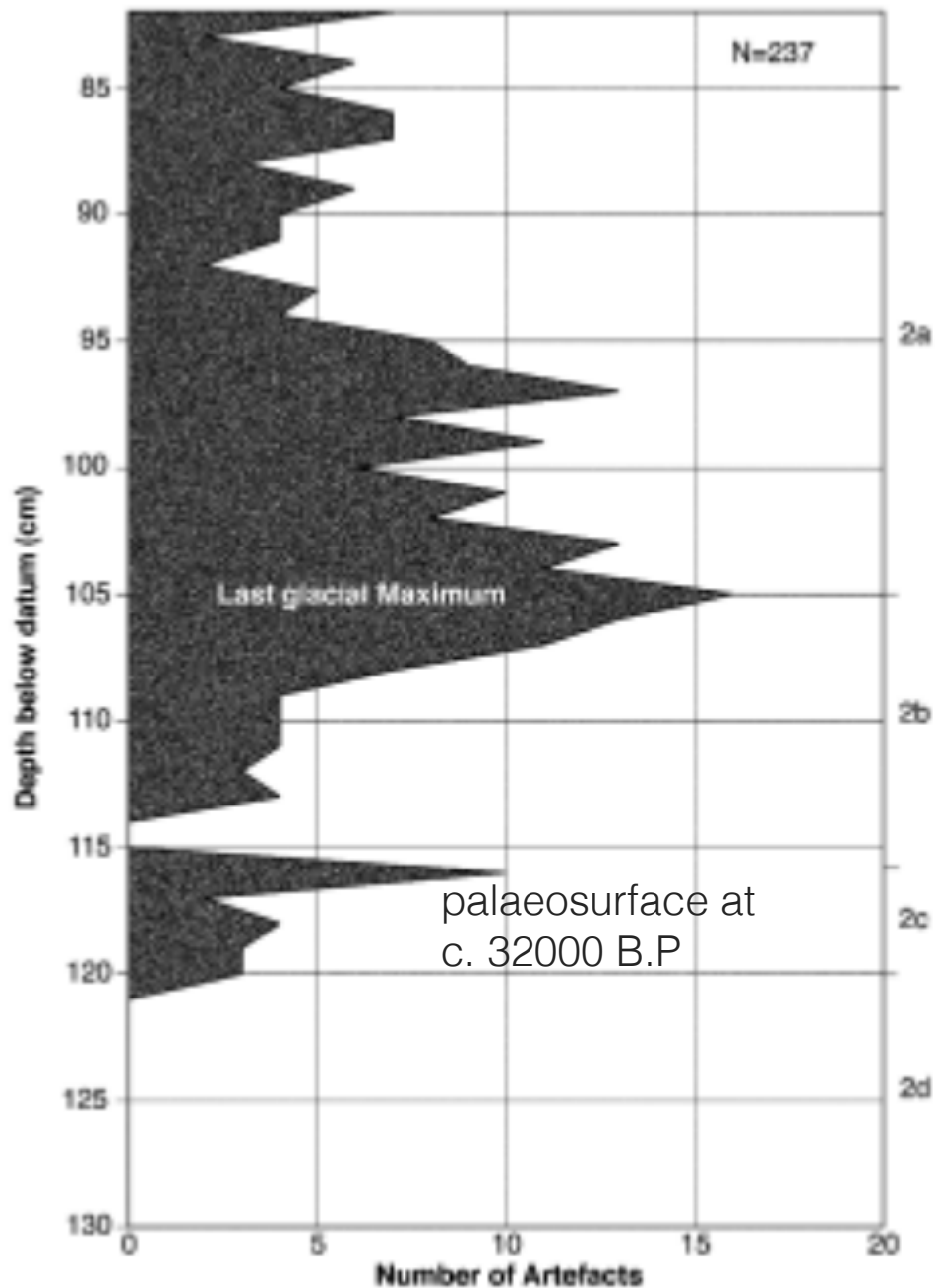
Excavations at Puritjarra reveal occupation more than 35,000 years ago, in the centre of Australia.



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Flaked stone artefacts at Puritjarra



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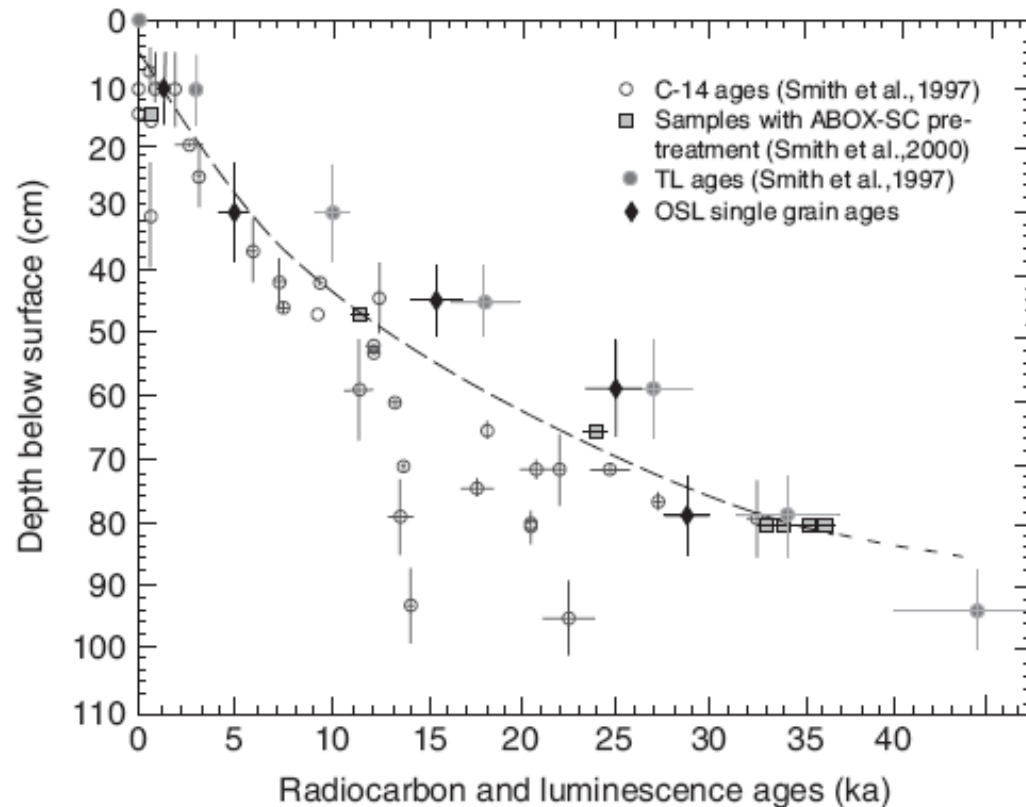


Fig. 2. Ages of samples from the Puritjarra rock shelter. For the luminescence ages the range of the sampling depth is shown by the vertical error bars.



A

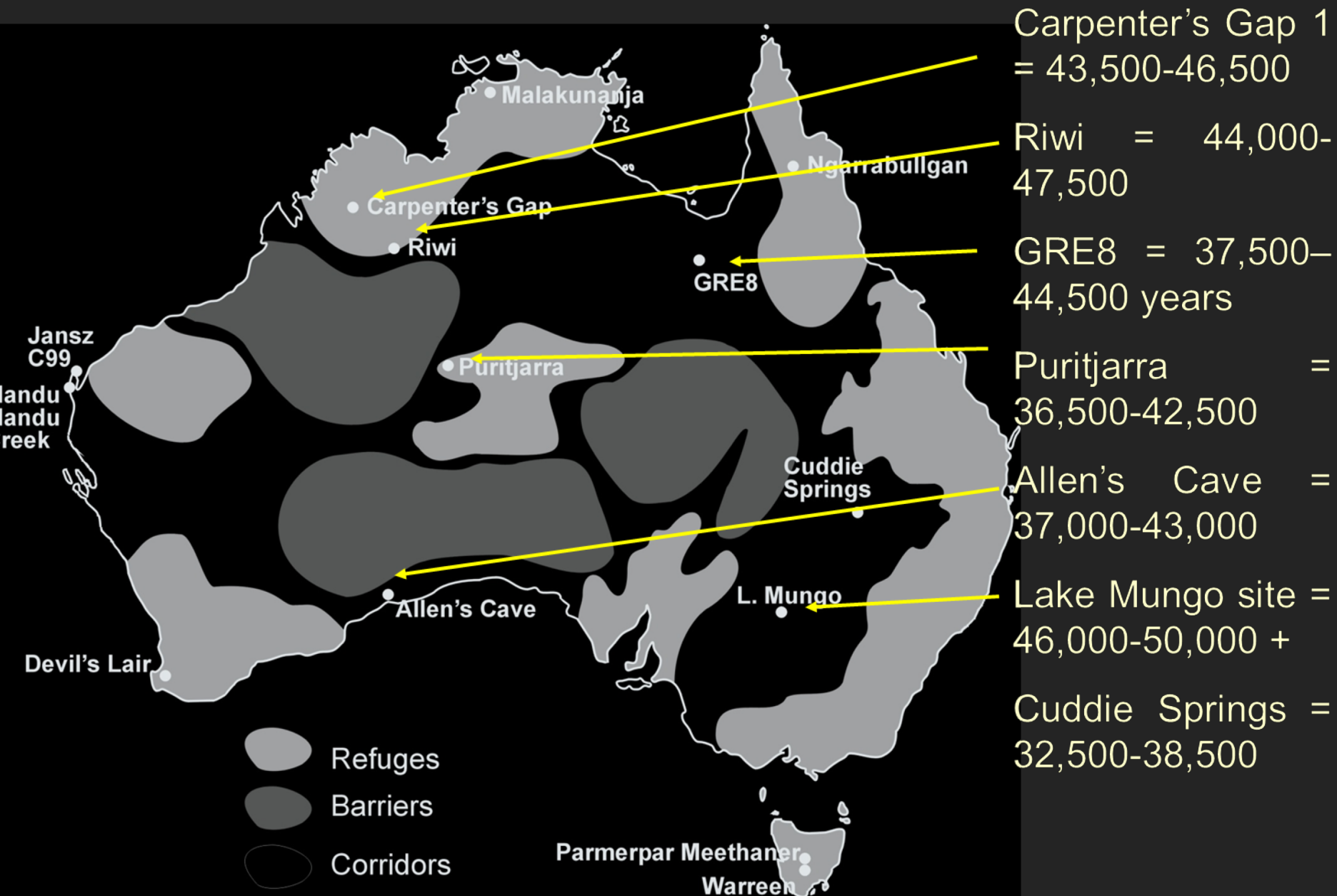


B



C

Peter Veth's model of refuges,
corridors and barriers



THE END



A
Warner Bros.-First National
PICTURE