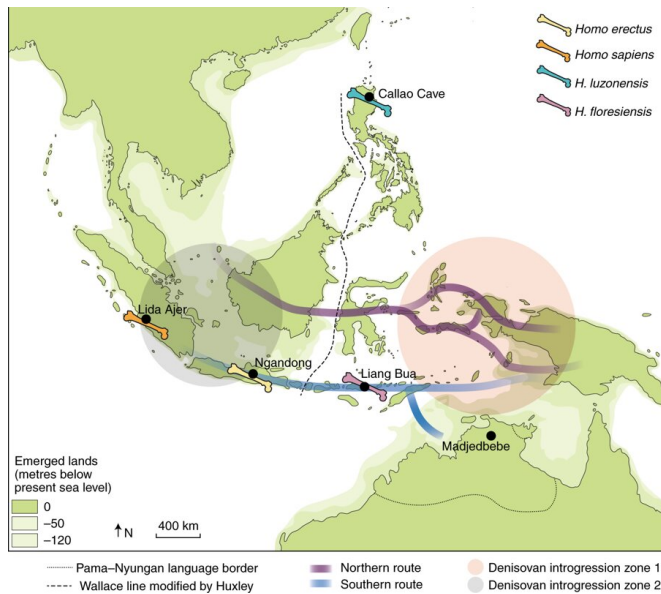


Studies suggest more original migrants to Australia than thought—and they came on purpose

20 June 2019, by Bob Yirka



The emergent picture of regional Pleistocene complexity from genomes, fossils and material culture. Credit: *Nature Ecology and Evolution*, DOI: 10.1038/s41559-019-0928-9

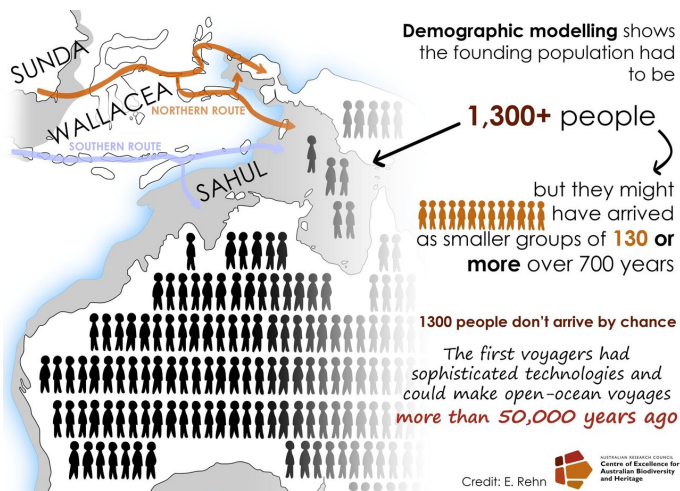
Two teams of Australian researchers working independently have found that there were likely more first arrivals to Australia and New Guinea than previously thought—and it was not by accident. The first team created a model showing that a large number of people must have made the trip to have survived the migration. They have published their results in the journal *Nature Ecology and Evolution*.

The second team found that multiple crossings must have taken place for the population to survive in their new home. They published their results in the journal *Scientific Reports*. Michael Westaway with the University of Queensland has published a [News and Views piece](#) outlining the work by the

two teams in *Nature Ecology and Evolution*.

Prior studies based on genetic analysis of the original migrants to New Guinea and Australia has shown that the earliest migrations occurred approximately 60,000 years ago. And some evidence has indicated that as few as 35 to 50 female migrants made the trip. Also, prior research has shown that during the time of the migration, ocean levels were low enough that New Guinea and Australia were connected by a [land bridge](#); the collective land mass is called Sahul. In this new effort, both teams were interested in learning more about the people that migrated to Sahul, and the size of the population.

To make a reasonable estimate regarding the number of migrants, the first team built a model that accounted for such factors as [fertility rates](#), mortality rates of modern hunter-gatherers, climate, and survivability in a new environment. The model showed that approximately 1,300 people must have migrated, either as part of very large migration efforts or as part of multiple smaller migrations over several centuries. The model also showed the most likely route was via island-hopping from what is now Indonesia.



Arrival of First Australians infographic Credit: Australian Research Council Centre of Excellence for Australian Biodiversity and Heritage (CABAH)

The second team began by looking at [climatic conditions](#) during the periods of [migration](#), along with [population estimates](#), to make probabilistic assumptions about the likelihood of people in boats randomly reaching Sahul. They found that the most likely scenario was intentionally sailing from their homeland to Sahul. They also found that the migrants also clearly had the wherewithal to make such a journey.

Taken together, the results by the two teams suggests that the initial migrants to Sahul were purposeful and large in number.

More information: Corey J. A. Bradshaw et al. Minimum founding populations for the first peopling of Sahul, *Nature Ecology & Evolution* (2019). [DOI: 10.1038/s41559-019-0902-6](https://doi.org/10.1038/s41559-019-0902-6)

Michael I. Bird et al. Early human settlement of Sahul was not an accident, *Scientific Reports* (2019). [DOI: 10.1038/s41598-019-42946-9](https://doi.org/10.1038/s41598-019-42946-9)

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