

# **No one is an island: The history of human genetic ancestry in Madagascar**

July 5 2016

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To get at the heart of Malagasy genetic ancestry and reconstruct their history, a researcher team led by Dr. Francois-Xavier Ricaut investigated genome-wide genotyping data of Malagasy populations along with populations across the Indian Ocean, including two groups of anthropological interest: the Banjar and the Ngaju from Southeast Borneo. A rope bridge leading to a Dayak village, Southeast Borneo. Credit: F-X Ricaut

More than 4,000 years ago, a proto-globalization process started in the Indian Ocean, one of the outcomes being a great human migration of African and Asian peoples spreading across the Indian Ocean to inhabit the fourth largest island in the world, Madagascar. Austronesian peoples came from Borneo on boats, and Bantu migrants crossed over from East Africa. Overall, the Malagasy is thought to be composed by more than a dozen of ethnic groups, and the specific geographic, linguistic origins and settlement dates are still hotly debated.

To get at the heart of Malagasy [genetic](#) ancestry and reconstruct their history, a researcher team led by Dr. Francois-Xavier Ricaut investigated genome-wide genotyping data of Malagasy populations along with populations across the Indian Ocean, including two groups of anthropological interest: the Banjar and the Ngaju from Southeast Borneo

A new picture has emerged on the settlement of Madagascar.

Ricaut's group has shown that the Malagasy genetic diversity is 68 percent African and 32 percent Asian. Based on their evidence, the Banjar were the most probable Asian population that traveled to Madagascar. The genetic dating supports the hypothesis that this Austronesian migration occurred around 1,000 years ago, while the last significant Bantu migration to Madagascar began 300 years later,



perhaps following climate change in Africa.

Lastly, the authors propose that a language shift occurred in Southeast Borneo after the [migration](#) of Banjar to Madagascar. It is thought that the Banjar, currently speaking a Malay language, presumably spoke a language closer to that reconstructed for Proto-Malagasy. This linguistic change would have followed a major cultural and genetic admixture with Malay, driven by a Malay Empire trading post in Southeast Borneo. The collapse of the Malay Empire during the 15th and 16th centuries could correspond to the end of the Malay gene mix into the Banjar population.



Dayak village with houses on pilotis, Southeast Borneo. Credit: F-X Ricaut

"Our study is the first to reconcile data and hypotheses coming from linguistic, archaeological and genetic research to build an anthropological scenario placing the Malagasy ancestry in the Banjar group, living 6000km away," says Dr. Ricaut.



A landscape from South of Madagascar. Credit: T. Letellier

Provided by Oxford University Press

Citation: No one is an island: The history of human genetic ancestry in Madagascar (2016, July 5) retrieved 27 April 2024 from

<https://phys.org/news/2016-07-island-history-human-genetic-ancestry.html>

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