

“PLEASE PASS THE SALT” – AN ETHNOARCHAEOLOGICAL STUDY OF SALT AND SALT FERMENTED FISH PRODUCTION, USE AND TRADE IN NORTHEAST THAILAND

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ABSTRACT:

Northeast Thailand is known for salt production, both today and in the past. Prehistoric salt sites are found throughout the region and ethnographic and historical data demonstrate the importance of salt as a commodity, as well as for preserving and fermenting fish. This paper explores the archaeology and cultural history of salt and salt fermented fish products in Northeast Thailand and the Greater Mekong Delta region. Using archaeological, historical and ethnographic data, it addresses how the foods we eat and our preparation methods can be deeply rooted in our cultural history and identity, and discusses the ways in which they can be studied in the archaeological record to learn about the past.

INTRODUCTION

Food preparation is a fact of daily life and a universal cultural practice. Our food choices and preparation methods are strongly shaped by cultural traditions, with recipes and preparation methods handed down from one generation to the next. Our culinary choices are often a defining part of our ethnic or cultural identity and an integral part of our social life (Twiss 2007). They structure our daily routines as well as many of our social and ritual practices. As such, food practices can be a microcosm of the political, economic, social and ideological realities of a cultural group or society.

Foodways, a more encompassing term for all the activities surrounding the procurement, preparation, presentation, consumption and discard of food, are also largely culturally and environmentally determined. The availability of resources, preparation methods, and cultural taste preferences all impact the types of foods we choose to eat. Archaeologically, the material remains of these activities include the culinary tools, presentation vessels, plant and animal remains, and midden deposits.

Furthermore, social factors, such as age, religious beliefs, status and gender also influence food preparation and consumption patterns (Hastorf 2012; Jones 2009; Twiss 2007). This is especially common in societies where limited food resources necessitate food allo-

cation among family or community members. Food rationing or food redistribution can be a social tactic for maintaining hierarchical relationships and statuses, or reinforcing group or social identities or differences. These topics have been well studied by anthropologists (Dirks and Hunter 2013; Mintz and du Bois 2002), and to a lesser extent by archaeologists (Enrique-Alegria 2012; Junker and Niziolek 2010; Twiss 2007; Twiss 2012).

This paper examines the importance of salt and salt fermented fish products in the cultural foodways of Northeast Thailand and the greater Mekong Delta. Using an ethnoarchaeological approach, it examines contemporary foodways among rural subsistence farmers in Northeast Thailand within a historical framework and in the context of local archaeological evidence looking back over the last two and half millennia.

BACKGROUND & STUDY AREA:

This field research took place in Tambon Phon Song Kham in the Upper Mun River Valley of Northeast Thailand (Figure 1). It evolved out of several seasons of field research with the Origins of Angkor Archaeological Project and the ensuing Society and Environment Before Angkor Archaeological Project. These multidisciplinary, collaborative research projects involve a number of institutions, including the Fine Arts Department, Thailand; James Cook University, Australia; University of Otago, New Zealand, Kasetsart University, Thailand; and, the Earthwatch Institute.

Northeast Thailand is commonly referred to as *Isan*. *Isan* is a landlocked region that is bordered on the north and east by Laos and the Mekong River, the south by Cambodia and the west by the Phetchabun Mountains. It is a large plateau that encompasses an area of approximately 150,000 square kilometers and is comprised of two large plains: the Korat plain and the Sakhon Nakhon plain. The Mun River is a major tributary of the Mekong that runs west to east across the Korat plain. The Chi flows into it from the north before it eventually crosses the border into Laos and flows into the Mekong. The Mun and the Chi provide critical water and food resources for the Korat plain while the Sakhon Nakhon

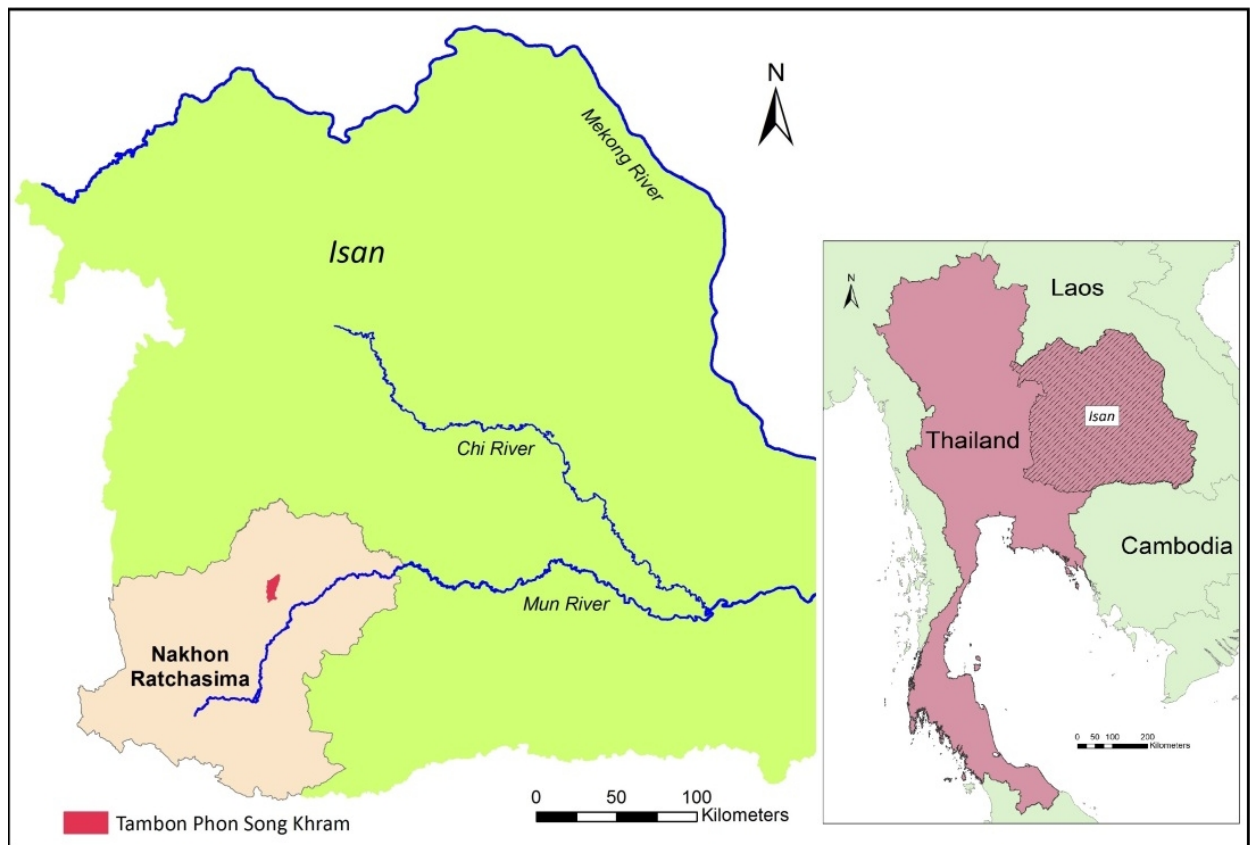


Figure 1: Map of Tambon Phon Song Kham, Northeast Thailand.

River fulfills the same role further to the north before it too joins with the Mekong.

The term *Isan* also refers to the dominant ethnic group who live in the Northeast. Historically, the area was part of the Lao Kingdom of Lane Xang, and was only incorporated into the Kingdom of Siam in the 19th century and remains part of the modern Thai political state. As a result, many of the people of this region maintain a strong Lao identity, and speak *Isan*, a Lao dialect.

The strong ethnic and linguistic unity of Isan is widely recognized by the Thai political state. One component of this identity is tied to the local foodways (Lefferts 2005). More specifically, sticky rice, salt fermented fish, and fish sauce are consumed by most Isan households on a daily basis. Ethnographic and historical research suggests that fermented fish products are deeply rooted in the foodways of the Lower Mekong cultural region (Ruddles and Ishige 2010).

The economy of Isan is predominately agricultural with a heavy reliance on rice farming. While the land itself is not highly productive, the monsoonal climate brings seasonal rains and floodwaters, providing a natural irrigation source for the regions rice fields. During the wet season, rice production is ubiquitous in the flood plains, and fresh water fish is heavily exploited. During the dry season, people turn to other economic activities, such as making salt. These three resources,

rice, salt and fish make up the basic subsistence of the Isan people (Higham 2007: 590-591; Lefferts 2005).

PREHISTORIC SALT ARCHAEOLOGY IN NORTHEAST THAILAND AND THE GREATER SOUTHEAST ASIAN REGION

There is much discussion in the archaeological literature about prehistoric salt production in Northeast Thailand (Chantaratiyakarn 1984; Higham 2014; Higham and Kijngam 1984; Higham & Thosarat 2002; Rivett 1999; Rivett & Higham 2007; Wichakana 1984; Welch 1989; Nitta 1997). From as early as the 1970's, archaeologists working in the area have noted small mound sites clustered around many Iron Age habitation sites and have suggested they were related to salt making. The mounds are composed of sandy sediments and are located in environments suitable for salt making, and often still used for this purpose today. It is also common to find crudely made earthenware sherds at these sites, assumed to be prehistoric boiling and/or draining vessels.

Excavations have helped confirm that some of these mounds are prehistoric salt-making sites. Higham (1989) excavated at a salt exposure known as Bo Phan Kahn near the large, moated archaeological site of Non Dua, in the Chi River Valley of Roi Et Province. Excavations took place at one of a number of small mound sites in the area that had large quantities of thick-walled earthenware sherds, presumed to be salt making pottery. Excavations exposed evidence of salt production at a

depth of approximately six meters, and dating to the 1st to 2nd century AD (Higham 1989: 215).

In the 1990s, Nitta (1996, 1997) excavated a salt site known as Non Tung Pie Pone in the Upper Mun Basin. The site measured approximately 5.5 meters high and 120 meters in length. The excavations exposed nine phases of salt-making activities. Features exposed included clay-lined water storage tanks and filtration troughs, furnaces, cord marked pottery, as well as pit holes from what were probably temporary dwellings. Based on one radiocarbon date and associated materials, the age was estimated to the 2nd to 3rd century AD (Nitta 1997: 158).

Subsequently, most small mound sites found in association with Iron Age habitation sites and located in saline environments are assumed to be salt-making sites. For example, Rivett (1999) mapped many small mound sites near the moated site of Ban Bing and identified at least twenty-five as salt-making areas, as well as another 42 located near other prehistoric sites in the immediate surrounding area (Rivett 1999: 91-92). Higham (1989) identified two small mounds to the west of the Iron Age site of Noen U-Loke, in an area currently used for salt-making, as prehistoric salt sites, and as such, has suggested that Noen U-Loke was a center for salt making.

If most of the small mound sites found throughout the region are Iron Age salt sites, this would be socially and economically significant. The Iron Age was a time of intensification of rice production (Castillo 2011: 116), increased long-distance trade, and the introduction of new technologies such as iron forging and “moated” engineering works (Higham et al. 2014). Additionally, the period is known for increased social hierarchy that is likely due to the control of land, resources and/or exchange (O’Reilly 2014). Salt was likely to have been a key resource and trade commodity in Northeast Thailand during the Iron Age, as has been documented in more recent times, as well as historically and archaeologically in many other early economies around the globe (Brigand and Weller 2015; Harding Kurlansky 2002; Li and Falkenhausen 2010; McKillop 2002; 2013). The significance and extent of this trade has yet to be fully understood.

The potential importance of salt in the early economy of Southeast Asia should not be underestimated. However, more archaeological research is needed to identify the range and types sites and understand the scope and scale of early salt production and trade. Salt archaeology is a relatively new field of research in Southeast Asia. This is likely due to a number of factors including the “invisibility” of salt and the difficulty of locating sites that are often located in coastal areas subject to sea level changes.

An exception is the recent excavation of a major salt making site in Go o Chua, South Vietnam. It has given us some insights into the importance of this commodity in South East Asia from an early date. Located 150 kilometers from the sea, this site was a major salt mak-

ing center from approximately 900 to 150 BC (Reinecke 2010). An estimated 2-3 million ceramic pedestal supports were recovered, as well as some clay oval structures that could possibly be salt-boiling kilns. It is noteworthy that other sites in the surrounding area have also yielded similar clay pedestals, although in smaller quantities.

To the north in China, prehistoric salt production has been well documented at coastal sites and was also flourishing inland at Zhongba in the Three Gorges regions of Sichuan Province during the early second millennium BC (Flad and Chen 2013). Dense accumulations of industrial pottery sherds were recovered from the late Neolithic through Bronze Age of this site, as well as oval pits with thick clay lining during the early phases. Salt production at this site is also well documented during the historic period, providing important insights into the specialized production and trade of salt, and possibly salted meat and fish products, between the upper and middle reaches of the Yangzi River (Flad and Chen 2013).

It seems probable that the salt sites in Northeast Thailand were equally significant from an early date. This leads us to question what fueled the demand for salt. Population growth and the use of salt to preserve food resources throughout the dry season were probably contributing factors to an increase in production. Furthermore, a road system linked Northeast Thailand to the Angkorian capital in Cambodia during the first millennium AD, and was probably used to transport salt and salted fish as has been documented during more recent historic times (Aymerion 1895; Hendrickson 2011: 449-450; McNeill and Welch 1991: 329; Welch 1998: 214).

Small-scale household salt production is still common among the rural rice farmers of Northeast Thailand with archaeological evidence indicating the processing methods have remained consistent (Duke et al 2010; Nitta 1997). Furthermore, rice and salt fermented fish are a staple part of the local diet. These are both discussed in more detail below.

FISH IN PREHISTORIC SITES IN NORTHEAST THAILAND

We do not have any direct archaeological evidence of fermented fish production in Northeast Thailand. This is because fish bones decompose rapidly during lactic acid bacterial fermentation, leaving little physical traces other than some possible amino acids or minerals to be tested through residue analysis (Smigra 2010). However, we know that salt was produced in great quantities, which is required for the fermentation process, and that the species of fish remains recovered from prehistoric sites are many of the same species that are consumed in the area today (Higham 2014:178-179; Thosarat 2004; Thosarat 2010). This includes many species that are commonly salt dried and salt fermented. A sampling of the archaeological evidence of recovered fish bones



Figure 2: Salt processing basins - Ban Don Phangat, Nakhon Rachasima Province.

from several sites in the Mun River Valley and beyond is summarized below.

In the Mun River Valley, fish bones are recovered in varying contexts, including middens, pits, floors and burials. In burial contexts, fish and other animal bones are commonly recovered in pots suggesting they were placed as burial offerings and may be indicative of communal feasting. The data on bones recovered from grave fill, floors and midden deposits vary depending on individual site sampling and recovery techniques. The use of flotation to recover small and fragmentary bones has helped with obtaining better representative samples.

At Ban Non Wat fish bones were recovered from Neolithic middens and pig, cattle and fish bones were recovered in many Bronze and Iron Age burial pots. In both cases, the fish species recovered closely match the species consumed in the area today, and included a great variety of species (Higham 2014; Higham and Kijngam 2012).

Despite using stringent recovery and flotation methods, excavations at Noen U-Loke, approximately two kilometers southwest of Ban Non Wat, recovered very few fish bones (Thosarat 2007). Most that were recovered were from early mortuary pots. Thosarat (2007: 536) suggesting that different cooking or preparation methods could have been used at Noen U-Loke, which wouldn't preserve well, or more extensive excavations

could recover evidence of fish bones at a different location of the site.

Flotation at Ban Lum Kao recovered a number of fish species well adapted to a range of fresh water habitats. The most abundant was *Channa striata* (snakehead), but also common were *Mystus* (catfish) *Anabas* (gouramie), *Clarias* (wriggling catfish) and *Monopterus* (swamp eel) (Higham 2014: 178-179; Thosarat 2007).

For comparative purposes, at Phum Snay, a mound site in Northwest Cambodia with similar characteristics to Bronze and Iron Age sites in Thailand, fish bone assemblages were again found both in middens deposits and in burial pots (O'Reilly 2006: 202). The majority of bones recovered from the small sample of burial pots were snakehead, genus *Channa*. The midden deposits were much more varied and contained large river fish as well as small pond and mudfish, demonstrating again that they obtained fish from different resources (O'Reilly 2006: 207-208).

Overall, archaeological evidence demonstrates that fish played a prominent role in prehistoric diets and that communities were resourceful, procuring fish from riverine, stream, pond and rice field environments, much the same as today. When people first started salt drying and fermenting fish is still being addressed, but salt and fish were plentiful providing the necessary resources. The growth of communities and need to store food resources for the dry season and/or trade, or accumulation for wealth are factors to consider when



Figure 3: Evaporating brine water – Ban Don Phangat, Nakhon Rachasima Province.

examining when and why salt dried and salt fermented food developed in the region, questions that'll need to be addressed with further archaeological research.

MODERN SALT PRODUCTION IN ISAN

Salt (NaCl) is a naturally occurring substance in the sandy sediments found throughout Isan. The salt originates from ancient seabeds that form part of the Maharakham Formation, which extends from the Korat Basin northwards into the Sakhon Nakhon Basin and into parts of Laos. Approximately 17% of the soil in the Northeast is salt affected (Mitsuchi et al. 1986).

Salt is an important natural resource in Isan. It is industrially mined and sold throughout Thailand, and in rural areas, people make their own salt for personal use and trade by leaching it from the local sediments (Cawte and Bongasilp 2009; Yankowski and Kerdap 2013). This traditional industry has a long history.

In our study area of Tambon Phon Song Khram and the surrounding area of Amphoe Non Sung, in the Upper Mun River valley, the traditional way to make salt, still commonly used, is to dig a basin in the ground for processing the sandy sediments with water, and a deeper pit adjacent to it for collecting the brine. These are both clay-lined providing an impermeable container to hold the liquids (water and brine), and a bamboo tube is inserted between the basin and pit for draining the brine, with bundled grasses and rice husks used to facilitate the draining and sieve impurities (Figure 2).

Water and soil are added to the basin and allowed to settle so the soluble salts dissolve in the water. Once the salinity level is concentrated, a plug in the bamboo tube is removed so the brine can drain. This brine is then boiled in shallow metal pans until the water evaporates and salt crystals form (Figure 3).

This method of making salt is still common throughout the Northeast region, with some regional variations. For example, wooden troughs or burlap bags are sometimes used in place of a clay-lined basin, and the brine is sometimes collected in stoneware jars or plastic buckets. In spite of these differences, the basic processing method is the same, involving leaching and boiling.

Historically, salt was made in a similar fashion, except the brine was often boiled and traded in earthenware pots or sometimes sold in cylindrical baskets. 19th century French explorer Etienne Aymonier described many facets of peoples' livelihoods during his travels in Northeast Thailand and frequently remarked that the villagers he encountered cultivated rice and produced salt that was evaporated in small cooking pots (Aymonier 1895: 176). This is significant because large quantities of earthenware sherds are commonly found at prehistoric salt production sites demonstrating a deep continuity of the salt making process in the region.

FERMENTED FISH IN ISAN

Research has yet to address what fueled the prehistoric demand for salt. On the most basic level, humans and animals have a biological need for salt, and prehistoric diets based on agricultural crops and domesticated animals generally lack sufficient quantities. As people began living in more settled communities, the demand for salt increased and salt became a universally sought after commodity. Globally there was a rise in the demand for salt and the expansion of trade networks to fulfill this need.

Salt has also been highly valued for its preservative qualities since ancient times. In Southeast Asia, it has traditionally been used for both drying and fermenting foods, allowing for the accumulation of surplus food reserves and the transport of these products over long distances. Salt allowed people more dietary flexibility, as they weren't restricted to particular foods during specific seasons.

In Northeast Thailand, rice production is ubiquitous during the wet season. Conversely, during the dry season, rice fields are left fallow and dry up. Fish resources are also limited because all but the major rivers dry up, limiting fish availability to predominately mudfish. The local population has adapted to this seasonality of food-stuff by storing surplus supplies of rice, salt and fish, with the storage of fish made possible by drying and salt fermenting.

Salt drying fish is a relatively simple and quick method for preserving fish. The fish is cleaned, salted, and solar dried. Salt fermentation is a more complex and timely process, as it relies on bacterial fermentation to break down the composition of the fish. Typically, the fish is cleaned and put in a jar with a large quantity of salt, and after a couple weeks to a couple months, roasted rice or rice bran is added to aid with fermentation, and the ingredients are left to ferment for up to one year. Salt fermentation requires more preparation time than salt drying, but has the advantage of allowing for a longer shelf life.

Table 1: Chart of villages where ethnographic interviews were conducted.

Village (บ้าน)	Subdistrict	Population*	Households
Ban Non Wat (บ้านโนนวัด)	Phon Song Kham (พลสงคราม)	117/129	48
Ban Kra Chut (บ้านหนองกระชวด)	Lorn Kor Hong (ลำคองหงษ์)	302/305	148
Ban Non Prom (บ้านโนนพรม)	Lorn Kor Hong (ลำคองหงษ์)	118/108	62

*Men/Women

Traditionally, most households in rural Isan make and store fermented fish during the wet season when

fish are most plentiful. In January 2014, we interviewed households in several villages in Amphoe Non Sung in the Mun River Valley to learn about the local process of fermenting fish (Table 1). In each of the villages we spoke to the headman or headwoman who introduced us to households with individuals who make fermented fish, known as *pla-ra*. This allowed us to get a sampling from each of these villages.

Additionally, we were informed that the village of Ban Non Prom specializes in *pla-ra*. Household 64/2 has a small fermented fish production business and they sell their products at several local markets and to repeat customers. They ferment eight different types of fish as well as shrimp, and also sell salted dried fish. The fish comes from their rice fields and ponds, for as long as it is available, and then in the dry season from April through July they buy fish from Lopburi, Central Thailand at 20 baht/kilo. Because of the large quantities of salt that is needed, they buy salt from a local factory in Non Thai rather than from salt makers in surrounding villages.

Overall, we found some variability in recipes, but the basic ingredients are always fish, salt and rice. Salt to fish ratios range from 1:10 to 1:4, and either roasted rice, or rice bran is used as an additive. Some popular species of freshwater fish used includes *Anabas testudineus* (gourami), *Henicorhynchus siamensis* (Siamese mudcarp), *Clarias batrachus* (walking catfish), *Pristolepis fasciatus* (Malayan leaf fish), *Notopterus notopterus* (bronze featherback), and *Channa striata* (snakehead murrel). However, we learned that other species are also used depending on availability and individual taste preferences.

Most people prefer to use locally made salt for fermenting fish. This is probably due to the specific minerals that are present in the salt as well as the lack of iodine, which can inhibit bacterial fermentation. They also indicated that the salt should be aged beyond two months probably to allow the bitter minerals to settle out of the salt. We were consistently told that the fish does not last as long if they use factory made, iodized salt.

On average, Isan households rely more heavily on fermented fish products in their diet than anywhere else (Ruddle and Ishige 2010:11). In the recent past, most households made their own salt and fermented fish, but today, it is typical for select households to specialize in these products and sell or trade their surplus. Salt producers generally make 30-40 large jars per season, keep a few for personal use, and sell or exchange the rest. Similarly, fermented fish producers often sell several varieties of their surplus fish at the local markets. Being a dietary staple, these products are highly sought after.

FERMENTED FISH IN THE GREATER MEKONG DELTA REGION

Fermented fish and fish sauce, the liquid derived from fermented fish, have been important in the culinary history of many societies, and was not unique to

Table 2: Fermented fish products in South East Asia (modified after Ruddell and Ishige 2010: 2)

Country	Fermented Fish	Fermented Fish Paste	Fermented Fish Sauce	Fermented Shrimp Paste	Fermented Shrimp Sauce
Cambodia	prahok	padek	tuk trey	kapi	nam tom
Indonesia	bakasam	terasi kian	kecap ikan	terasi udang jeow kapi; kung jom; kapi	nam kapi
Laos	plaadaek	plaadaek	nam plaa		
Malaysia	pekasam		budu	belacan	
Myanmar	ngapi-gaung	ngapitaungtha	ngagampyaye	ngapi; seinsa ba-goong;alamang;dinailan; oyap; guinamos	pazungga mpyaye alamang patis
Philippines	burong isda	bagoong	patis		
Thailand	pla ra; budu tai pla	jaew bong; pla ra bong	nam pla;nam budu,tai pla	kapi	nam kapi
Vietnam	ca mam	mam mem	nuoc mam	mam ruoc; mam tom	nam tom

Southeast Asia. *Garum*, a fermented fish sauce was widely consumed in the ancient Greco-Roman world, and fish sauce and fish products may have been the fourth most important trade commodity in this region after wine, olive oil and grain (Locker 2007). Extensive archaeological research there has uncovered the architectural remains of salting installations, as well as amphorae and smaller vessels known as urcei, which were containers used to store and transport fish sauce (Curtis 1984). This demonstrates the potential of archaeological research to locate features and material remains related to fermented fish production and address a wide range of research questions related to cultural foodways.

In Southeast Asia, we are lacking similar detailed archaeological evidence of prehistoric fermented fish production, but modern day studies offer insights into this ancient industry, as well as ethnographic analogies for future research. Today, Southeast Asia produces and consumes the greatest quantities and varieties of fermented fish products in the world. This is most evident in the Mekong Delta region, i.e. among the Thai-Lao, Khmer and Burmese populations living along the Mekong River and its tributaries. Fermented fish is a staple part of the local diets in this region, and fermented fish sauce, which is derived from fish fermentation, is widely consumed throughout the greater Southeast Asian region (Table 2).

There are regional variations in the methods of making fermented fish throughout the Mekong Delta region, but the basic recipe requires fish, salt and rice. For example, in Jampasak Province, Laos, scaled and cleaned fish are combined with salt and roasted rice bran in a ratio of 1:2:3 (salt:rice:fish), put in earthenware jars, covered with plastic and left in the shade for six months (Udomthawee et al. 2012: 329). In Siem Reap Province, Cambodia, the head and bones are first removed, and the fish is mixed with solar salt in a ratio of 3:1 and pounded lightly with a mortar, then put in an earthenware jar in the sun for six months. (Udomthawee et al.

2012: 329). These variations in preparation methods and fish preferences distinguish each region's fermented fish products from one another.

Likewise, studies suggest that each region has traditionally used distinctive vessel types for fermenting fish. For example, in the Upper Mun Valley of Nakhon Rachasima Province large wide bodied, narrow necked stoneware jars are typically used, but in other areas of Northeast Thailand, double rimmed stoneware jars are preferred (Lefferts 2005:252-253). These regional variations can be significant indicators of regional traditions and are likely to be present in the archaeological record, a topic we hope to address in future research.

CONCLUSION:

These three resources, rice, salt and fish make up the basic subsistence of the people in Isan and define the regions cultural foodways. Archaeological research demonstrates that these resources have been exploited for at least 2,000 years supporting the theory that salt and fermented fish products have a long culinary history in the region.

Ethnographically, fermented fish is an important and inexpensive food resource for the rural population of Isan. It is also an important dietary source of protein, calcium and phosphorus as well as an umami to complement the regional diet of rice and vegetables (Udomthawee et al. 2012). Perhaps even more important, salt is used to preserve food, providing consistency in availability. This is important in a region known for its long dry season and comparatively low rice production yields. These complementary industries help sustain families throughout the dry season with food resources and an additional source of income.

What archaeological evidence can we hope to find of prehistoric salt, salted fish and fermented fish production and consumption? Many salt production sites have been identified in the region, but for the most part, they have not been well studied. More surveys and

excavations are needed to document their ages, duration of use, and scale of production, and understand the layout, use and relationship of the sites. This could be accomplished through some small-scale excavations and by obtaining a series of dates from sites located near a single habitation mound to determine if production was happening simultaneously at each mound versus a succession of use and abandonment.

It is also possible that salting and fermenting occurred at or within the vicinity of salt production sites; if so, particular types and quantities of fish bones could be present, depending on the processing methods (Flad 2005). Soil chemistry sampling could prove useful to test for these activity areas (Knudson & Frink 2010).

Other archaeological features common at salt sites include clay lined basins and stoves. Documenting the frequency of these features at each site could help us determine the scale of production at any given time at a site. Equally important would be evidence for structures, such as shelters and temporary residences, similar to what we find at contemporary salt sites in the region today.

Furthermore, large quantities of earthenware sherds are often found at prehistoric salt sites. Based on historic and ethnographic information, earthenware pots were probably used to boil brine (Aymonier 1895; Yankowski 2010) and possibly ferment fish. The identification of specific vessel types used for these activities could greatly assist in our analysis of the production, consumption, distribution and trade of these commodities. Residue analysis and chemical testing offer promising means for identifying if specific containers were used to make or store these items (Flad 2005: 233; Flad et al. 2005; Smigra et al 2010).

The present day concentration of fermented fish products in areas of the former Khmer Kingdom may be historically significant and offer a means to assess the relationship between Northeast Thailand and the ancient Angkorian kingdom. The concentration of these food products as well as the geographical differences in recipes and taste preferences are significant. These regional similarities and differences in food preferences could be reflective of identity, or offer insights into the nature of the regions early political-economy. These are questions we hope to better address with future research.

"Food is an unusually powerful symbol of identity", which is "intimately intertwined with ideological, political and economic realities" (Twiss 2007: 2). Likewise, foodways, including the associated material culture and the archaeological footprint of these activities, provides us a promising window into learning more about the interrelationship of communities in the Mekong Delta, and elsewhere, in the past.

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