

## PROJECT MUSE<sup>®</sup>

Skeletal Biology of the Ancient Rapanui (Easter Islanders) ed. by Vincent Stephan and George Gill (review)

Siân Ellen Halcrow

Rapa Nui Journal, Volume 30, Number 2, October 2016, pp. 99-100 (Review)

Published by University of Hawai'i Press *DOI:* https://doi.org/10.1353/rnj.2016.0026

Rapa Nui Journal



HILL

➡ For additional information about this article https://muse.jhu.edu/article/684412 pre-European systems, although there is evidence to suggest that Hawai'i was an exception.

Friedlander et al. describe the development of hybrid marine resource management systems in the contemporary Hawaiian Islands. They suggest that one of the reasons conventional marine management programs have largely failed across the archipelago is that they lack the ability to regulate and enforce prohibitions due to topdown, centralized management strategies far removed from the local communities that use the resources. Therefore. community-based systems integrating ecosystems thinking with Hawaiian Traditional Ecological Knowledge (TEK) are increasingly being implemented with initial indications of their success. For example, comparison of scientific surveys from a number of locations around Hawai'i demonstrate that community-based management results in fish biomass levels often equal to or greater than conventional no-take marine protected areas. One of the strengths of hybrid management systems is a return to local scale oversight and enforcement rather than a centralized system that produces difficulties for regulation and enforcement. Moreover, local-scale management programs have the potential to develop unique strategies attuned to each individual situation and context.

The conflict between centralized management characteristic of most contemporary Pacific Island nations, and the often decentralized, local communitybased systems that once previously existed, is also an important theme explored in Section 2. For example, in her discussion of European contact era systems of governance on Tongareva, in the Northern Cook Islands, Chambers points out that the Tongarevan people modified the pre-exisitng rahui to encompass various economic and social changes put in place by Europeans during the colonization period. However, the local Tongarevan community today has reacted actively by requiring the agreement of the local community in any prohibitive or management decisions made offisland in Rarotonga. While Tongareva is part of a large centralized political system, much decision making is still concentrated at the local level, pointing out that authenticity of enforcement remains an important element of prohibition in contemporary rahui systems. Similarly, Mawyer notes that on Mangareva in the Gambier Islands, there exists a conflict between the actions of the centralized political regime, and the legitimate right to prohibit and manage pearl shell resources, such that the authentic right to rahui today remains ambiguous. In contemporary Aotearoa (New Zealand), Ruru and Wheen also describe an uneasy existence born from the previously existing rahui system and the current New Zealand legislation which is oriented primarily to promote sustainability without regard for traditional concepts.

Importantly, the twelve chapters in this collection point out that in order to understand how rahui can be applied to contemporary resource management, it is fundamental to take into consideration how rahui functioned in the past and the socio-political contexts in which they developed and functioned. In pre-European contact rahui, the ability to prohibit rested firmly within a dynamic systemic relationship between political power, the sacred, and legal pluralism often in the context of decentralized social structures. As a number of authors in this volume have noted, to instate effective prohibition requires the ability to both regulate and enforce, and this can take the form of local scale authority or mediation through a social system that promotes profound sacredness and respect. The immediate concern now for the development of contemporary rahui systems is how to re-build sacredness for the many important resources of these varied islands in the context of the capitalism and centralized political regimes. Can local scale communities enforce prohibitions in contexts with an absence of the legal and authoritarian backing of the centralized political apparatuses in place? A fruitful way forward seems to require development along these two lines and this important book has laid the foundational ground work.



## Stephan, Vincent and Gill, George (Eds.). Skeletal Biology of the Ancient Rapanui (Easter Islanders)

Cambridge: Cambridge Studies in Biological and Evolutionary Anthropology, Cambridge University Press,

2016. 347 pp. ISBN 9781107023666. US\$124 (hardcover). Available from www.cambridge.org

## Review by Siân Ellen Halcrow, University of Otago and Durham University

This book is a culmination of over thirty years of research on the skeletal variation of the prehistoric and proto-historic inhabitants of Rapa Nui (Easter Island) in the Eastern Pacific. The methodological approach is largely based on osteometric and non-metric analyses to assess questions of origins and microevolution, with the majority of the book devoted to the presentation of these data. There are also chapters dealing with aDNA analyses, as well as skeletal trauma, and cultural modification of the skeleton aimed at more socially informed anthropological questions.

The first chapter by Gill provides a detailed overview of the history of the research focusing on the 1981 Easter Island Anthropological Expedition. The stated aims of the research project were to investigate the origins of the people, collect anatomical, demographic, and paleopathological information from the skeletal remains, and record cultural information to better understand their burial practices. The excavation seasons, sites, antiquity, and sample sizes are described. Chapter 2 by Pietrusewsky and Douglas serves as an excellent introduction to the book, presenting a thorough review of past Polynesian and Pacific skeletal biology focusing on questions of origins and also touching on recent work on health, disease, and lifestyle. Chapter 3, by Lipo and Hunt, presents a synthesis of the chronology for Rapa Nui using a carefully constructed ranking method of reliability for radiocarbon dates, which supports a later initial colonization after AD 1220.

The next six chapters provide thorough analyses of skeletal metric and non-metric variables to assess questions of origins and intra-population variation. Chapter 4 by Gill and Stefan presents the basic descriptive skeletal biology of the people using metric analysis of the skull, selected postcranial measurements, and non-metric traits. Chapter 5 by Stefan is a multivariate statistical analysis of craniometric variation of prehistoric Rapa Nui samples with comparisons to prehistoric Polynesians to test models of origins, migration, and evolution of these people. The author states that an advantage of this study is the incorporation of population genetic models to identify micro-evolutionary forces acting on the past Rapa Nui populations. Chapter 6 by Chapman presents a summary of the non-metric traits from Rapa Nui. The author argues for an East Polynesian settlement with limited gene flow from South America. Chapter 7 by Furgeson and Gill investigates discrete cranial trait variation within groups from Easter Island to determine if there are morphological differences between tribal groups. Unsurprisingly, the results highlight limited regional variation. Chapter 8 by Gill presents continuous non-metric traits (i.e. traits that have no measurement boundaries and that need to be scored subjectively) with the aims of adding further to the documentation of the facial and cranial morphology, and testing South American genetic admixture and intertribal endogamy. Chapter 9 by Stefan and Rozen assesses non-metric traits in the dentition, finding limited intra-island variation. In Chapter 10, Harrison and Harper assess pelvic metric variability and sexual dimorphism for the prehistoric Rapa Nui individuals and compares these data to historical North American data.

Chapter 11 by Hagelberg provides a review chapter of genetic studies on living inhabitants and other East Polynesians that assess questions of origins of the Rapa Nui people. In Chapter 12, Dudgeon et al. present their work on human aDNA using microsatellite DNA fragment analyses to assess interaction between sites and clan divisions. Chapter 13 by Owsley et al. is an assessment of skeletal trauma exploring questions of social change related to social collapse, which were interpreted in the context of archaeological evidence and oral traditions. Chapter 14 by Owsley et al. is a demographic analysis of the modified crania and illustrates design motifs.

Chapter 15 by Gill presents an analysis of Rapa Nui skeletal morphology with Paleoindian remains, arguing for a close relationship between the populations and for a "two-wave" hypothesis of New World settlement, one over land, and one by sea potentially from East Asia. Chapter 16 by Gill and Stefan reviews the main findings of the book and places these findings within the context of archaeological theories of origins and dispersal.

This book is invaluable in providing a thorough analysis and synthesis of models for settlement of Rapa Nui and I believe that the data compiled in this book will be useful for future comparative skeletal variation research. This book is certainly a product of its time when there was a focus on adult skeletal measurement and trait appearance in physical anthropology. Recent paleodietary evidence published by Commendador et al. (2013) and Tromp and Dudgeon (2015) is extending our knowledge of past diet and resource use on Rapa Nui. Future research on the paleodemography of the sample, and health and disease from both subadult and adult individuals would be useful to further assess adaptation of these people to the natural and social environment. Evidence for health assessed in conjunction with dietary data, and archaeological data on mortuary treatment could offer a more holistic view of the past by contextualizing these people in their natural, social, and cultural environment.

## References

- Commendador, A.S., J.V. Dudgeon, B.P. Finney, B.T. Fuller & K.S. Esh. 2013. A stable isotope (δ13C and δ15N) perspective on human diet on Rapa Nui (Easter Island) ca. AD 1400–1900. American Journal of Physical Anthropology 152(2):173-185.
- Tromp, M. & J.V. Dudgeon. 2015. Differentiating dietary and non-dietary microfossils extracted from human dental calculus: the importance of sweet potato to ancient diet on Rapa Nui. Journal of Archaeological Science 54:54-63.