

# Voyages of discovery or necessity? Fish poisoning may be why Polynesians left paradise

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Fish poisoning, or ciguatera could be the reason that New Zealand, Easter Island and, possibly, Hawaii in the 11th to 15th centuries became colonized by masses of migrating Polynesians.

Ciguatera poisoning, the food-borne disease that can come from eating large, carnivorous reef [fish](#), causes vomiting, headaches, and a burning sensation upon contact with cold surfaces. An early morning walk on cool beach sand can become a painful stroll on fiery coals to a ciguatera victim. But is this common toxin poisoning also the key to a larger mystery? That is, the storied migrations of the Polynesian natives who colonized New Zealand, Easter Island and, possibly, Hawaii in the 11th to 15th centuries? Could ciguatera be the reason masses of people left paradise?

Teina Rongo, a Cook Island Maori from Rarotonga and a Ph.D. student at the Florida Institute of Technology, and his faculty advisers Professors Robert van Woesik and Mark Bush, propose this intriguing theory in an upcoming issue of the [Journal of Biogeography](#). Based on archeological evidence, paleoclimatic data and modern reports of ciguatera poisoning, they theorize that ciguatera outbreaks were linked to climate and that the consequent outbreaks prompted historical migrations of Polynesians.

Why would historic populations of Cook Islanders take the chance of voyaging? A journey beyond the horizon was risky and favorable

landfalls were uncertain. It is known that this population was heavily reliant on fish as a source of protein, and the scientists suggest that once their fish resources became inedible, voyaging became a necessity.

Modern Cook Islanders, though surrounded by an ocean teeming with fish, don't eat fish as a regular part of their diet but instead eat processed, imported foods. In the late 1990s, lower-income families who could not afford processed foods emigrated to New Zealand and Australia. The researchers suggest that past migrations had similar roots. The heightened voyaging from A.D. 1000 to 1450 in eastern Polynesia was likely prompted by ciguatera fish [poisoning](#). There were few options but to leave once the staple diet of an island nation became poisonous.

"Our approach brings us a step closer to solving the mysteries of ciguatera and the storied Polynesian native migrations. We hope it will lead to better forecasting and planning for ciguatera outbreaks" says van Woesik.

More information: The paper is available at [www.wiley.com/bw/journal.asp?ref=0305-0270](http://www.wiley.com/bw/journal.asp?ref=0305-0270) .

Source: Florida Institute of Technology ([news](#) : [web](#))

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