

# THE FIRST POLYNESIANS

DAI Standort Commission for Archaeology of Non-European Cultures

Projektart Einzelprojekt

Laufzeit 2020 - 2025

Disziplinen Archäologie

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## METADATEN



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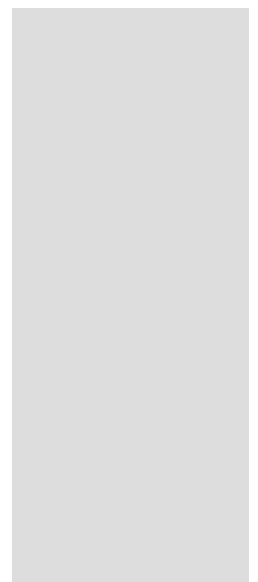
Cluster/Forschungsplan KAAK - Migration (Ursachen und Folgen von Bevölkerungsbewegungen), KAAK - Formen sesshafter Lebensweise und Nischenbildung (Siedlungs- und Landschaftsarchäologie)

Fokus Feldforschung, Regionalforschung, Thematische Forschung

Disziplin Archäologie

Schlagworte Urgeschichte

Projekt-ID 5861



## ÜBERBLICK

The vast shellfish beds and sheltered palaeoshoreline of northern Tongatapu sustained one of the densest human populations anywhere in the ancient Pacific world<sup>1</sup>. Rescue excavations at the Talasiu shell midden site have identified a burial ground holding the remains of more than 40 individuals who lived during the critical period of cultural and environmental change. The skeletal remains and contents of early sites are key to establishing the origins (biological and cultural), health and lifeways of the first Polynesians.

This project would fund the analysis of those human remains, and excavate and analyse archaeological material – shell midden, ceramics, exotics stone, marine and terrestrial fauna – from three adjacent early sites on Tongatapu, including new skeletal remains at Talasiu observed during site monitoring. High-resolution mapping (RTK-GPS) of the palaeoshoreline and AMS dating of stranded beach deposits will establish sea level at the time of human occupation, its rate of decline, and the challenges that a falling sea level had on the productive marine foods that supported early settlement in Tonga and other parts of the Pacific.

The Talasiu collection is of crucial importance as the only skeletal assemblage of early Polynesian remains. While a few early individuals have been recovered from Fiji and Tonga all other human remains from Polynesia date no earlier than 1200 yr BP.

## RAUM & ZEIT

### TONGA ALS FORSCHUNGSRaum

Debate about the ultimate or biological origins of Polynesians dates to the late 18th century when word lists collected during European voyages to the Indian and Pacific Oceans disclosed similarity between island populations separated by vast distances. The people living in the area in what came to be known as the Polynesian Triangle outlined by New Zealand/Aotearoa, Hawai'i and Rapa Nui/Easter Island were unexpectedly found to speak closely related languages. More remarkable was that the Polynesian languages were in some way related to those spoken in Madagascar and Indonesia, but not to the numerous 'Melanesian' languages spoken by people in the West Pacific who lived closer to Polynesia. The early spread of the related Austronesian languages in Oceania was tied to the archaeological discovery in the 20th

century of a ceramic-making Lapita culture that extended from island and mainland New Guinea to Tonga-Samoa around 3000 years ago.



Three general ideas have been advanced to explain the origins of Lapita people, who arrived in Tonga at 2850 yr BP: 1) Lapita people came from Island Southeast Asia and were part of a much bigger Austronesian migration that swept through the region and into the Pacific; 2) Lapita culture represents the biological and cultural fusion of migrants from island Asians with indigenous Island Melanesians, and 3) The Lapita expansion was not homogeneous and colonising groups varied depending on the composition of the migration stream at different times and places and the degree of island isolation and population 'bottlenecks'.

Recent advances in extracting aDNA from human bone buried in tropical conditions has cut through the debate by producing the first genetic sequences for a Lapita group in Vanuatu and sequences from individuals the Cis and PI have excavated from Talasiu. The research demonstrates that individuals from both groups have East Asian ancestry and represent a population that no longer exists in unmixed form. The aDNA also show that people from Melanesia reached Tonga and that population genetics did not remain static in West Polynesia after Lapita colonisation. The origins and migration history inferred from a small number of aDNA results from the Tongan remains, but additional sequences and morphological study of skeletal remains are required from existing and new locations to understand genetic and phenotypic variation and the historical complexity of early human groups who colonised the Pacific.

There are currently only three cemetery/burial grounds in the Pacific with remains of more than 40 individuals from the crucial 3000- 2500 yr BP period where the origins of early colonising groups can be investigated; Chelechol ra Orrak in Palau, Teouma in Vanuatu and Talasiu in Tonga.

Cultural Origins: The second issue in the question of Polynesian origins concerns the cultural formation of recognisable 'Polynesian' behaviours and beliefs. Polynesian ethnogenesis is theorised to have begun in Tonga and Samoa (plus Futuna and 'Uvea) between 2650 and 2350 years ago when decorated Lapita ceramics were succeeded by undecorated Polynesian Plainwares. The ceramic change is taken to mark the point when West Polynesia started to diverge from the colonising Lapita culture and a proto-Polynesian linguistic sub-stage developed. These events signal the emergence of Ancestral Polynesian Society (APS) in Tonga and Samoa and the coalescence of a package of biological and cultural traits that was later spread by colonisation voyages to East Polynesia, and westward to the 'Polynesian Outlier' islands.

Ancestral Polynesian Society has been reconstructed using historical linguistics in recognition that the archaeological record is largely incomplete due to the perishable nature of most material culture in the tropics and the complete absence of physical evidence for the belief and leadership systems, the sailing craft and rigs used, and dwellings and burial customs. Cultural traits and social organisation that are seen as typically 'Polynesian' as they occur in ethnographically recorded populations and reconstructed in proto-Polynesian include tattooing, a hierarchical society and abstract concepts like *mana* (supernatural power), *tapu* (under ritual restriction) and *noa* (common, ordinary) that are fundamental to Polynesian culture.

Several researchers have criticised the notion of APS in linguistics, suggesting that Polynesian traits developed much later and that there is insufficient evidence for early prehistoric interaction in West Polynesia to support an integrated APS. These and other aspects of APS culture in West Polynesia are poorly resolved. For example, shell midden sites with pottery have been interpreted as camps occupied by opportunistic foragers, semi-permanent hamlets, or permanent villages occupied by people with a restricted marine economy. Domestic dwellings were either made on land where shell midden was discarded or people lived in stilt houses in the inter-tidal zone, and early Polynesian groups had frequent and extensive maritime interactions or else they were highly localised and stayed within an archipelago.

Similarly, the effect of a sea level fall of 1.8 m on a human population that gathered and consumed large quantities of inshore shellfish and other marine foods is uncertain. It is notable that a mid-Holocene highstand was experienced across all of the major island groups colonised by Lapita groups and the magnitude of sea-level fall was significantly greater than the 60-80 cm drop thought to accompany the AD 1300 event which has been associated in the Pacific with warfare, cannibalism and occupation of island interiors. Tonga is the obvious island group to examine and test these issues through detailed archaeological study due to the relative abundance of large APS midden sites. The presence of burials at Talasiu demonstrates for the first time that at least some midden sites were more than just places where shell was consumed and discarded.

In contrast, a widespread *tapu* regarding the association of human remains with food consumption and food debris in Polynesian and Tongan ethnographies is not seen at Talasiu, suggesting that the social meaning and material expression of *tapu* – and perhaps other reconstructed terms – was very different in APS. New archaeological results from excavation of three neighboring APS sites including material culture sets, burial location and context, site layout (e.g. cooking and activity areas, dwellings located in the inter-tidal zone or palaeoshoreline etc.) is the essential information to refine understanding of early Polynesian society. Finally, investigating the environmental conditions in which APS developed is a fundamental issue. Lapita settlement of Oceania occurred after a mid-Holocene hydroisostatic

highstand indicating that colonisation of Pacific islands was aided by a sea level fall. Sea level fall of ~1.8 m over several centuries had the potential to reduce the productivity of littoral marine zones that were heavily utilised by early prehistoric people for subsistence. When people arrived on Tongatapu the rich and easily accessible aquatic resources supported a semi-continuous band of coastal occupation over 50 km in length before sea level fall and lagoon formation progressively diminished the contribution of marine foods and large shell midden sites typical of APS in Tonga disappeared. New research and collaboration with earth science researchers is needed to ascertain the environmental conditions during the early settlement era and how sea-level change impacted APS lifeways.

## FORSCHUNG

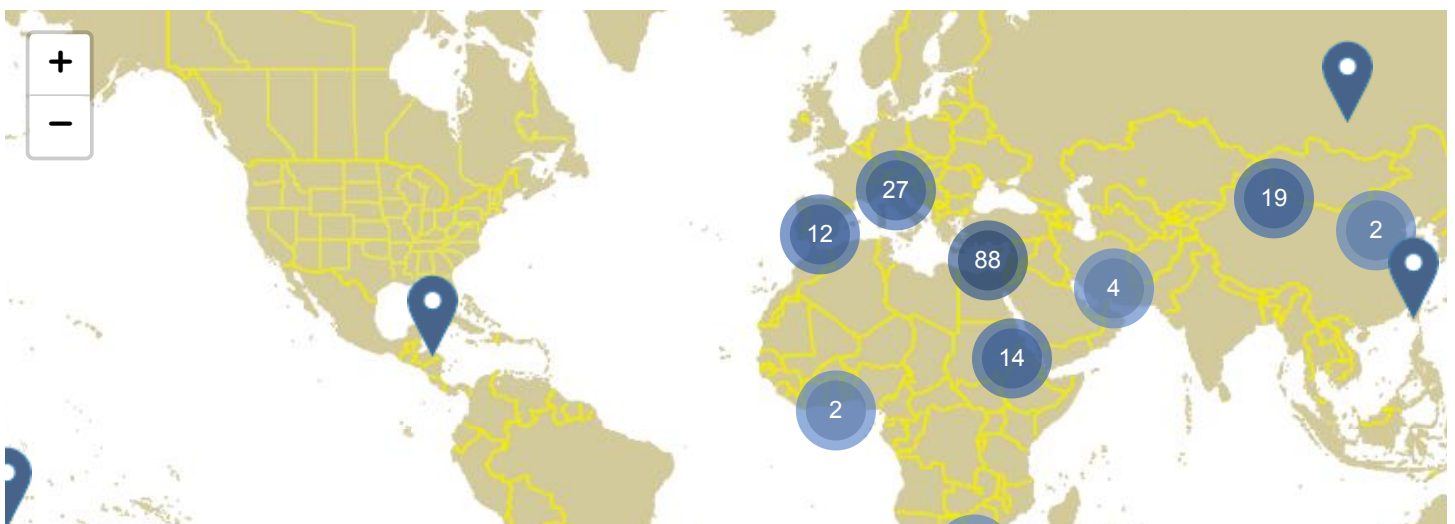
### PROJEKTZIELE

Specifically, the project has three key aims:

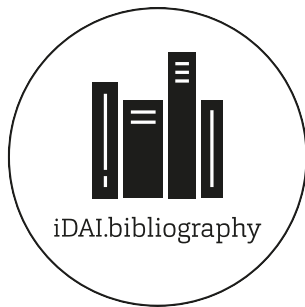


## KULTURERHALT

## VERNETZUNG



## ERGEBNISSE



High-resolution lidar analysis of the Fisi Tea defensive earthwork at Lapaha, Kingdom of Tonga

Geospatial analysis of fortification locations on the island of Tongatapu, Tonga



Antiquity 2024 Early architecture in Tonga: implications for the development of Polynesian chiefdoms

AO 2021 The stone adze and obsidian assemblage from the Talasiu site, Kingdom of Tonga

Antiquity 2020 Mortuary practices of the first Polynesians: formative ethnogenesis in the Kingdom of Tonga

JAA 2020 Royal funerals, ritual stones and participatory networks in the maritime Tongan state



Kingdom of Tonga

# PARTNER & FÖRDERER

## TEAM