

# Pacific people spread from Taiwan

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New research into language evolution suggests most Pacific populations originated in Taiwan around 5,200 years ago.

Scientists at The University of Auckland have used sophisticated computer analyses on vocabulary from 400 Austronesian languages to uncover how the Pacific was settled.

"The Austronesian language family is one of the largest in the world, with 1200 languages spread across the Pacific," says Professor Russell Gray of the Department of Psychology. "The settlement of the Pacific is one of the most remarkable prehistoric human population expansions. By studying the basic vocabulary from these languages, such as words for animals, simple verbs, colours and numbers, we can trace how these languages evolved. The relationships between these languages give us a detailed history of Pacific settlement."

"Our results use cutting-edge computational methods derived from evolutionary biology on a large database of language data," says Dr Alexei Drummond of the Department of Computer Science. "By combining biological methods and linguistic data we are able to investigate big-picture questions about human origins".

The results, published in the latest issue of the prestigious journal *Science*, show how the settlement of the Pacific proceeded in a series of expansion pulses and settlement pauses. The Austronesians arose in Taiwan around 5,200 years ago. Before entering the Philippines, they paused for around a thousand years, and then spread rapidly across the

7,000km from the Philippines to Polynesia in less than one thousand years. After settling Fiji, Samoa and Tonga, the Austronesians paused again for another thousand years, before finally spreading further into Polynesia eventually reaching as far as New Zealand, Hawaii and Easter Island.

"We can link these expansion pulses to the development of new technology, such as better canoes and social techniques to deal with the great distances between islands in Polynesia," says Research Fellow Simon Greenhill. "Using these new technologies the Austronesians and Polynesians were able to rapidly spread through the Pacific in one of the greatest human migrations ever. This suggests that technological advances have played a major role in the spread of people throughout the world."

The database of Austronesian basic vocabulary can be accessed at:  
[language.psy.auckland.ac.nz/austronesian/](http://language.psy.auckland.ac.nz/austronesian/)

Source: University of Auckland

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