

Salt Makes the Maya: Small Salt Kitchens in a Large Economic System

McKillop, Heather 2019 *Maya Salt Works*. University Press of Florida, Gainesville, 254 pp., ISBN 978-8130-5633-3

In *Maya Salt Works*, Heather McKillop assembles more than a decade of archaeological research at Classic period salt works along the southern coast of Belize. She builds on her 2002 volume, *Salt: White Gold of the Ancient Maya* (University Press of Florida), in which she demonstrated that specialized salt production workshops around the Punta Ycacos Lagoon provided salt to inland populations. The present work focuses on additional sites in the same lagoon system. McKillop investigates the Paynes Creek complex of salt works to understand the organization of salt production and its role in the larger Maya economy. Due to sea-level rise, most of the salt works are now submerged in the shallow waters of coastal lagoons, where McKillop and her teams have discovered and mapped more than 4,000 wooden posts, beams, and wedges from submerged buildings. Combined with radiocarbon, ceramic, and other fine-grained analyses, this work provides a rare image of the physical spaces of craft production and how household labor specialization can meet a large regional demand for salt.

In Chapter 1, McKillop introduces the general characteristics of Classic Maya economics, with emphasis on the roles of gift exchange, tribute, and feasting in the establishment and maintenance of sociopolitical networks. She presents a brief overview of the economic role of salt in global ancient and modern economies then introduces the Paynes Creek Salt Works as a test case for evaluating the economics of salt in the Maya world. In the second chapter, McKillop provides a detailed description of how the archaeologists discovered, mapped, and sampled the abundant preserved wooden structural features now beneath the lagoon's water and thick layers of mangrove peat. Systematic coverage of the lagoon floors by sight and feel revealed pottery and

patterns of preserved, *in situ* wooden posts that, when mapped, represent 45 individual salt works in the Paynes Creek complex.

McKillop structures Chapters 3 through 5 as a series of questions and hypotheses about characteristics of Maya salt production. Readers not already acquainted with the range of traditional means for harvesting salt will be especially interested in Chapter 3, because it is here that McKillop describes each of the major methods that have been documented, archaeologically and ethnographically, around the world. McKillop reviews the processes of concentrating and evaporating brine as well as the ceramic artifacts associated with non-mechanized salt production, known collectively as briquetage. Paynes Creek briquetage spans the entire Late Classic period and consists of a variety of vessels used to evaporate brine over a fire. The occurrence of leached mounds of earth, ceramic funnels and strainers, and a canoe used as a strainer are evidence for the common practice of washing salt-impregnated earth to create a concentrated brine. The brine is then boiled in pots, which are supported above a fire by three clay cylinders. There is limited but intriguing evidence that brine also may have been evaporated in large, shallow ponds using solar energy.

For archaeologists accustomed to terrestrial survey and identification of sites, McKillop's methods of identifying, mapping, and recording submerged wooden posts may become increasingly useful as global sea-levels continue to rise. As described in Chapter 4, her team investigated 110 sites at the Paynes Creek Salt Works, many of them precisely mapped to reveal dozens of rectangular structures arranged in linear patterns parallel to the lagoon shores. Differentiating hardwood from palmetto posts and measuring post diameter revealed patterns in the construction of coastal salt kitchen and attempts to retain land against rising seas. As detailed in Chapter 5, further identification of the tree species used to construct Paynes Creek buildings largely mirror the decisions made by modern Maya. Different species are chosen for different parts of the buildings, the choices reflecting a strong preference for hardwoods. Palmetto palms were used for retaining walls at the edges of sites.

The identity of the Paynes Creek salt makers and the scale of their production is discussed in Chapter 6. McKillop reviews archaeological and ethnographic literature for examples of how salt-making is integrated into household production. She notes that making salt is a form of multi-crafting that can involve the production of tools and other necessary equipment on a seasonal cycle. The identification of individual buildings at Paynes Creek, combined with the spatial patterns of

artifact types and densities, reveals a clear picture of specific activity areas. Briquetage accounted for more than 90% of the pottery found in several buildings. McKillop carefully examines evidence for multiple contingent crafting activities associated with the household production of salt, including making pottery; salting fish and gathering food; construction; crafting wooden tools, canoes, and paddles; gathering firewood; carving calabashes; spinning cotton; and trading. This thorough analysis demonstrates that Paynes Creek salt makers lived at the lagoon's edge year-round and boiled brine in salt kitchens adjacent to their houses. More than 40 radiocarbon dates from the structures demonstrates that the Paynes Creek Salt Works were established at the beginning of the Classic period to meet a high demand for salt. Over the next few centuries, structures had to be moved further from the lagoon's edge to escape sea-level rise. Radiocarbon dates also reveal episodic construction of additional buildings along the lagoon, which McKillop interprets as "infilling" of space by salt-makers eager to be close to the source of brine.

In her previous studies of salt works, McKillop discovered that salt pots were made locally and in standardized sizes and forms by different work parties or households located at each salt works. This pattern is confirmed in the current study, suggesting that pots for boiling brine were made at home by the workers of individual salt kitchens. Patterns of similar tree species used to construct the salt kitchens strengthens the picture of households working independently. One of the most important findings in this book is McKillop's estimate that ten households of salt producers, if they worked year-round on the contingent crafts required for making salt and spent four months making the salt itself, could have provided enough salt for the needs of 24,000 people. Chapter 6 illustrates the rich results of years of comprehensive documentation and thorough analysis, including radiocarbon dating, spatial analysis, petrographic, and use-wear analysis.

Chapter 7 addresses the place of salt in the Classic Maya economy. There is evidence at Paynes Creek for salting fish. Facilitated by canoe travel, salt-makers moved salt and salted-fish to inland markets, where they traded for pottery, cacao, ocarinas, chert, obsidian, and other goods. McKillop points out that salt production was not simply an economic transaction; it was likely integrated into a widespread ritualized exchange of goods and social obligations that underpinned the Maya political structure.

The final chapter of this fascinating volume reminds us that salt was integral to Maya society. While it may be an archaeological invisibility, McKillop amply demonstrates that well-executed, long-term research renders salt, and even its place in the Maya value system, quite visible

in architecture, pottery, and other thoroughly analyzed data. The book contains indispensable comparative material for researchers in the expanding field of salt anthropology, but it also serves as a model to which all archaeologists can aspire when marshaling huge amounts of information for a comprehensive synthesis.

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