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Nunn/Vanished Islands and Hidden Continents of the Pacific

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1 Introduction

A PERSONAL ODYSSEY

There are few topics that have captured the imaginations of people within the last few centuries more than the idea of vanished islands. For myself—and, I would argue, for most schoolchildren with inquiring minds growing up in Europe in the second half of the twentieth century—the questions of whether the fabulous island Atlantis, described in exhaustive detail by the Greek philosopher Plato about 350 BC (Before Christ), ever truly existed and where it might have been located proved compulsive. For me at that time, such questions seemed to go straight to the fundamentals of existence in ways that the questions raised within prescriptive curricula did not. In adolescence, it seemed to me that proving the former existence of Atlantis was tantamount to proving the existence of God for it was self-evident that only in the wisdom of the Ancients, unpolluted by the complexities and crass materialism of the modern world, could the answers to such fundamental questions be found.

Naturally these views have since been significantly tempered but, decades later, I realize that numerous people had similar views, both before and after I held them. In the “Dedication” to his 1880 poetry collection *Ultima Thule*, H. W. Longfellow wrote

But that, ah! that was long ago.
How far, since then, the ocean streams
Have swept us from that land of dreams,
That land of fiction and of truth,
The lost Atlantis of our youth!

Today, a whole new way of thinking—the new age—has embraced the concept of Atlantis, making it the cornerstone of an edifice that is chaotic, contradictory, and unapologetically unscientific. Yet, for the same reasons that I toyed with these ideas as a teenager, many people today get reassurance from such charismatic explanations of the world that they have

struggled to find elsewhere. The fact that these explanations are fuelled by pseudoscience writers who bend, distort, and selectively cite scientific data and explanations to support their often ludicrous theories of natural phenomena and human history is less palatable to me. It is no coincidence that the rise of pseudoscience has coincided with a diminishing of legitimate scientific interest in issues like vanished islands and hidden continents, not because the associated questions have become any less intriguing or indeed valid scientifically but because they have become tainted. In a critical 1978 book about Atlantis, E. S. Ramage commented

Perhaps it is already clear why those who are best qualified [scientists] to speak about Atlantis are satisfied with offering incidental criticism or else ignore the problem entirely. The one common denominator among all the various theories that have been put forward is the singular lack of detachment shown by the [pseudoscience] theorists. Instead of beginning with Plato, most begin with a hypothesis and develop their ideas with an enthusiasm that often verges on fanaticism.¹

Some years ago I wanted to visit the island of Moturiki, some 10 kilometers off the east coast of Viti Levu, the largest island in the Fiji Group of the Southwest Pacific. I drove to Ucunivanua (the tip of the land), in eastern Viti Levu, to rendezvous with the boat from Moturiki. It arrived much later than I did, and I spent some of the interim wandering along the foreshore, exposed by the low tide, wondering at the vast numbers of pottery shards sticking up through the mud. Some of these shards were intricately decorated, made this way I supposed by the distant ancestors of the people now living in the area, people who today have no memory of pottery making.²

When the boat arrived, we headed out to sea, threading our way through the myriad reefs that fringe this coast, buffeted by swells driven into our path by the southeast trade winds. Our route was not directly to Moturiki; the boatman first had to collect some supplies from isolated Leleuvia Island, 5 kilometers south, where a backpackers' resort is located.

Leleuvia is one of the smallest and lowest islands I have ever been on, perhaps 100 meters in diameter and rising no more than 3 meters above the surface of the patch of coral reef on which it is built. It is a pile of sand and gravel, thrown together by successive storm waves, then colonized by the coconut palms and creepers that are ubiquitous along the low, sandy coastlines of the tropical South Pacific islands. While the boatman went to do business on Leleuvia, I wandered along the shore and there — to my surprise — buried in the sand spit at the eastern end of the island, I found more pottery shards. There is no clay on Leleuvia so the pottery could not have been manufactured there. I tried to imagine how it could have got there. Too heavy to be carried in the waves, I supposed the pottery must have been brought to this island by people. In the absence of freshwater, people in the past could never have lived permanently on such islands; to do so today they import drinking water. Perhaps the pottery was brought as water containers for fishing parties.

We got back into the boat and set off for Moturiki. To get there from Leleuvia we first had to cross Davetalevu (great passage), a deepwater gap through the great barrier reef into which water from the deep ocean is driven by the southeast trade winds. As we reached the edge of Davetalevu, all of us in the boat were asked to remove our hats and refrain from talking until we reached the other side. The reasons for this are intriguing, as I found out when we landed finally on Moturiki.

Long ago, I was told, an island named Vuniivilevu had existed between Moturiki and Leleuvia: a chiefly island, one of immense cultural importance in the district. Then one day it abruptly disappeared; it slipped beneath the waves and only a few of its occupants survived. Sometimes today, my informants told me, when they cross Davetalevu, where the island once was, the shouts and screams of people can be heard coming up from the ocean depths. And that is why you must show respect by removing your hat and being quiet when you cross Davetalevu. For if you are loud, the cries from below cannot be heard and those uttering them will in frustration agitate the sea and capsize your boat. Only a few weeks earlier, I was told, a man from Moturiki (where alcohol is forbidden) went across to Leleuvia and had a few beers. On his way home, sailing alone through the dark, he sang at the top of his voice as he was crossing Davetalevu and his boat tipped over and he, quickly sobered by the cold water, swam ignominiously back to Moturiki. I suggested that the man in question may have been the architect of his own fate, but my informants merely smiled and told me that there had been many comparable incidents at Davetalevu that were not so easily explainable.

Since that time, and in more than twenty years of living and researching in the Pacific Islands, I have come across many tales of vanished islands that are often known only within very small communities. Yet the commonalities between these tales are striking, as are their similarities to the well-publicized story of Atlantis.

My career as a geoscientist was built on the study of islands in the middle of the oceans. A few years ago, the convergences between the stories of Atlantis and other vanished islands and what I understood about the life cycles of oceanic islands became too many and too compelling to ignore. For although Atlantis, like many allegedly vanished islands in the Pacific, never existed, many of the associated details derive from observations of a whole range of natural phenomena cemented together with human imagination.

There are mechanisms by which steep-sided oceanic islands can abruptly collapse, and the evidence that such megacollapses once occurred has been described from many oceanic islands. It was only a short jump from thinking of flank collapses that could remove part of an island to summit collapses, which, although they still affected mostly the flank of an island edifice, also carried away its top (above-sea) portion.

And then I acquired the 1984 book by oceanographer Henry Stommel entitled *Lost Islands*. It is a masterly review of all manner of such islands, from those incorrectly located, through those invented by unscrupulous navigators who wanted an island named after

them, to those that really seem to have existed once . . . but now are no more. The latter group intrigued me most, especially because one of those Stommel described, Tuanaki, was within my immediate geographical sphere of interest. Discussions with Marjorie Tua'inekore Crocombe, a former colleague who had translated from Cook Island Maori the nineteenth-century narrative that gave most details about Tuanaki, convinced me that this island had been in existence in the 1830s but had somehow vanished by 1844 when missionaries went searching for it.

A period of immersion in Pacific Island origin myths led to numerous discussions with Paul Geraghty, a renowned Pacific Island linguist, who had traced the story of the supposedly sunken island Burotu back to near Matuku Island in Fiji. Burotu is a key component in the widespread myths about the homeland Hawaiki from which all Pacific Island people living east of Fiji, including those in Hawai'i and New Zealand, are reputed to have descended. Although Burotu no longer exists, according to the people of Matuku there are manifest signs that it is still present below the ocean.

As my interest in Tuanaki and Burotu grew, so information about other such vanished islands in the Pacific came to my attention, particularly through studies of Pacific Islander myths. I became interested in the hazard implications of island disappearance, particularly the possibility that islands may have vanished as a result of island flank collapses. If such collapses occurred in the past, then they will also occur in the future and cause massive disruption to humans in the Pacific, not just on the islands that collapse but also, through the impact of what are sometimes called megatsunamis, along other Pacific coasts.

It is easy to overstate details about vanished islands, particularly when dealing with myths and hazard potential. In this book, although relating the opinions of others, I have tried to ensure that no details are overstated, and that nothing that is unverifiable is presented as undeniable fact. That said, this is a field of enquiry that is in its infancy, and future research may well lead to the removal of some of the caution with which the accounts of particular vanished islands are treated in this book.

Myths are fictions that sometimes contain coded grains of historical truth. But anyone attempting to isolate these grains from the fiction must be cautious neither to identify them too uncritically nor to exaggerate them unduly. Yet conversely, it is self-defeating to argue, as some have done, that such myths can never be used as a source of historical information because the fictional overprint is just too great. Myths may be inherently difficult to interrogate, but, in the Pacific Islands, where most written history began only a couple of hundred years ago, they represent a massive archive of historical material that anyone interested in the region's long-term geological history would be foolish to dismiss.

It is also possible to exaggerate the nature of geohazards associated with island flank collapse and island disappearance. We have abundant evidence from the world's oceans of these events occurring throughout geological time, but the associated evidence of large-wave impacts is generally indistinct. This has led to the suggestion that flank collapses may

not be the abrupt catastrophic events that they appear to be when viewed from a distance in time but slower, more gradual phenomena. The opposing view that such collapses have been catastrophic, albeit infrequent, events has been extended to modern hazard studies. Some scientists argue that large-scale collapses are threatening — in parts of Hawai‘i and the Canary Islands, for example — and should be given appropriate attention by hazard planners.

This is a book about the entire Pacific, not just the islands and the ocean, but also the fringe of the continents that borders it. The Pacific Ocean is the world’s largest, covering almost one-third of the earth’s surface. By comparison, in the words of Robinson Jeffers, from his poem “The Eye,”

The Atlantic is a stormy moat; and the Mediterranean
The blue pool in the old garden,
. . . but here the Pacific . . . the hill of water; it is half the planet:
this dome, this half-globe, this bulging
Eyeball of water, arched over to Asia,
Australia and white Antarctica: those are the eyelids that never close;
this is the staring unsleeping Eye of the earth . . .

It is remarkable how little was known for so long about the origin and nature of the Pacific Ocean, a fact that fuelled speculation and misinformation. Yet for all that, there were indeed islands that once existed in the Pacific and that have since vanished. And there are fragments of possible continents now hidden beneath the surface of this ocean and along its sides. What I intend in this book is to give a readable yet scientifically rigorous account of these phenomena in the hope that it will expose the falsehoods about this topic while also showing that there is substance to this intriguing subject.

A reviewer of one of my earlier books, *Environmental Change in the Pacific Basin*, rebuked me for having the temerity to recommend that readers interested in learning more about the ways in which native Australians interacted with their environment should read Bruce Chatwin’s travelogue-novel *The Songlines*. I was told that such nonscientific texts should never be cited in a scientific book. I disagree. The current book has at its core a marriage between the arts and the sciences. Probably no other approach would work with such subject matter but that is not the only justification. The dangers that C. P. Snow foresaw more than fifty years ago from the continuing polarization of arts and sciences have been amplified since he wrote, not lessened as he hoped.³

Over the past twenty years, in addition to teaching at the international University of the South Pacific, I have had short stints at universities in Australia, Canada, Japan, New Zealand, and the United States. In all these places, students specialize either in science or arts. The arts students are generally terrified of science and are therefore ready prey for pseudoscience writers, and science students are often contemptuous of the arts. One subsidiary aim of this book is therefore to give those readers with a background in the arts some

understanding of science and, more important, a critical notion of what constitutes pseudoscience. And for readers who have a science background, I hope that this book demonstrates the value of nonscientific information sources, such as myths, to scientific enquiry.

I have tried to write this book in a way that is accessible to every educated reader, whatever their particular interests. I have consigned formal referencing and technical detail to endnotes and have strived to avoid unnecessary jargon.

In chapter 2, the background to the dynamic condition of the Pacific Basin is outlined. I explain its evolution and describe the processes by which movements of the land (tectonic movements) have taken place.

In chapters 3 and 4, I discuss those islands and continents that may once have existed in the Pacific but that disappeared from view generally long before modern humans appeared on the scene. The principal purpose of these chapters is to show that, unquestionably, the history of the earth has been marked by the alternate appearance and disappearance of pieces of land in the ocean basins.

In chapter 5, by way of background to the accounts of vanished islands and hidden continents given by people from their own observations that occupy most of the remainder of the book, I explain when and how humans reached the Pacific Basin and spread across it.

Chapter 6 deals with vanished islands in the Pacific that are considered, on the basis of the available information, to be mythical but that may have some foundation in observations of the natural environment in the island groups concerned. In contrast, the accounts of mythical continents in the Pacific in chapter 7 have almost no basis in fact, being largely a result of incorrect inferences or the demonstrable products of people's imaginations.

In chapter 8, I describe the processes by which islands are disappearing, as observed by people. Then in chapter 9 I describe all those vanished islands from the Pacific that I regard as having once existed. Chapter 10 deals with the future, and when and why we might witness landmasses disappearing. Chapter 11 is a short concluding chapter.