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978-1-107-00941-7 - Salt Production and Social Hierarchy in Ancient China: An Archaeological Investigation of Specialization in China's Three Gorges

Rowan K. Flad

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### **SALT PRODUCTION AND SOCIAL HIERARCHY IN ANCIENT CHINA**

This book examines the organization of specialized salt production at Zhongba, one of the most important prehistoric sites in the Three Gorges of China's Yangzi River valley. Rowan K. Flad demonstrates that salt production emerged in the second millennium B.C. and developed into a large-scale, intense activity. As the intensity of this activity increased during the early Bronze Age, production became more coordinated, perhaps by an emergent elite, who appear to have supported their position of authority by means of divination and the control of ritual knowledge. This study explores evidence of these changes in ceramics, the layout of space at the site, and animal remains. It synthesizes the data retrieved from years of excavation, showing not only the evolution of production methods but also the emergence of social hierarchy in the Three Gorges region over two millennia.

Rowan K. Flad is associate professor of anthropology at Harvard University. He is actively engaged in archaeological field work in China and has lectured widely on Chinese archaeology. He co-edited a book on specialization in the series *Archaeological Papers of the American Anthropological Association* and has contributed articles to many edited volumes and journals, including *Proceedings of the National Academy of Sciences*, *Current Anthropology*, *Journal of Anthropological Archaeology*, and *Journal of Field Archaeology*.

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# Salt Production and Social Hierarchy in Ancient China

*An Archaeological Investigation of Specialization  
in China's Three Gorges*

**ROWAN K. FLAD**

Harvard University



**CAMBRIDGE**  
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*Dedicated to In and Duncan, for your patience, love, and support*

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## Prologue

This book focuses on the results of excavations at the site of Zhongba<sup>1</sup>, in Zhong County, Chongqing Municipality, China, one of the most important sites excavated during the Three Gorges Dam project in the late 1990s and early 2000s. I first visited Zhongba on March 16, 1999, as part of a team of investigators traveling to historic sites related to salt production around China's Sichuan Basin.<sup>2</sup> After first visiting sites in the region around Chengdu, the capital of Sichuan Province, we then headed to Zigong (Sichuan's "salt capital" in historic times), and then to Chongqing and the Three Gorges. On the fifteenth day of our trip, we arrived at the county seat of Zhong County, and then, on the following day, we traveled inland to Zhongba.

First identified in the late 1950s, Zhongba was rediscovered in 1987, and as preparations for the construction of the massive Three Gorges Dam intensified in the 1990s, the site was surveyed in preparation for large-scale excavations. When we visited in 1999, intensive research had already begun under the direction of Mr. Sun Zhibin, an archaeologist from the Sichuan Provincial Institute of Cultural Relics and Archaeology (ICRA). This intensive research was part of efforts by the Chinese archaeological establishment to salvage everything possible in anticipation of the completion of the Three Gorges Dam, the reservoir of which would submerge Zhongba and countless other archaeological sites.

We drove to Zhongba over a rough paved road that wound among terraced hills covered with fields used to grow rape, corn, and vegetables. Although the site was only about six kilometers upstream on the Ganjing River, a tributary to the Yangzi that joined the larger river at Zhong County seat, the trip was about ten kilometers on this road. About halfway to Youxi Village in Ganjing Township, a small village adjacent to the site where the elementary school that served the surrounding rural communities was located, we passed through a rural tollbooth that we would come to know well. This place could cause long delays in one's trip to and from Zhongba if a truck driver and the tollbooth operator got into an argument – an occurrence that was not infrequent.

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*Prologue*

Once we arrived, we got our first impressions of a site where we would spend much of the next two years.

**March 16, 1999.** Today we visited Zhongba in Ganjing Township. We first arrived in the village of Youxi, on the northern bank of the Ganjing River. The mound which makes up the main part of the site rises 10–15 meters in the center of the river. . . . Our initial introduction to the site by the lead excavator, Sun Zhibin, included examining some of the units that are currently being excavated. The excavation strategy is focused on maximum horizontal exposure, but does not attempt to maintain stratigraphic continuity across the site during excavation. Instead, a grid of square units covers the excavation area . . .

The excavations focus on identifying features: house floors, trenches, post-holes, storage pits, etc. The floors seem to be covered by some sort of fine, ground material, and some are packed hard. These floors seem to be riddled with postholes, possibly many of which are intruding from higher levels. House remains have been identified and seem to be separated into compartments with overall rectangular shapes. The dominance of single vessel types in the Eastern Zhou deposits in which they are now excavating indicates a specialized industry, the production of a single pottery type, or both.

Nine months later, the seat of Zhong County and the site of Zhongba would become my homes away from home for the better part of two years. An arrangement was worked out that allowed my colleague Pochan Chen (now of National Taiwan University) and me to join the team from the Sichuan Provincial ICRA and direct the excavations of a portion of the central mound of the Zhongba site. This excavation area became a lens through which we could test ideas in an intensive fashion that was impossible across the site as a whole. Our methods became refined over time, but when we first arrived, we were unsure how things would proceed. The following excerpts from my daily log reflect my efforts, in my first few weeks in Zhong County, to deal with these issues.

**November 26, 1999.** I have arrived in Zhong County today after what amounts to a two and a half day journey. It began with a missed flight from LAX to Hong Kong, which resulted in an overnight stay there, before a flight to Chongqing. Today I took the 8:30 A.M. hydrofoil from Chongqing (for 141 Renminbi) and arrived at Zhong County at about 1:30 P.M. I was met at the dock by five guys associated with the Peking University [PKU] team working nearby: Prof. Yang Zhefeng [Professor of Han archaeology at PKU], Zhang Zhongyun

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[a former PKU student now at the Anhui Provincial Institute], Zhong Zhi [a member of the Santai County Cultural Relics Bureau], Zeng Xianlong [from the Zhong County Bureau of Cultural Relics Administration], and one other person [whose name I did not catch at the time, and who could have been any of a number of people]. In addition, the woman who will be picking me up every day for the trip to Zhongba was there as well . . .

Tomorrow I am to meet the driver in the hotel lobby at 8:30 A.M., and she will take me to the site. I'm not exactly clear whether I will be going to Zhongba or to the sites at the mouth of the Ganjing River where the Peking University team is working. It doesn't really matter, I guess, since I think that my objective is to begin to familiarize myself with the process of excavation and recording at the sites used here . . .

The town has changed a little since March. There is a fair amount of construction at the higher levels of the city, presumably in areas that will not be flooded by the dam. The water level of the river is much higher than it was in March as well, so the distance from the dock to the road was not as great as I remember. It will be interesting to see how much water there is near Zhongba and whether it is an island right now.

**November 27, 1999.** After breakfast I was driven to the PKU living quarters and dig house. I first sat down with Zhang Zhongyun and discussed the differences between the excavations that I have participated in in the past and the methodology that is used in China. I discovered general similarities with the methods I am used to from when I worked in Turkey [at Cadir Höyük, in central Anatolia, under the direction of Dr. Ron Gorny]. Specific differences will come to the surface as we discuss specifics of excavation over the next few months, but the recording strategies seem pretty similar. I was actually surprised by this since I had been led to believe that daily mapping, for example, was not something stressed in Chinese excavation strategies . . .

Zhang let me borrow final notes from the 1997 excavations at Shaopengzui, which include (1) a descriptive account of the stratigraphic relationships for each feature (i.e., pits, burials, houses); (2) a form for each feature and level with graphic depiction of stratigraphic relationships, dimensions and depths, descriptions of soil matrix, lists of the included artifacts, any C14 dates, photographs, lists of plans the feature/locus is drawn on, and a short description; (3) plan views of the unit for each stratigraphic layer including the associated features. There is also a final plan view and individual drawings for each feature, (4) a summary of the unit, and (5) breakdowns of the recovered ceramics by shape and surface treatment in relation to ware. In the end, the recording strategy is not very different from those I have used previously on projects in

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the West. It is perhaps not as precise as an ideal excavation might be, but this is partly due to time constraints. There is not a whole lot of attention given to the location of artifacts within a unit/level. Also, this one particular unit seems very neat, all the levels are relatively flat, and there is little confusing stratigraphy. It may be an idealized version of what was actually discovered, but it may also be the case that the unit was fairly simple. I suggested to Zhang that it might be useful to place more depth measurements on the top plans, but actually, in this particular unit, with its level, simple stratigraphy, this is really unnecessary. One thing that puzzles me is that there is no mention of artifacts on any of this paperwork. I think it is the case that they do not assign specific catalog numbers to artifacts but instead label them with the site and level information. I'll have to think about what the advantages of a catalog would be.

**November 28, 1999.** Here, artifacts only get unique numbers when they are important/whole. I don't think I have as of yet fully grasped how the artifacts are recorded once excavated. I am pretty sure there is no master catalog list of artifacts. Basically, I think the tendency is for particular attributes of artifacts or artifact-based information to be noted, and then the artifacts themselves are no longer considered useful unless they are whole vessels or other rather unique finds.

**November 29, 1999.** Another methodological note: I noticed that there is not a lot of attention paid to the position of objects in situ. In unit 105 at Shaopengzui, a jumble of sherds, mostly pointed-base cups, had been uncovered, and they were proceeding to excavate them. The excavators were removing the artifacts as they came up and not leaving them in situ in order to consider the relationships between objects. No maps are made of the location of objects, and what is excavated is not noted, as far as I can tell, in any detail in the unit records . . .

. . . Flotation might be a very useful strategy here since most of the features being exposed are pits. Unfortunately, flotation might only be useful if someone was focused on this full time because a qualified person should be trying to deal with problems, produce results, and convince the Chinese side that such an endeavor is worth it. . . .

. . . Pochan arrived today in the afternoon.

After spending more than a week getting acclimated to Zhong County, overcoming problems with equipment, engaging with our PKU colleagues, discussing excavation strategies, and working with a total station to create maps of the PKU sites, we finally returned to Zhongba on December 8.

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**December 8, 2009.** The first thing I noticed as I approached the site was that the water level is, in fact, higher than last time we were here. The water is now running on both sides of the Zhongba mound, although on the side near the town, it is only a narrow stream. We walked down the road in town toward the entrance to the site. It was market day (once every three days), and the street was full of people, many wearing the characteristic head towels of this region and many carrying babies on their backs in bags that commonly are used for this purpose. The people were definitely more rural looking than in the city seat of Zhong County, but ironically, I actually felt that I was less a center of attention. [This would change later, but on market day, there were plenty of other things to keep everyone's attention.]

The Sichuan ICRA archaeologists have excavated a lot since our last visit! The area on the mound that they were excavating in the spring was excavated in parts down to sterile soil 8–10 meters below the original surface. Immediately above the sterile soil is about a meter of Neolithic levels. This includes a thick midden of ceramic sherds in places (about 20 cm) . . .

We walked around the units they are currently excavating. They have opened a number of 10 × 10 meter units and have exposed (at present) a couple of nice kilns and at least one large house. These features date to the Eastern Zhou through Han. . . . Part of our agenda was to consider different areas where we might want to open our own excavation units. After our tour and a discussion, our preferred choices were to test to the east of the current excavations or reopen some previously started excavation units in the general area where they are now digging . . .

Basically there were (are?) two sticking points in the negotiations between Sun Hua [our principal investigator and professor from PKU] and the Sichuan archaeologists. The first is over the access to the data from previous years of excavation at the site. They only want to make the data from this year available to us, while we, of course, want to be able to use all the data. The second is a question of money. They don't want to use any of the money that we have provided them for our room and board. Sun Hua has been trying to convince them to let us use their data and to participate in covering expenses.

Another issue has been the decision about where on the site we might open our own trench. They seem much more flexible about this point. Basically, I think they don't care. Sun Hua thinks that opening a trench within their old units might not be the best idea because we can probably not finish excavating the unit before the end of our season. There is an awful lot of emphasis here placed on "finishing" a unit. It is rather distressful. There are times when I think that the archaeological methods used are more akin to organized, sanctioned

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looting than they are to the archaeological projects with which I have been involved in the past. Because of the dam, they are very concerned about getting everything out of the ground instead of getting a detailed picture of what happened at the site from careful excavation of a smaller area. We realized at this point that due to uncertainties in the access to data and the scale of our work, we will have to be flexible.

**December 10, 1999.** This was supposed to be our first full day at the site. The first order of business was to walk around the site again with Sun Hua and Sun Zhibin and decide on a place for us to excavate. Although Sun Zhibin has repeatedly said that he does not care where our excavation takes place, it was fairly obvious from the conversation that he preferred that we take part in the large-scale excavation at the center of the mound rather than putting in smaller test trenches elsewhere. In the end, we were basically given the choice to excavate four  $5 \times 5$  meter units in a line along the south of the currently opened excavations or four similarly sized units together as one larger  $10 \times 10$  contiguous with the southwestern southern edge of the current excavations. We chose the latter because this would expose a greater profile north to south. The unit currently has two prominent kiln features within it, one of which was completely excavated in 1997–1998, but the other has not been fully excavated. These kilns are late features (Late Warring States or Han). Since the kilns are currently the latest loci in the unit, they will be removed first. We will try to institute screening and flotation for the pits as soon as possible.

And so began our work at Zhongba. We worked daily, with interruptions for rain and the occasional national holiday, until January 24, 2000, and then took a break during the period of the Chinese New Year festival. Excavations resumed on February 27 and continued until May 11. We resumed for a second season on November 22, 2000, and excavated until the New Year holidays began on January 8. We began again on February 23 and continued until June 23, 2001. Over the course of these ten months of excavation, the  $10 \times 10$  m unit for which I was partly responsible (known as 99ZZDT0202) was excavated down to sterile soil. At the same time, other units across the central mound at Zhongba were also completed, and additional parts of the site were investigated as well.

The results of these excavations inform us about the nature of past human activities at Zhongba and the incredible story the site has to tell about the changing nature of salt production at the site over the course of more than two millennia during the region's Late Neolithic and Bronze Age. This story, in turn, provides crucial insight into the cultural development during the

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prehistoric period in the Three Gorges, a region that has only recently started to become well understood as the results of the archaeology done during the construction of the Three Gorges Dam have been published. Zhongba is among the most important sites in this region, and we are fortunate that the site was the focus of intense research before it was lost forever.