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Settlement Patterns in the Chifeng Region. Chifeng International Collaborative Archaeological Research Project. Pittsburgh, PA: Center for Comparative Archaeological Publications, University of Pittsburgh. 2011, 190 pp. \$29.00, paper.

The most important part of this book is the modestly named "Appendix B, Electronic Access to Color Illustrations and the Full Dataset" It is here that the reader comes face-to-face with the future of archaeology. One of our greatest concerns as we design research and manage data in the 21st century is how to deal with massive data sets and aggregate them into wieldy interpretable units. The authors of this work present one systematic, extensible and clearly detailed set of approaches to this problem while making their data available to the reader to actively critique their methods or attempt an analysis of their own. Their argument is that extensive and rigorously controlled archaeological survey data can be used for demographic simulation and that it is the comparison of synchronic demographic moments that structure our understanding of the inhabited landscape and change within it. As a source for archaeologist studying East and Northeast Asia this book is a welcome addition to the limited corpus of regional survey data available. For a student, the methods and data offered by this book can be a starting point for their own work. I imagine that the Chifeng region can become the Dawenkou cemetery (c.f. Höllmann 1983) for a new generation of students studying cultural landscapes in Asian archaeology.

This volume documents the results of a regional survey carried out within the framework of the long history of field archaeology in China and with deep roots in American landscape archaeology. The approach taken by the research team is one aimed at providing a precise

description of the trajectory of inhabitation in the survey region in expectation of comparative analysis.

The volume itself is divided into four main sections. The first two describe the framework of ceramic chronology and the test excavations that established the basis for the survey and the second the natural environment during the Holocene. The third section describes in detail the methods used to recover ceramics for the survey and then analyze and structure the interpretations of those ceramic scatters into settlements and communities. Here the authors are focused on questions of inhabitation, over those of settlement hierarchy. The detail of this section is more than enough to make any survey nerd smile. This section concludes with the background of basic, and in a departure from the rest of the volume — uncritically analyzed, GIS based study of landform characteristics that are used to illustrate how the inhabited areas are distributed in relation to the watercourses.

The presentation of demographics that is so central to the argument of the book is based on a metric for artifact scatters designated the 'Area-Density Index', the product of the proportion of a collection from a particular chronological period and the area of a sherd scatter standardized by the span of the period to provide a flexible value that can be reconstituted as a product of the duration and intensity of occupation. This value, it is argued, is directly representative of population. The number of people inhabiting a settlement is derived by comparing a range of population represented by the number of houses from excavated sites and mapping the highest ADI onto the most populous excavated site for the same period then extending the population measure towards the minimum ADI to establish a population density range for different periods. ADI is also used to derive the population surfaces that are the hallmark of the Pittsburgh school of archaeological GIS. Those surfaces extend existing sherd densities, as measures of

inhabitation, out across the landscape to measure potential interaction in the spaces between artifact scatters and are used to define ancient communities.

Finally, the fourth section, the "Sequence of Social Change" describes the results of the survey from the early Neolithic Xinglongwa period to the Historical Liao period, a span of 7000 years. For each c. 600-1000 year period population the location and scale of settlements are described. The narrative here is that population increases throughout the Neolithic, the number of people increased around 24 fold over 4000 years and the scale and spatial interrelationships for settlements increased as settlement filled the interfluvial areas. During the advent of the Bronze Age spanning the cultures of the Lower and Upper Xiajiadian periods the population exploded increasing more than 20 fold from the previous periods (and 612 times since the start of the Neolithic) and settlements — some with populations reaching over 10,000 people — grow in size, become fortified and territorially restricted to a portion of the survey area. In the historical periods of the Iron Age and Han Empire the population drops drastically and then grows again to fill the study area and habitation is found on the alluvial plains of the rivers.

Though one can see many questions that might be asked about the accuracy of this demographic model one of the great strengths of this book is that it is written in such a way that its data and conclusions can be critiqued and discussed. What is most painfully lacking is explanation. The patterns described can be arresting, none more so than the population explosion and concentration during the Xiajiadian periods but next to no explanation is offered for this either in a local or larger historical and cultural context. However, the introduction of the book is clear that it is not meant to stand alone in its study of the archaeology of East and Northeast Asia and we can only hope that the contributing authors and others will pursue these enticing questions in future publications. In the final analysis, this book is a valuable

contribution because it makes possible reinterpretation of results and an informed critique of methodologies and assumptions, facts that make it a solid piece of science.

Works Cited

Höllmann, T. 1983. *Neolithische Gräber der Dawenkou-Kultur in Ostchina*. München: C.H. Beck.

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