Local Developments on the Eastern Rim of the Tibetan Plateau: The Prehistoric Anning River Valley

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Abstract

The Anning River Valley at the eastern rim of the Tibetan Plateau has long been a transit area and exchange corridor connecting Southwest China to the northern steppe. What has long remained unexplored are the local developments in the Anning River Valley itself. Recent fieldwork has brought to light new evidence and recent research on the local chronology has greatly enhanced our understanding of local prehistoric developments. Nevertheless, the Anning River Valley is usually treated as a cultural unit rather than the diverse area it is. Based on the results of recent fieldwork analyzed in a combination of object typology and spatial analysis, the present paper argues that during the Neolithic period the Anning River Valley was inhabited by various separate groups engaged in various types of subsistence practices. Over time, these groups grew increasingly closer and were finally drawn into one identity group connected by the practice of erecting megalithic graves. The conspicuous nature of those monuments and the complex rituals conducted in and around them also attracted communities in the neighboring mountains. Some of them adopted the practice wholesale; others adopted only certain aspects but preserved other burial customs of their own as well as ceramic form traditions and tool assemblages. As the paper shows, these differences in reaction to this new burial practice depended partially on local geographic preconditions, partially on the nature of the groups involved and various cultural factors.

Keywords: Southwest China, Tibetan Plateau, cultural history, cultural contact, identity

Introduction

Surrounded by the high and forbidding mountains of the North-South-trending Hengduan Mountain Range, the wide and fertile Anning River Valley in the Liangshan Region, Southwest Sichuan, has been settled since early prehistoric times. Recent research has highlighted the area's importance as an exchange corridor between North and South (Hein 2014); by contrast, local developments in the Anning River Valley itself largely have remained unexplored. A new focus on settlement sites during the last ten years of fieldwork – mainly with the aim of establishing a local chronology (Hein, forthcoming 1) – has greatly increased our understanding of local prehistoric developments. In spite of this diversity, the Anning River Valley usually has been treated as a unit inhabited by one cultural group receiving various kinds of outside influence rather than an area with various local groups and developments of their own (e.g., Jiang 2007, Sichuansheng et al. 2006).

Based on the results of recent fieldwork, the present paper argues that far from being a unit, during the Neolithic period the Anning River Valley was inhabited by at least three separate groups characterized by different modes of subsistence and ceramic assemblages. Over time, these groups became increasingly more closely connected. With the emergence of the megalithic-grave burials, an increasingly large number of local communities came to be drawn to this particular mortuary tradition. At the same time, local subsistence practices remained distinct and even ceramic assemblages and burial goods retained local particularities.

Furthermore, the receptiveness toward outside influences seems to have varied throughout the Anning River Valley, reflecting the continued existence of several separate communities with distinct cultural practices and identities that were nevertheless linked to each other through shared burial practices and various types of exchange relations. This paper traces the development, change, and interaction between these groups and their reflection in the material record.

Geographic Background

The Anning River Valley is the core are of the Liangshan Yi Autonomous Prefecture in Southwest Sichuan, Southwest China. Located at the rim of the Tibetan Plateau and bordering on the Yunnan-Guizhou Plateau and the Chengdu Plain, the area has long been an intersection point of various culture-geographic regions and a transit region for exchange routes in all directions (Figure 1). The valley formed by the Anning River and its tributaries is the largest mountain plain in the region and the second largest in Sichuan. In its upper reaches, the river flows in a very narrow delta at high elevation starting from over 4,000 m at its source, through the wide plain around Xichang at an altitude of around 1,500 m, to below 800 m in Panzhihua. At its widest point, the river valley measures around 11 km and the riverbed can be as wide as 1 km but is much narrower along its upper and lower reaches. Over time, the riverbed has moved gradually west, altering the geography and the archaeological record significantly.

Being the main agricultural strip of the Liangshan Region, the landscape in this plain has been transformed heavily by human hands, and nowadays only secondary and tertiary vegetation of agricultural crops, low scrubs, and some deciduous trees can be seen. Rich “purple soils”, as they are called, are widely distributed and can bear up to two crops of rice a year (Wang et al. 2009). The most fertile patches of earth are located east of the Yalongjiang around Xichang, and the temperate climate with marked but mild wet and dry seasons, warm winters, mild summers, a high sunshine intensity, and abundant rain, allow for a large variety of produce. The main mineral resources are hematite, iron, copper, limestone, and kaolin, but they are mainly located in the lower reaches of the river, while the most important resource of the area are its fertile soil, favorable climate, and abundant water resources contained in multiple rivers, lakes, and ample rainfall.

History of Archaeological Research in the Anning River Valley

Archaeological research in the Liangshan Region commenced only in the 1970s, concentrating mainly on the Anning River Valley (Sichuansheng and Anninghe 1976). Until the mid-1980s, research focused on the most conspicuous of local remains, the megalithic graves that are found only in the Anning River Valley and the eastern mountains in Puge and Xide (Liangshan Yizu 1987). This period also saw a first survey of Liangshan Prefecture and Panzhihua City revealing a broad range of different features and site types. While excavation work basically ceased after the mid-1980s, the Anning River Valley continued to be explored in further surveys, providing a fairly good overview of the distribution of early remains (Sichuansheng and Sichuansheng 1990).

The main scholarly discussions during these first two phases of research ranged around questions of chronology and ethnic attribution of the different types of graves. The lack of a chronological framework for the Liangshan Region was felt increasingly acutely, and when fieldwork commenced again in the late 1990s, the focus shifted to settlement sites whose stratigraphy might provide a basis for establishing a local chronological sequence. Unfortunately, most sites discovered so far consist of one single thin cultural layer, but a small

number of multi-layered sites [1] combined with a few radiocarbon dates and typological comparisons with finds from neighboring regions with well-established chronologies have allowed for developing a chronological framework (Hein, forthcoming 1, Table 1).

Until recently, the main sources of information on Southwest China have been preliminary excavation reports published in sometimes obscure journals, but since the mid-2000s, the situations has improved considerably. In 2009, the Sichuan volumes of the Chinese Cultural Relics Series appeared, summarizing the discoveries from the first two National Cultural-Relics Surveys and smaller local survey and excavation projects (Zhongguo Wenwuju 2009). A volume summarizing and evaluating all megalithic graves from the Anning River Valley had already been compiled in 2006 (Sichuansheng et al. 2006), and in 2012 a book containing reprints of all previous reports on material from the Anning River Valley has become available (Liangshan et al. 2012). Nevertheless, much material was never reported in full or remains completely unpublished.

Range of Material and Analytical Approach

The present paper is based on the information available through the publications listed above as well as earlier excavation reports combined with the results of extensive visits to local archives from fall 2010 to spring 2011 and during follow-up week-long visits in the summers of 2012-15. Overall, the collection comprises material from 157 sites throughout the counties of Dechang, Mianning, Miyi, Puge, Xide, and Xichang City, 42 of them settlement sites, 96 megalithic-grave sites, 1 earth-pit-grave site, and 18 sites with more than one type of remains (i.e., a combination of earth-pit graves, megalithic graves, settlement remains, and object deposits) (Figures 2-3). A catalog of all pre-Han sites in the Liangshan Region can be found in Hein 2013. Detailed analysis of all settlement sites in that area can be found in Hein 2015, and a book-length study on the burial material is forthcoming (Hein, forthcoming 2). In a previous publication on cultural contact throughout the Liangshan Region I already discussed methodological problems of the identification of instances of inter-group interaction in the material record, ideas which also have a bearing on the present paper (Hein 2013). Additionally, issues of the relationship between material remains and various kinds of identity groups are important to consider in connection with regional analyses like the one conducted in this paper.

The problem of how to identify past cultural groups based on material remains has long been a heated topic of discussion in archaeological research. Proponents of the cultural-historical school of archaeology prevalent until the 1960s generally held that the repetitive occurrence of similar typological or stylistic elements corresponded to specific groups sharing the same cultural and ethnic identity as well as the same language (e.g., Childe 1929, pp. v-vi). Even Childe himself soon realized that there were no such clear-cut boundaries in material remains, and later scholars therefore began to focus on differences and commonalities in behavioral patterns between social, ethnic, and other types of identity groups as observed in ethnographic research (e.g., Hodder 1982).

At present, most scholars agree that ethnic and cultural identities are not an inherent attribute of individuals or groups, but manipulated and transformed according to context in an ongoing process of identification and differentiation in which material culture and style are used (e.g., Jones 1997). The problem remains how to identify objects or aspects that are related to expressions of group identities in contact with and expressing their distinctiveness from other groups. A promising approach that emphasizes the importance of material preconditions of object production as well individual actions by producers and users of artifacts is the chaîne

[1] These sites are Dechang Dongjiapo, Mianning Sanfentun, Xichang Dayangdui, Henglanshan, Lizhou, Mimilang, Qimugou, and Yingpanshan.

opératoire concept, which focuses on the process of procurement, production, use, and discard (Sellet 1993). This approach combines practical considerations of object production and usage with cultural choices and can also be used to integrate issues of geographic preconditions and raw-material availability; it is therefore very useful for understanding both functional and cultural significance of object appearance.

The congruence and mutual exclusion of such elements may then reflect the existence of discrete identity groups; however, in reality the picture is likely considerably more complex. Instead, what emerges throughout this paper are various overlapping patterns of behavior reflecting different spheres of identity. Group identities refer to a shared way of doing things (Bourdieu 1977) and leave recoverable traces in the material record; therefore, at least some forms of identity should be identifiable through object classification and other forms of material analysis. Nevertheless, without written evidence, the identification of ethnic groups is difficult if not impossible; I therefore focus on communities (in the sense of people living together in a specific place) and cultural groups (i.e., larger entities showing similar behavioral patterns in object production and usage, as well as subsistence and modes of burial that indicate a shared identity). Social groups, which may be identified through careful analysis of burial material, are not a focus of the present paper; instead, I focus on object groups and their function to identify small-scale identity groups and the connections between them.

These connections can take a variety of forms. The term contact may refer to one, several, or repeated instances of encounter between groups or individuals, either directly or indirectly, through trade, communal events, or close bonding such as marriage, or even hostile interactions such as war (Burmeister 2000). Not all instances of contact may leave traces in the material record - a person who married into a foreign group may, for example, take on all habits of clothing, eating, and object production and usage of his or her new surroundings - and it is therefore difficult to measure or predict patterns of culture contact. Nevertheless, human actions are not arbitrary but influenced by natural surroundings as well as specific cultural or individual factors. In migration studies, push and pull factors moving individuals or groups to migrate or remain in a specific location play a significant role and I have successfully employed this concept to the prehistory of the Liangshan Region (Hein 2013). In the present paper, environmental preconditions and the location of raw material sources are therefore emphasized as well. However, ultimately there is no straight-forward way of inferring from similarities in object assemblages or burial customs to nature and intensity of interaction. The matter therefore has to be decided on a case-by-case basis. Accordingly, in this study all assemblages are discussed and analyzed within their local context and only then compared to finds from neighboring sites and regions to distinguish between different local groups and identify instances of interaction between them.

Location Choice and Material Remains

Settlement Sites

Compared to a sample of random points, both settlement and grave sites are preferentially located at low elevations, on moderate slopes, and in close vicinity of a river (Table 2). Given the unevenness of the terrain, there is much local variation, but settlement sites are preferentially found at medium elevation (1500-1800 m asl.) and on level or only slightly sloped ground with no preference for a specific slope orientation (Table 3). As the whole area receives much sunshine with considerable sun intensity year around, slope orientation may not have been of great importance. The location close to a river but on an elevated spot would have provided the sites with access to water, while at the same time protecting them from the dangers of seasonally swelling watercourses and human intruders alike.

Settlement sites are preferentially located on land favorable for agriculture such as the alluvial soil in the lacustrine basins along the Anning River. Only in the eastern mountains of Puge and Xide where the average elevation exceeds 1700 m asl. and flat ground is sparse, are settlements found on sloped ground at higher elevations characterized by drab mountain soil. Not surprisingly, all of these sites lack clear agricultural tools but yield a considerable amount of arrowheads, indicating an economy based on hunting. The main resource of the Anning River Valley are its fertile ground, abundant water, and mild climate; the immediately adjacent mountains of Puge and Xide furthermore abound with wild game, lumber, nut trees, and various other types of plants. Metal resources and salt, however, would have been imported from elsewhere, likely Yanyuan in the case of salt, and probably Huili or places in Southeast Asia for metal. Raw material suitable for stone tools available in the Anning River Valley is largely limited to various types of coarse igneous and sedimentary rock as well as slate and quartz/quartzite. All of these materials are best worked through grinding, but as flakeable material is largely absent, igneous and sedimentary rock were sometimes also worked into chipped stone tools (Hein 2015). The rare finds of objects made of serpentinite, obsidian, and chert must have been imports.

All of the settlements are open-air sites varying in size from to 0.5 to 10 ha, but the majority cover an area of 1-5 ha, i.e., a site size considerably smaller than what is found in the Chengdu Basin but larger than the space that semi-mobile communities of prehistoric Southwest Asia usually occupy (Hein 2015). Building remains have been reported from six sites, ash pits from ten sites, and pottery kilns from one site (Hein 2015, Appendix 2). The houses were rectangular semi-subterranean or waddle-and-daub houses that measured only around 2-3 x 1-2 m (i.e., 2-6 m^2). As the settlement layers are furthermore very shallow and the sites small, it is likely that people relocated frequently and did not invest time in large constructions. The kilns are simple and could not have reached high temperatures which fits with the coarse low-fired ceramic material prevailing in the region. Traces of metalworking are all from the post-Han period and show Han-cultural influence reflecting the foreign origin of this technology in the region.

The majority of settlement sites are located in the center around Xichang where the valley is the widest, the flattest, most extensively occupied at present, and thus well-researched. The earliest remains found here were retrieved from the two cultural layers of the settlement site of Xichang Henglanshan (dated to 2545 ± 47 cal. BC and 2112 ± 62 cal. BC respectively; Chengdu et al. 2006). The ceramic assemblage from the two layers are largely identical, consisting of coarse, low-fired, red-brown ceramics in the form of large urns with finger-tip impressed appliqué strip below the rim, bowls, vases, and a few spouted vessels and lids (Figure 4). The tool assemblage – polished stone woodworking tools, arrowheads, and a small number of perforated halfmoon-shaped stone knives – point to a mixed form of subsistence with incipient agriculture and hunting and gathering. Similar tool assemblages are known from Ma'anshan and the lower layers of Qimugou and Yingpanshan, all of them likewise located in the Xichang area (Chengdu et al. 2007a and 2007b, Chengdu et al. 2009b).

The ceramic forms and especially the decoration motives of Ma'anshan, lower Qimugou, and Yingpanshan are very similar to each other and show some deviation from what the Henglanshan assemblage. As has been shown elsewhere, all of these sites belong to the same ceramic tradition, but Henglanshan represents an earlier and the other three sites a later phase (Hein 2013; Hein, forthcoming 1). The ceramic assemblage from the early settlement layers of Xichang Lizhou bears a marked resemblance to the later sites as well, but the tool assemblage differs markedly: at Lizhou, double-perforated stone knives are very common, the woodworking tools are well-polished and accompanied by spindle whorls and drills, indicating forest-clearing activities as well as intensive agriculture and weaving (Lizhou 1980). Both Lizhou and Henglanshan furthermore furnished ring stones that likely served as weights for digging sticks, reflecting agricultural activities at both sites, but evidence for hinting is lacking

at Lizhou.[2] It is noteworthy that Lizhou is not only later in date than Henglanshan and the other sites mentioned so far, but that it is also located on particularly fertile level ground, close to the river but elevated on the third-level terrace and thus safe from flooding. By contrast, Henglanshan – although likewise located on a terrace safe from flooding but reasonable close to water – is characterized by sloped ground and less favorable soil. The mixed economy practiced at Henglanshan compared with the heavier reliance on agriculture observed at Lizhou thus fit well with the natural environment observed at the site. Similarly, Ma'anshan, Qimugou, and Yingpanshan are located on sloped ground less favorable for agriculture than Lizhou.

The ceramics and stone tools in the later layers of Qimugou and other sites around Xichang (e.g., Mimilang and Yangjiashan) are still similar to the aforementioned assemblages, but have even less coarse tools and finer ceramics of different types and with varied decoration, resembling objects from megalithic graves; they thus reflect a later development. Late Qimugou and Xichang Yingpanshan furthermore yielded a large number of net weights (Figures 4.23, 5.24, and 8.9), an object type that only occurs at a small number of sites in the Liangshan Region but there always in large numbers, indicating a strong reliance on river resources in these places (e.g., Dechang Dongjiapo and Puge Kangli). None of these sites is located immediately adjacent to a river or lake but they were observed on second- or third-level terraces or mountain slopes, similar to most other settlement sites in the region. At least from a geomorphological perspective there is thus no particular incentive for the exploitation of river resources at these sites. Nevertheless, here fishing seem to have been the main source of subsistence, especially at Yingpanshan where net-weights were found through all layers and even in object pits of likely ritual function observed in the upper layers of the site.

Remarkably, the ceramics at both Qimugou and Yingpanshan are very similar to those at other contemporary settlement sites in the same area, showing the close cultural connection. This phenomenon has several possible explanations:

1. Qimugou and Yingpanshan may have been special-purpose sites inhabited only during part of the year;
2. a sub-group (i.e., the fishermen) of the population of a larger agricultural-oriented settlement site may have lived here;
3. the sites were used year-around by a separate group following the same tradition of ceramic production as the inhabitants of close-by agricultural sites; or
4. the inhabitants may have traded part of the fish they caught for the ceramics that other groups produced.

It is difficult to say if these various communities saw each other as members of the same larger entity, but the specialization in subsistence at Qimugou and Yingpanshan coupled with the ceramic tradition shared with surrounding sites indicates the existence of bond with neighboring groups.

Net weights were also observed in the southern reaches of the Anning River Valley at Dechang Dongjiapo but coupled with a considerable number of woodworking tools, some perforated knives, and even a sickle and a potential plow (Figure 5, esp. 5.15). This assemblage indicates a mixed economy as it is appropriate for these mountainous parts of the Anning River Valley with a soil less fertile than the deposits around Xichang. The ceramic assemblage of the early layers at Dongjiapo shares certain features with the settlement finds from Xichang (i.e., overall ceramic quality, various jar and bowl forms, and appliqué bands), but other vessel forms (esp. vessels with plate-shaped openings) and the decorative program (mainly impressed or incised net, zigzag, and cross patterns) differ markedly from the Xichang assemblages. Instead, these features developed from a local tradition of ceramic decoration already visible at earlier sites

[2] For ethnographic references to the use of digging sticks consult Mazoyer and Roudart 2006: 11.

such as Dechang Maojiakan and Wangjiaping (Chengdushi et al. 2009a, Liangshan et al. 2012, Sichuansheng et al. 2007). Wangjiaping is largely contemporary with Xichang Henglanshan but the stone tools are only marginally polished instead of finely polished and do not include perforated knives. Maojiakan, which predates Wangjiaping, furthermore revealed large numbers of microliths and mostly undecorated ceramics.

Overall, there thus seems to be a difference in both subsistence and cultural identities between the inhabitants of the southern and the central Anning River Valley during this early period. As time progresses, however, the ceramic forms and decoration motives become increasingly similar throughout the region: first the appliqué bands characteristic for Xichang appear in the Dechang Wangjiaping assemblages; then the ceramics at Xichang Mimilang show net, zigzag, and cross patterns largely identical with decoration motive seen in the late phase of Dechang Dongjiapo; additionally, the ceramic forms of late Dongjiapo are largely similar with those of Mimilang but differ from earlier local forms (Liangshan et al. 2006). By the middle of the megalithic-graves phase, the settlement remains (as represented by Dechang Wangjiatian, Xichang Lianghuan, and Mianning Sanfentun) are largely identical throughout the Anning River Valley and show strong similarities with finds from megalithic graves.

Developments in the northern part of the Anning River Valley around Mianning run along similar lines (Liangshan et al. 2012). The earliest sites known in that area, Mianning Gaopo and Zhaojiawan, show a ceramic traditions completely different from any other finds in the Anning River Valley but similar to assemblages in Northwest Yunnan and Northeast Guizhou (Hein 2014). The ceramics are coarse, low-fired, and reddish in color similar to the Xichang ware, but the production technology (wheel-thrown or coil-built instead of hand-thrown) and forms (horn-shaped handles, duck-beak-shaped spouts, carinated bowls with small feet) are entirely different. These sites are rather late in date (ca. 1297-842 cal. BC), i.e., largely contemporaneous with early Xichang Dayangdui and early Dechang Dongjiapo, while earlier local developments are so far unclear. The later developments are better documented: with the occurrence of the fist megalithic graves, the local settlement material is completely replaced by assemblages largely identical with remains from Xichang and Dechang (e.g., Mianning Sanfentun). These ceramic assemblages comprise jars with band handles, flat-bottom outward-flaring bowls, leaf-vein impressions on vessel bottoms, and a limited amount of simple line decoration, thus combining characteristics known from contemporaneous megalithic graves and elements form the ceramic tradition of earlier settlement sites in Xichang.

These ceramics are accompanied by ground-stone tools of varying shapes. Interestingly, Mianning Sanfentun is one of the few sites with a considerable number of clearly identifiable agricultural tools, in this case sickle-shaped perforated stone knives with sickle gloss pointing to a largely agricultural form of subsistence. Xichang Mimilang, on the other hand, combines perforated knives with a considerable number of arrowheads and grinding tools indicating a mixed economy; and Dechang Wangjiatian revealed a considerable amount of microliths combined with a few ground-stone tools in the shape of adzes and chisels and unperforated knives without sickle-gloss, suggesting a subsistence system with only limited amount of agricultural activities. Mianning Gaopo and Zhaojiawan did not furnish any stone tools, so it is difficult to say anything about their subsistence systems. It is noteworthy, however, that the ground at these sites is rather flat and fertile with a water source at less than 1 km distance; the same applies to Mianning Sanfentun and most of the sites in the Xichang region. By contrast, Dechang Wangjiatian and Xichang Mimilang (similar to Xichang Ma'anshan) are located on sloped ground covered by less fertile patches of soil, explaining the choice for mixed or largely non-agricultural forms of subsistence at these sites. Dechang Dongjiapo, and Xichang Qimugou and Yingpanshan, on the other hand, would have been fitting places for agriculture but were nevertheless used for fishing. The choice for specific subsistence activities at the various sites in all three regions therefore are determined by both environmental and cultural factors.

Moving to the mountains of Puge and Xide, the geomorphological limitations are more considerable than in the immediate Anning River Valley where ample flat and fertile ground and water resources allow for various kinds of subsistence systems. The mountains naturally are dominated by sloped ground and forests with drab mountain soil of limited fertility. Not surprisingly, the settlement sites here are very small, have particularly shallow cultural layers, and stone-tool assemblages dominated by arrowheads and other types of projectile points (Liangshan and Puge 1982, Liangshan 1983). Nevertheless, these are associated with tools appropriate for forest-clearing (axes, adzes) and in one case even sickles (Puge Xiaoxingchang) reflecting a mixed form of subsistence. Both stone tools and ceramics observed at the few known settlement sites in Xide (Xide Wadegu and Wamu) resemble finds from Xichang (Lizhou in one case, Mimilang in the other); the same applies to Puge Kangli while all other sites in Puge shows strong local characteristics. The inhabitants of Kangli and potentially also of the sites in Xide thus likely had relocated to the western mountains coming from the Anning River Valley.

All other settlement sites in Puge are characterized by a stone-tool assemblage much more refined than objects from Xichang. The ceramics are very different as well: high-fired fine ware in the form of undecorated plain cups and jars without handles, spouts, or other appendages. The only site in the Anning River Valley with ceramics similar to those in Puge is Xichang Yangjiashan; here high-fired plain fine ware is combined with the a small number of coarse handled ceramics resembling material from Xichang Lizhou, thus combining elements from the two ceramic traditions. The stone-tool assemblage likewise resembles those known from Puge, as do the techniques of ceramic production. Additionally to ceramics resembling material from Puge, this community also had forms into their repertoire. The group settling in Yangjiashan may have relocated from Puge, searching out the flat, fertile ground close to the water resources of Lake Qionghai with its favorable climate, or the settlement may have been built by local individuals who were in close contact with their neighbors in Puge.

Overall, in the early to mid-3rd millennium, the Anning River Valley and the neighboring mountains thus likely were inhabited by people identifying themselves with various local cultures. Slight variations between the early sites throughout Xichang are partially chronological in nature and partially due to differences in subsistence practices. Judging from the strong similarities in ceramic forms, production techniques, and decoration, the inhabitants of all these sites nevertheless likely identified themselves as belonging to the same larger group. The communities in Dechang, on the other hand, can be seen as members of a distinct cultural group that came into increasingly closer contact with the groups in Xichang, as did the inhabitants of Mianning; however, during the late second millennium at least part of Mianning was inhabited by a completely different group of foreign origin. Only during the mid-1st millennium did the material culture of all sub-regions of the Anning River Valley become rather homogenous, including even the mountains of Xide. Exchange between Puge and the Anning River Valley including relocation of whole communities did take place at least from the mid to late-2nd millennium BC, but at first contacts between the different regional groups seem to have been limited. The material expressions of the groups inhabiting Puge remained entirely distinct until the advent of the megalithic graves, and even then local traditions were not abandoned but combined with elements of Xichang-origin as we will see below.

Grave Sites and Object Deposits

Non-settlement sites in the Anning River Valley and neighboring mountains encompass earth-pit graves, megalithic graves, potential urn burials, and – likely ritually motivated – object deposits. All of them tend to occur in locations similar to that of settlement sites, i.e., at lower than average elevations on level ground, in close vicinity to water, but elevated on second- or

third-level terraces protected from rising waters. Nevertheless, there is much variability by grave type and sub-region (Table 3). Megalithic graves were often erected closer to river courses than other types of graves or settlements, suggesting that the main focus here might have been visibility in the flat alluvial plain rather than safety from flooding or the avoidance of good agricultural soil. Some graves are located on flat ground while others were built on mountain slopes, not only in the mountains of Puge and Xide but even around Xichang where flat ground is ample. Again, in choice of location cultural considerations seem to have been more important thatn practical worries such as flooding or reserving flat, fertile ground for agricultural activities. Nevertheless, in Puge, Xide, and even Mianning where the average elevation is higher than around Xichang, on average, both megalithic and earth-pit graves appear at considerably higher elevations than settlement sites. Practical considerations thus played a role as well.

Graves located on slopes are usually oriented perpendicular to the mountain ridge but in the open, they occur either perpendicular or parallel to the river. Preferences for specific soil types cannot be discerned. A number of graves are in close vicinity to settlement sites or even appear in the same location but in consecutive periods. A direct connection between a cemetery and a specific settlement site so far could not be established. Noteworthy is only the site of Xichang Dayangdui that was used consecutively for various types of ritual acts starting with earth-pit graves followed by object pits followed by megalithic graves, suggesting the spiritual importance of the place for successive groups.

Similar to most other graves and settlement sites, the urn burials of Mianning Xiaogoudi are situated on moderate slopes at low elevation in less than 2 km distance of the nearest river, as are the object pits of Xichang Dayangdui, Qimugou, and Yingpanshan. None of them are associated with contemporary graves or close-by settlement sites. The ceramic pits of Puge Wadaluo and Xichang Maliucun, on the other hand, are immediately adjacent to megalithic graves containing similar ceramic material reaffirming their direct connection. The ceramic deposit of Xichang Tianwangshan is located within the burial mound of the megalithic grave M10 itself, so the direct connection is undisputable in spite of the lack of comparable ceramic material in the grave itself. Overall, there thus is some variety among the ceramic pits: some served some function in connection with megalithic graves; others belong to separate earlier tradition of ritual object deposits. In local burial customs, there is some variety as well.

How people in the southern part of the Anning River Valley disposed of their dead prior to the emergence of the custom of megalithic graves is currently unclear, but Xichang, Mianning, and Puge show early earth-pit graves. The earliest known graves (mid to late 1st millennium BC) superimpose the settlement finds of Xichang Lizhou. They are elongated graves containing a large number of ceramic vessels including vases and ewers for the middle phase and foreign-influenced double-handled jars and bowls for the late phase (Figure 6). The ceramic quality is similar to the earlier settlement finds (reddish low-fired coarse ware), but they are decorated surface-covering geometric motives instead of appliqué bands and simple incisions. No human remains were preserved and the mode of burial is therefore unclear.

The ceramic assemblages of the early Dayangdui graves are significantly smaller and very different from those in the southern Anning River Valley (Figure 7). The objects were made of high-fired black-brown fine ware, sometimes with a black slip but without further decoration. The handles are very different in form from those at Lizhou: thin and long instead of thick ring-handles. Handles and decoration motives similar to those of late Lizhou appear also at the settlement site of Xichang Mimilang, but settlement material comparable to the early Dayangdui ceramics has not been found anywhere in the Anning River Valley. Instead, ceramic quality and form are very similar with objects from Qijia-culture graves in Northwest China.

As has been argued elsewhere, the Dayangdui graves therefore likely were built by a group of Qijia origin (Hein 2014a).

The middle-phase Dayangdui deposits consist of 19 oval pits filled with yellow sediment and 24 pits containing two horizontally placed ceramic objects, the larger one placed in smaller one and the bottom of the former intentionally broken. Some pits held one or two additional objects and all were filled with fine sediment, but no ash, charcoal, traces of fire, or bones could be identified. The same applies to the ceramic deposits of Yingpanshan, which are very similar in form and content but without the accompanying sediment pits (Figure 8). Only the single pit at Qimugou held bits of charcoal, next to a smaller jar inside larger jar, but also here no bones were observed. These deposits were thus not urn burials, but had a different, yet likewise ritual function. Interestingly, some of the ceramics from the Dayangdui deposits are similar in form to those found in the earlier earth-pit graves at the same site, but long handles are rare and the objects are made of reddish low-fired coarse ware sometimes decorated with appliqué bands and line incisions. Additionally, the large urns resemble earlier local settlement material and stand in sharp contrast to the small forms of early Dayangdui. This is clearly a mixture of local ceramic traditions with foreign vessel forms, likely the outcome of an intermingling of foreign and local populations.

The late phase of Dayangdui then shows a phenomenon unique to the Anning River Valley: two of the earliest megalithic graves containing ceramic vessels resembling the middle Dayangdui material accompanied by two object pits containing broken vessels likely used in connection with the burial or later ritual acts around the grave. The earliest megalithic graves such as Dayangdui DM1 and DM2 and Tianwangshan M10 date to the late 8^{th} and early 5^{th} centuries BC and are all located in the central Anning River Valley. These graves are small, were used for a single instance of interment of a small number of people, both primary and secondary, and contain only a small number of large jars used for food offerings but no personal ornaments or tools; ceramic vessels used during the burial or later rituals were buried in separate pits nearby. The early-phase ceramics are undecorated and often slipped fine ware surprisingly similar to ceramics from Puge. At that time, the most common mode of burial in Puge were primary single interment in earth-pit graves equipped with a modest amount of simple undecorated jars (e.g., Puge Wadaluo); here, megalithic graves appear only around 400 cal. BC during the third phase of the development of this grave form (Puge Xiaoxingchang). At present, the reason for the similarity in ceramic material between Puge and the early megalithic graves is therefore unclear.

The second phase of megalithic graves (5^{th} – 2^{nd} c. BC) is characterized by small to medium-sized construction used for several instances of successive primary burial of several people (e.g., Xichang Qimugou, Bahe Baozi, Yanjiashan). The dead wore a small number simple ornaments and tools (knives, spindle whorls, grinding rods, bracelets, rings, small *ling* bells) but were not accompanied by other grave goods such as ceramic jars containing food offerings or larger assemblages of weapons or ornaments placed next to them (Figure 9). Ceramic vessels comprise fine, high-fired drinking equipment in the form of spouted jars and high-stemmed goblets that were likely used during burial ritual and then deposited at the grave entrance or in object pits such as Xichang Maliucun H1.

During the latter part of the second phase, the first globular jars with two band handles and limited amount of incised decoration appear that come to be typical for all later megalithic graves. They also occur in the ceramic deposits of upper Yingpanshan whose assemblage otherwise closely resembles object types and mode of deposition at middle Dayangdui. Interestingly Dayangdui also holds earth-pit graves containing the same type of ceramics. Assemblages similar to those in the object pit of Maliucun were not only found in megalithic graves but also in two earth-pit graves of Qimugou, indicating that the custom of earth-pit

graves continued as well. As anthropological analysis shows, the megalithic graves held only adult and senile individuals; younger people – or generally individuals of lesser status – were buried in earth-pit graves (sometimes cremated like at Mianning Xiaogoudi). In spite of the special form of burial, the deceased interred in the megalithic graves were not particularly richly adorned or accompanied by large numbers of objects. As during the first part of the second phase, only a small number of personal ornaments and tools were found on the bodies, and ceramic vessels used in ritual were placed at the grave entrance or in close-by pits.

The latter part of the second phase furthermore sees the beginning of the expansion of the custom of erecting megalithic graves beyond Xichang, first into Dechang and Xide, and in the third phase further into Miyi, Mianning, and finally Puge. During the third phase (4th to 3rd c. BC), the graves in the Anning River Valley become increasingly large and are used for many instances of interment of large groups of up to 125 skeletons. The graves are now high and wide enough to allow easy access and were entered for sorting the bones of previous interments and other ritual acts as the scorch marks inside some of the graves show. This does not apply to Puge, however: here the graves stay small and hold only a small number of interments accompanied by a number of personal ornaments but also arrowheads and perforated animal teeth as they are common to earlier local earth-pit graves. Here, a foreign grave form is thus adapted to local circumstance (i.e., the choose of a smaller size reacting to the lack of wide open space for erecting large stone constructions) and combined with local customs (e.g., the interment of objects connected with the local mode of subsistence strongly reliant on hunting).

In Puge, ceramics appear only in small number or are completely absent, indicating that the associated burial rituals may have differed from those in the immediate Anning River Valley. The forms and ceramic quality differ as well: they continue local traditions of brown undecorated fine ware. Double-handled vessels are absent from Puge but they become common throughout all other parts of the area including even the mountains of Xide, albeit in small number. Interestingly, the largest number of ceramics appear in the southern part of the Anning River valley, but here personal ornaments and tools/weapons are scarce (e.g., Miyi Wanqiu, Dechang Arong). Interestingly, during the third phase the ceramic material becomes coarser, reminding of the early settlement and grave finds at Lizhou instead of the objects at Dayangdui or Qimugou, thus returning to older local traditions.

During the fourth phase (2nd c. BC to 1st c. AD), the ceramic assemblages change again; they now consist of single-handled and often undecorated vessels of high-fired red fine ware. The interred are usually accompanied by iron or bronze knives, grinding rods, elaborate hair combs, and many other ornaments as well as clothing applications and various objects of clear Han origin. There may be some overlap between the third and fourth phase because of the relatively long use life of many late graves. The overall development, however, is clear: from small graves with single interments to increasingly large constructions used in elaborate rituals over longer periods of time; from a custom limited to the area around Xichang to a phenomenon extending throughout the whole Anning River Valley and even the eastern mountains of Puge and Xide. At the same time, earth-pit graves continued to be used for part of the population throughout the whole area, and around Xichang pits with ceramic vessels – some of them connected to megalithic graves others the outcome of independent ritual acts – continue to occur. All of these local customs cease with the onset of large-scale Han-cultural influx, first seen in the interment of single Han-style vessels and other objects in the megalithic graves but soon followed by Han-style earth-pit and brick graves with exclusively Han-style objects, the earliest seen at Xichang Lizhou and Ma'anshan but soon occurring throughout the whole area.

Discussion

The major developments in the Anning River Valley thus commenced from its center around Xichang during the mid-3rd millennium BC. At first, center, north, and south show differences in ceramic forms and especially decorations reflecting the existence of at least three separate groups who nevertheless shared similar ceramic forms and production techniques. The differences in tool assemblages between various sites in the Xichang area furthermore reflect a diversification in subsistence practices between different locations, some relying on agriculture, others on hunting or fishing. These sites may thus have been occupied either by sub-groups of a single settlement community using specialized locations seasonally or by separate communities exchanging goods obtained through different mode of subsistence but expressing their shared identity through a common ceramic repertoire.

Over time, the ceramic assemblages throughout the Anning River Valley become increasingly homogenous but the differences in tool assemblages indicate that most communities in the South maintained a mixed form of economy while the inhabitants of the central and northern part focused on agriculture. In the North, only the communities of Mianning Gaopo and Zhaojiawan produced a completely different ceramic assemblage, reflecting their foreign origin in northeast Yunnan or northwest Guizhou. After the 8th century BC, this tradition breaks off without leaving considerable traces in the local material record. Instead, ceramic forms, decoration patterns, and production techniques originating around Xichang become dominant also in Mianning. Outside influences from the North leave a more lasting impression.

The most prominent feature of northern origin are handled ceramic vessels and techniques of metal production appearing around the middle of the 2nd millennium BC. The graves of Xichang Dayangdui in particular with their high-fired black-slipped fine ware reflect the presence of an immigrant group of Gansu origin. The mastery of the more complex techniques needed to produce this type of ceramics seems to have vanished over time, and the material remains reflect a return to less advanced local production techniques resulting in unevenly fired reddish-brown vessels. Only the mastery of metal-production techniques and the double-handled forms remained, the latter becoming rather prominent in the phases characterized by megalithic graves.

The early local communities and the northern immigrants apparently buried their dead in simple earth-pit graves accompanied by varying amounts of ceramic vessels. The number of known graves dating before the 8th century BC is very limited, however, suggesting either a gap in research – which is entirely possible considering the short history of archaeological fieldwork in this region – or a burial custom without recoverable material remains. The early graves known from the eastern mountains are simple earth-pit graves with unknown mode of interment as well, but that they contain entirely different assemblages: arrowheads, shells, and bone beads instead of ceramics. The local settlements show no connection with the immediate Anning River Valley either; they contain undecorated high-fired brown fine ware and tool assemblages reflecting a subsistence system based mostly on hunting and gathering as befits the forested mountains. Connections with the Anning River Valley become apparent only with the advent of the megalithic graves.

The most remarkable archaeological features of the region – the megalithic graves – go through a development spanning several centuries from the 8th century BC to the 1st century AD. The first small above-ground stone construction used for single instances of interment of one or several people occurred around Xichang. Over time, the graves became increasingly larger, came to be used for many successive instances of interment, and became the center of various rituals involving the re-entering of the graves as well as drinking rituals reflected in the deposition of sets of drinking vessels in the grave or in separate pits in the vicinity. These pits are entirely different from the earlier tradition of object pits containing a larger vessel with broken bottom placed in a smaller vessel and filled with fine sediment. This earlier custom has been observed only in the Xichang area from the early 2nd to the early 1st millennium BC. The

meaning, origin, and discontinuation of this tradition, which after all continued until the time of the first megalithic burials, is presently largely unclear.

What is considerably better known are the spread and diversification of the megalithic-grave tradition. During the early 5th century BC, megalithic graves started occurring outside of Xichang, first in the South where some of the largest graves with the largest number of ceramic vessels were observed, then to the North where such graves are considerably more rare and more poorly equipped, and in the early 4th century finally to the mountains of Puge. Interestingly, the area around Xide, although likewise located in the mountains, adopted the custom somewhat earlier and shows graves more similar to those in the immediate Anning River Valley, i.e., relatively large graves containing both personal ornaments/tools and ceramic vessels reflecting drinking rituals in or around the grave. The megalithic graves of Puge, on the other hand, are small, were not re-entered, and contain mainly tools, weapons, and personal ornaments, most often arrowheads and perforated bovine teeth. The few ceramics associated with these graves follow the local ceramic tradition while the typical double-handled jars of the Anning River Valley graves are entirely absent. The inhabitants of Puge thus clearly were culturally different from the inhabitants of the Anning River Valley and preserved their cultural particularities in spite of adopting the custom of erecting megalithic graves.

The construction of megalithic graves – an undertaking which would have required a considerable amount of communal labor – and the complex rituals conducted in and around them, clearly brought the various communities of the Anning River Valley closer together. Although certain differences in subsistence systems remained, the ceramic material and burial customs finally seem to have become virtually identical throughout the region. Even the inhabitants of Xide who had previously belonged to a completely different cultural tradition more closely related to the groups in Puge, came to be drawn into this larger development. In the end, not only the grave forms but also the associated rituals and ceramic assemblages became largely indistinguishable from those in the Anning River Valley, indicating a shared larger communal identity. The communities in Puge, however, remained culturally distinct.

Although located in the eastern mountains, Xide is connected to the Anning River Valley through one of the main tributaries of this river and thus easily accessible. Pufe, on the other hand, lies on a more distant separate side arm of the Jinsha River and is substantially more difficult to reach. Nevertheless, some individuals from Puge relocated to Xichang, as the Puge-style material at Xichang Yangjiashan shows, and the ceramic production techniques of Puge seem to have left an impression in the Anning River Valley as well. There was thus a constant exchange between the two regions, even though their inhabitants remained distinct in subsistence systems and cultural identity. Nevertheless, the megalithic graves and the rituals surrounding them must have been so powerfully attractive that they were adopted in Puge, albeit in a smaller form appropriate for the narrow river valleys and steep slopes of the eastern mountains and combined with local objects and burial customs.

It is also noteworthy that the custom of erecting megalithic graves did not spread further beyond Xide and Puge into the higher mountain range of the Great Liangshan or further west, south, or north beyond the reaches of the Anning River Valley. Overall, the adoption or rejection of specific customs or techniques of foreign origin thus came about in very different ways throughout the region, depending on a local combination of natural and cultural factors.

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