'All we can say for certain is that the Lapita had canoes that were capable of ocean voyages, and they had the ability to sail them,' says Geoff Irwin, a professor of archaeology at the University of Auckland. Those sailing skills, he says, were developed and passed down over thousands of years by earlier mariners who worked their way through the archipelagoes of the western Pacific, making short crossings to nearby islands. The real adventure didn't begin, however, until their Lapita descendants sailed out of sight of land, with empty horizons on every side. This must have been as difficult for them as landing on the moon is for us today. Certainly it distinguished them from their ancestors, but what gave them the courage to launch out on such risky voyages?

The Lapita's thrust into the Pacific was eastward, against the prevailing trade winds, Irwin notes. Those nagging headwinds, he argues, may have been the key to their success. 'They could sail out for days into the unknown and assess the area, secure in the knowledge that if they didn't find anything, they could turn about and catch a swift ride back on the trade winds. This is what would have made the whole thing work.' Once out there, skilled seafarers would have detected abundant leads to follow to land: seabirds, coconuts and twigs carried out to sea by the tides, and the afternoon pile-up of clouds on the horizon which often indicates an island in the distance.

For returning explorers, successful or not, the geography of their own archipelagoes would have provided a safety net. Without this to go by, overshooting their home ports, getting lost and sailing off into eternity would have been all too easy. Vanuatu, for example, stretches more than 500 miles in a northwest-southeast trend, its scores of intervisible islands forming a backstop for mariners riding the trade winds home.

All this presupposes one essential detail, says Atholl Anderson, professor of prehistory at the Australian National University: the Lapita had mastered the advanced art of sailing against the wind. 'And there's no proof they could do any such thing,' Anderson says. 'There has been this assumption they did, and people have built canoes to re-create those early voyages based on that assumption. But nobody has any idea what their canoes looked like or how they were rigged.'

Rather than give all the credit to human skill, Anderson invokes the winds of chance. El Niño, the same climate disruption that affects the Pacific today, may have helped scatter the Lapita, Anderson suggests. He points out that climate data obtained from slow-growing corals around the Pacific indicate a series of unusually frequent El Niños around the time of the Lapita expansion. By reversing the regular east-to-west flow of the trade winds for weeks at a time, these 'super El Niños' might have taken the Lapita on long unplanned voyages.

However they did it, the Lapita spread themselves a third of the way across the Pacific, then called it quits for reasons known only to them. Ahead lay the vast emptiness of the central Pacific and perhaps they were too thinly stretched to venture farther. They probably never numbered more than a few thousand in total, and in their rapid migration eastward they encountered hundreds of islands – more than 300 in Fiji alone.