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Statistical Approaches to Small Site Diversity: New Insights from Cretan Legacy Survey Data

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Abstract

Over the past fifty years, intensive Mediterranean archaeological surveys have yielded abundant and diachronic archaeological data. Although field methods have been continually debated and refined, the interpretation of survey results has focused primarily on site numbers and site size, with particular interest in reconstructing settlement hierarchies and in tracking episodes of nucleation and dispersal across the landscape. Artifact assemblages are largely used to date sites, while less attention has been devoted to assemblage diversity and site function. This study demonstrates the potential of legacy survey data to frame and answer new research questions via an analysis of 250 small rural sites of the first millennium BC recovered by intensive surveys on Crete from the 1970s through the early 2000s. I show that diachronic patterns of rural settlement in Crete depart strongly from those observed in mainland Greece and also differ between Cretan regions. I also reveal pronounced variation in the assemblages present at small sites across the island within regions and periods. This suggests that we cannot simply interpret all small sites as homogeneous farmsteads. Finally, I discuss the challenges and potential of using diversity measures as an exploratory tool for analyzing legacy survey data. Methods outlined here could be productively applied in other Mediterranean regions.

Keywords: Crete, diversity measures, legacy data, Mediterranean survey

Introduction

Starting in the second half of the twentieth century, intensive archaeological surveys proliferated in Greece and across the Mediterranean (Alcock and Cherry 2004: 1-2, figs. 1.1-1.3; Knodell *et al.* 2022). Characterized by large, interdisciplinary teams and a high investment of time per unit of surface area, these surveys treated surface archaeology as a source of information in its own right, rather than as a means to the end of locating sites for excavation. For its early advocates, intensive survey seemed poised to answer a wide range of social and economic questions at various spatial and temporal scales (e.g., Cherry 1983; Bintliff and Snodgrass 1988; Jameson 1994).

Despite this initial optimism, however, it soon became clear that interpreting survey data posed substantial challenges. Experimental archaeology and statistical comparison of surface, ploughzone, and subsurface assemblages demonstrated that surface remains are not reliably representative samples of subsurface material (Ammerman 1985; Schörner 2012). Geomorphology, vegetation, modern landuse, and the skill of fieldwalkers and analysts can introduce preservation and recovery biases even within

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