# Preliminary findings from the 2010 archaeological survey in Lake Dian Basin, Yunnan

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## Abstract

In 2010, a joint archaeological survey team organized by the scholars from China, the United States and Canada conducted archaeological survey in the southern and western parts of the Lake Dian Basin. The surveyed areas involved three towns, which were Kunyang in Jinning County and Haikou and Biji in Xishan District, Kunming City, covering areas of about 74sq km. The survey



Figure 1 Map of Lake Dian Basin and 2008/2010 surveyed areas.

methods included onsite survey, core observation and hand coring test. The survey discovered two microlithic sites, 21 sites of the Bronze Age, five sites containing remains of both the Bronze Age and the Han Dynasty and one site of the Han Dynasty.

**Keywords**: Bronze Age–Lake Dian Basin (Yunnan), Shizhaishan Culture

### Intention of the survey

Defining the full extent of the Dian settlement system depends upon the discovery of Bronze Age habitation sites across the lake's catchment zone and analysis of site distributions across varying terrains and elevations. One of the key factors leading to the formation of political complexity is the production of bronze and semi-precious stone ornaments such as agate and carnelian for elite consumption and trade. How the Dian rulers coordinated access to these sources of raw materials and key routes of trade into and out of the basin depend on an understanding of the organization of settlements across the full extent of the plain.

From May 4 to 26, 2010, the Sino-American and Canadian archaeological survey team undertook the second season of collaborative fieldwork in the southern and western extent of the Lake Dian Basin. Fieldwork took place in Kunyang, Haikou, and Biji Townships and covered 74sq km. Building upon the systematic survey methods developed in 2008, the team completed our investigations of the study region outlined in this firsttime collaborative project, demonstrating the richness of prehistoric life in the Lake Dian Basin. In 2010, the collaborative survey involved the Yunnan Provincial Institute of Cultural Relics and Archaeology, the Jinning County Commission for Preservation of Ancient Monuments (CPAM), the University of Toronto, and the Museum of Anthropology at the University of Michigan.

#### Study area

The survey area encompassed the southern and western extent of Lake Dian Basin encompassing a variety of ecological zones ranging from alluvium floodplain, lacustrine coastline, river terraces, and limestone hills. Like the Dian core area in the southeast, the lake basin around Kunyang is comprised of rich alluvium deposited on a broad flat plain but the amount of arable land is far less extensive than in the core zone near Shizhaishan (Figure 1). Mountain ranges that border the east and west enclose the Kunyang plain, allowing for entry into Kunyang through two narrow passes. Previous archaeological investigations in the Kunyang plain reported the presence of prehistoric shell mounds at Dahe, Xingwang, Quxili, Xiaotuanshan and Nancun Villages and Eastern Han brick-chamber tombs clustered around the perimeter of Kunyang city. Prehistoric occupations are located near the lakeshore and river valleys.

The western coast consists of a narrow river valley (Tanglangchuan) and a narrow coast line flanked by Western Hills (Xishan), a rugged limestone formation (Figure 1). The western banks of the Lake Dian were traditionally considered areas of limited agricultural potential given its rugged topography and uncultivable soils. However, the western shores were important for connecting the Lake Dian Basin with the Yangtze River Valley and important resources including copper and iron ores and salt. Tanglangchuan is a narrow river valley on the western bank that connects the Lake Dian Basin with Anning, an important center of copper production during historic times and the location of early Bronze Age cemetery site of Taijishan (Archaeological Team 1965). The river valley descends from 1920m in elevation in the upper reaches at Dayingzhuang to 1886m at Haikou. Stepped terraces are distributed on the southern bank and steep limestone cliffs flank the northern bank. Tanglangchuan naturally drains into the Lake Dian Basin but hydrological projects since the Yuan Dynasty transformed the river into an outlet of the lake through dredging of silt accumulations at the mouth of the river near Haikou Township (Figure 1). The river mouth has been significantly widened from its natural course. Previous archaeological investigations in the river valley documented prehistoric shell mounds at Laojie, Baita and Baitashan Villages and a Bronze Age burial at Tianzimiao.

The Western Hills (Xishan) extend northward from Haikou toward Biji Township, which is located on the western edge of Kunming City (Figure 1). The surveyed area consists of a narrow stretch of sandy coastline and terraces on the lower slopes that quickly give way to sharp cliffs. The Western Hills are karst formations rising precipitously from lake level at 1886m above sea level to over 2320m. Previous archaeological work along the western coast identified prehistoric shell mounds at Longmen, Xiyuan and Wangjiadun Villages. Numerous waterlogged wooden posts were recovered from Wangjiadun, suggesting the site may have been located along the lakeshore.

# **Survey methods**

Following procedures developed in 2008 and outlined in 2012 report, the survey team combined pedestrian survey in transects, documentation of irrigation wells, and subsurface coring test using a stainless steel bucket auger (Yunnan Provincial et al. 2012). Findings from 2008 indicated that many sites have been leveled such that prehistoric cultural layers lie buried beneath the cultivation soil and were hardly observed from the

surface. Road construction at the sites of Laojie and Dayingzhuang showed that prehistoric occupation layers could be buried beneath 20 to 150cm of cultivation soil (Figure 2). Thus modern irrigation wells and coring test enabled subsurface observations to be made and were critical to the successful location of individual settlements and their boundaries. While we systematically recorded the GPS location and cultural materials from irrigation wells cutting into archaeological sites in 2008, we did not record locations of wells where cultural materials were absent. In 2010, we modified recording methods to include all wells in the Kunyang basin in order to justify the representativeness of our subsurface observations (Figure 3). Specifically, we wanted to confirm that our methods approximated the same coverage and resolution similarly achieved by survey teams in northern China.

The 2010 season recorded a total of 375 wells, of which 341 did not contain any cultural materials. The geographic coordinates of each well were recorded as a unique data point and imported into a GIS database. This then allowed for the computation of an average



Figure 2 Diagrams of cultural layers from exposed sections at the Laojie (top) and Dayingzhuang (bottom) Sites.

distance between individual subsurface observations in a GIS program such as ArcGIS 10.0. Using the "Nearest Neighbor" measure in the "Spatial Statistics Toolbox" of ArcGIS 10.0, the average distance between any two irrigation wells was calculated to be 48m (Figure 3). In other words, if each team member made one subsurface observation every 48m, the resolution was comparable to that of the total coverage survey methods applied elsewhere where surveyors were spaced 25-50m apart. Furthermore, if the smallest sites measure roughly 100 by 100m, then the chances of missing a potential site were slight if observations were being made every 48m.

In addition to these improvements to field documentation, we also enhanced the identification of settlement boundaries using old Corona satellite imagery from the KH4B mission, which was acquired in 1970 and provides an approximate ground resolution of 1.8m. Beginning in 2008, the construction of the Huanhai Road encircling the entire lake and the expansion of townships such as Kunyang restricted direct ground observations. Buildings and roads obstructed both surface and subsurface investigations. Using early Corona imagery taken before major urbanization in the region, the team was able to identify remnant land features associated with prehistoric shell mounds. For example, when Bronze Age potsherds were found in a tree hole in the middle of Kunyang city,



Figure 3 Irrigation wells recorded in two adjacent transects showing an absence of cultural deposits.

the team could only rely on satellite images to locate prehistoric settlements (Figure 4). Coring test was not permitted on municipal roads and buildings. When the location of the tree holes were plotted on the 1970 Corona imagery taken during the driest part of the year in the month of April, a circular feature can be seen to have occupied this area. The brighter color of the circular feature is generated by the reflectance of the land surface, which is influenced by ground elevation, vegetation, soil moisture, and texture. The accumulation of shell debris with soil contributed to looser soil matrix, which produced higher evaporation rates during the height of the dry season, thus accounting for the high reflectance (brighter color). The regularity of the feature's shape along with its distinct color may represent the contours of a mounded settlement that has since disappeared from modern day landscape.

#### Collection

Materials spanning the prehistoric to the Han Dynasty were collected into sample bags. These collections were recorded with the name of the nearest village and a discrete UTM coordinate. 69 pottery localities were made from surface, well, and exposed sections at 27 sites in the study region. In all, 1358 potsherds were made in this collection and the number of potsherds collected per site ranged from four to 298 per site. Diagnostic potsherds from the south and western regions of the lake correspond with the types identified in the core region during 2008. Bronze Age potsherds include rims associated with coarse ware bowls, limestone- and sand-tempered fu-cauldrons. Potsherds of the Han Dynasty included fabric impressed gray tiles and check stamped body sherds.

In addition, subsurface coring produced a separate collection of microsherds recovered from flotation of the sediments extracted in the auger bucket. Microsherds were often less than 2cm in dimension. In all, 339 microsherds were collected from eight localities taken at six different sites. Procedures for processing collections from coring were adapted from the 2008 season.

Pottery types from the southern and western areas of the basin correspond with the core Dian zone and the frequency of occurrence is similar to findings from 2008. The typical ware forms include bowls, cauldrons, and jars

 Table 1 Bronze Age potsherds recovered from different archaeological contexts.

| Context           | Number of rim sherds |  |
|-------------------|----------------------|--|
| Surface           | 768                  |  |
| Wells             | 37                   |  |
| Sections          | 553                  |  |
| Cores/Microsherds | 339                  |  |



Figure 4 Google Earth (left) and Corona imagery (right) of the same location in Kunyang city at Hedaiqiao comparing the 2008 and 1970 land surface.

The area currently occupies the southeast corner of Kunyang city. Two tree holes near Hedaiqiao location yielded Bronze Age potsherds (dots).

(Figure 5). Bowl forms have a rough vegetal paste and represent the most common ware type, accounting for 40.5% of the entire assemblage. The bowl forms in the south and western parts of the basin are consistent with those found in the core region and classified into three primary types: a coarse plain ware tempered with chaff, an incised conical bowl, and a small bevel or flange rimmed incised bowl. While this class of pottery wares dominated the assemblage, only 18 small flange rimmed bowls were found at five sites. This low rate of occurrence differs from the prevalence of the incised conical bowls in the Dian core where 266 rims were collected.

To better understand the production of Dian utilitarian wares such as the fu-cauldron and jars, ceramics were systematically studied using a 35x dissecting microscope in the lab. In addition to recording paste characteristics and color with the reference of Munsell soil color charts, a "sand grain sorting chart" allowed for more detailed characterization of inclusion size, angularity, and distribution in Dian utilitarian ware. The use of an acidic solution helped verify the presence of limestone inclusions. Calcium carbonate, which characterizes the general minerology of limestone, is alkaline so will trigger a chemical reaction when placed in contact with acids. After applying this chemical test to individual sherds in the pottery collection, we determined that limestone-tempered fu-cauldron and jar vessels comprise 19% of the assemblage and medium sand-tempered vessels 13% of the assemblage. Compared to the core area around Shizhaishan, far fewer tiles and potsherds of the Han period were found. In the Tanglangchuan valley, other kinds of materials such as feldspar and mica were added as temper, suggesting regional variation.

In addition to pottery, stone implements and blanks (half-products) were collected from the surface in the west of the study area. These samples include microliths (Figure 5), chert cores and one stone quern.

## 2010 findings

The survey discovered 29 sites in the 74sq km extent of south and western coast of the Lake Dian Basin. Of these 29 sites, two sites with microlithic remains pre-date the 1st millennium BCE, 21 sites contained Bronze Age occupations, five sites spanned the Bronze Age and Han period, and one site (Chuying Village) was exclusively a



Figure 5 Bronze Age potsherds and stone tools.

1 and 4. Coarse and chaff-tempered bowl; 2 and 9. Pottery jar; 3 and 7. Flange rimmed bowl; 5 and 6. Limestone-tempered bowl; 8. Incised conical bowl; 10 and 11. Microliths.

settlement of the Han Dynasty. In addition, the Jinning County CPAM recently found two Eastern Han tombs on the eastern and southern edge of Kunyang Township.

The 27 settlements associated with Bronze Age and Han remains could be classified into three classes by size. 17 sites were less than 2ha. Eight medium sites ranged between 2–5ha. The sites of Dayingzhuang and Laojie in the Tanglangchuan valley were the largest settlements covering over 10ha. Bronze Age occupations were smaller, less clustered and the density of potsherds much lower than the Dian core area in the southeastern part of the basin. Similarly, the survey found few Han tiles in the south and western extent of the basin suggesting that Han settlements may have been primarily concentrated in the core region.

The 27 sites were all shell mounds located either close to the lakeshore or on river terraces in the Tanglangchuan valley. The discarded shell all belong to the gastropod genus *Margarya melanioides*, which once thrived in the brackish waters of the shoreline. While many sites have been heavily damaged and leveled, the thickness of shell and cultural deposits were still found to extend 3m or more at some settlements showing a long sequence of occupation. These snails were extensively exploited, being found more than 11km up the Tanglangchuan valley, suggesting a connection between interior and littoral communities. 1. Microlithic sites. Microlithic industries are widely distributed across northern China and were in use from the Late Paleolithic into the Bronze Age (Gai 2009: 232). Their distribution in southwestern China has so far been limited to the Tibetan Plateau. The discovery of such implements in the Lake Dian Basin thus represents an unusual find (See Figure 5). Surveys along the low ridges northwest of the Kunyang basin found three separate scatters of microlithic debris (Figure 6 dots). One microblade and one biopolar made from a black chert were surface collected. In addition, a black chert core was also collected 2km south of the microlithic scatter.

2. Bronze Age settlement patterns.

(1) Kunyang plain: the settlements in the south basin were anchored by two local communities but networked into the wider political system of the Lake Dian Basin. Based on coring and observations distribution of surface remains and from Corona imagery, the largest settlement sites in the Kunyang basin were at Dahe and Hedaiqiao. These sites are primarily circular or oval shaped mounds that were built up with shell over time. The Dahe Site covers 3.883ha and Hedaiqiao Site approximately 3.8712ha based on estimates of mound boundaries from Corona imagery. Archaeological survey from 1957 reported the height of Dahe mound as reaching 6m and Hedaiqiao, which lies buried under the Kunyang city, was reported to have been occupied by á'mountain of shell (See

## Figure 4)".

Settlements further inland appear to be smaller hamlets ranging between 800sq m to 1ha. These smaller settlements are distributed along old river courses and are closely aligned with either Dahe or Hedaiqiao. An average distance of only 500-1000m separates these small sites and the larger communities of Dahe and Hedaiqiao (Figure 6). Coring at the Taishicun Site extracted a wooden pile embedded in a Bronze Age level, indicating the presence of buried stilt dwellings. Fauna material collected from cores indicates an orientation toward the exploitation of aquatic sources as fish teeth and bones dominated the assemblage. In general, Bronze Age occupations are located either close to the coastline or along former river courses, perhaps to exploit aquatic resources and irrigation. Dahe and Hedaiqiao occupied the meeting points of these two geographical locales, being close to the mouth of rivers and the lakeshore, revealing the possible significance of water transportation in connecting Kunyang with the wider Dian catchment.

Bronze Age communities in the Kunyang basin were not geographically circumscribed but the sites of Dahe and Zhongyicun connected the local region with the Shizhaishan core and Haikou to the west. Zhongyicun may have played a counterpart role to Dahe. Not only was Zhongyicun a significant settlement occupying 1.59 to 2.3ha in size but it occupied the western corner of the Kunyang basin. In addition, Zhongyicun and Dahe saw significant Bronze Age occupation as evidenced by the highest density of potsherds. Pottery counts indicate that the frequency and diversity of ware forms were highest at Dahe and Zhongyicun (Table 2). 228 pieces of Bronze Age potsherds were collected from Dahe and 230 potsherds from Zhongyicun. In addition, the pottery assemblage from Dahe and Zhongyicun were the most diverse, with each of the four major ware types being well represented. Dahe and Zhongyicun may have occupied ports of entry linking the southern plain with the Bronze Age core near Shizhaishan in the east and the communities of the western lakeshore and riverine valleys.

(2) Haikou valley: Bronze Age communities in the Tanglangchuan river valley were anchored by two of the largest settlements discovered in 2010, the site of Dayingzhuang in the upper reaches and Laojie at the mouth of the river near the modern day Haikou Township (Figure 7). The Laojie Site occupies over 14.2ha in area while Dayingzhuang, which is located 11.5km upstream, covers 10.3125ha. Both sites are oriented longitudinally along the main river course on the floodplain. The actual extent of Laojie was probably much bigger with parts of the site presently under water. Hydrological works to dredge the mouth of the Tanglangchuan have significantly modified the natural river course such that the original channel is obscured. Bronze Age pottery scatters and bronze artifacts were recorded on the two islands across from Laojie, suggesting the site would have extended across the river course during the Bronze Age. Like the





Red dots indicate locations of microlithic remains. Sites with Bronze Age occupations are in black Han period occupation are colored gray.

settlements in Kunyang, Laojie and Dayingzhuang are also shell mounds with several meters of stratified shell debris recorded at Laojie (See Figure 2).

Laojie and Dayingzhuang are not spatially discrete settlements but encompass small adjacent communities distributed along the river banks. For instance, the Laojie settlement cluster included one large mounded center and four smaller occupation mounds separated by 200 to 600m (See Figure 7). Perhaps as these riverine communities grew over time, newer settlements expanded downriver. That these two settlements were prominent centers of activity is also represented by the high occurrence of ceramics collected at these two sites. 339 potsherds were recovered from Dayingzhuang while 397 were recovered from Laojie, which represents the densest concentration of pottery material collected from documented sites in the Tanglangchuan valley (Table 2). In addition to the documentation of Bronze Age material assemblage, several wooden posts were also recovered from wet-preserved cultural levels at Laojie, indicating the presence of stilt dwelling structures.

In the middle reaches of the Tanglangchuan, the main river valley is split by a side valley. Where the two

|               | Site         | Rough | Limestone | Medium | Fine | Total |
|---------------|--------------|-------|-----------|--------|------|-------|
| Kunyang       | Dahe         | 32    | 41        | 47     | 108  | 228   |
|               | Baozicun     |       | 6         | 8      | 7    | 21    |
|               | Hedaiqiao    | 3     |           |        | 2    | 5     |
|               | Nancun       | 4     | 12        | 21     | 17   | 54    |
|               | Quxili       | 29    | 9         | 3      | 5    | 46    |
|               | Taishicun    | 2     |           | 1      | 2    | 5     |
|               | Xiaodungou   |       |           | 1      |      | 1     |
|               | Xiaotuanshan | 8     | 1         | 2      | 2    | 13    |
|               | Zhongyicun   | 37    | 90        | 17     | 87   | 231   |
| Tanglangchuan | Baita        | 18    | 2         | 3      | 7    | 30    |
|               | Baitashan    | 228   | 14        | 20     | 14   | 276   |
|               | Dayingzhuang | 180   | 76        | 15     | 68   | 339   |
|               | Ercaicun     |       | 3         |        |      | 3     |
|               | Haimencun    |       |           |        | 1    | 1     |
|               | Hezhongdao   |       |           | 1      |      | 1     |
|               | Laojie       | 41    | 150       | 83     | 124  | 398   |
|               | Tianzimiao   |       |           | 3      | 1    | 4     |

 Table 2
 Frequency of different ware types in the collected potsherd assemblage.

valleys meet, the survey documented a second cluster of Bronze Age settlements located on river terraces and the low foothills (See Figure 7). These communities are located in close proximity to one another separated only by a distance of 200–400m. Baita Village, the largest site, spans 3.8583ha (See Figure 7). Four other neighboring settlements are located on Baitashan, the adjacent hill facing Baita Village to the south. This scatter of small sites suggests the organization of dispersed hamlets across the elevated terraces overlooking the entry into the main valley.

The discovery of sizable Bronze Age communities in the Tanglangchuan is surprising. The recovery of foxtail millet from Baita and Dayingzhuang indicate that communities cultivated crops well-suited to this hilly valley but also relied on lacustrine snails obtained from a distance of 11.5km downriver. Support of substantial settlements both upriver and downriver suggests Tanglangchuan valley may have served as an important corridor linking the Lake Dian Basin with the Bronze Age cultures in Jinsha River drainage. Yet was this valley occupied exclusively for the development of regional interaction? Flotation samples from an exposed midden at Dayingzhuang revealed several important economic activities being undertaken (See Figure 2 bottom). In particular, stone working debris consisted of agate and jasper, the two materials used to fashion ornaments. In addition, metallurgical slag was also recovered. Deposits

of iron ore are prevalent in the Tanglangchuan valley so perhaps these communities were engaged in local smelting of iron ores. Even more surprising is the dating of the Dayingzhuang cultural layer to 780–550 BCE (Beta 312946 2- $\sigma$ ), which suggests iron working may also have been undertaken in the basin then.

The distribution of rough wares also alludes to the economic interdependence of these disparate communities within the Dian settlement system. While rough ware (See Figure 5) sherds are present at nearly all Bronze Age sites in the Kunyang and Tanglangchuan region, the spatial distribution of the different vessel forms varies considerably (See Table 2). The plain bowl is commonly found across all sites while the flange rimmed bowl only occurs at littoral sites in Kunyang and at Laojie and Dayingzhuang in the Tanglangchuan valley (See Table 2 and Figure 8). While these vessels were prevalent in the Shizhaishan core region, their occurrence is comparatively lower in the south and western coast. With the exception of Dayingzhuang, flange rimmed bowls are never found at inland sites (See Figure 8). The uniformity of this vessel's dimensions and their ubiquity at certain Bronze Age settlements suggest that these bowls may have had a special function. To determine the flange rimmed bowls' contents, residue analysis was undertaken at the lab at McMaster University in Canada. Residues extracted from two excavated flange rimmed bowls in the Shizhaishan core yielded ratios of C16:0/C18:0 fatty acids ranging between 1.0 and 1.2, which is consistent with degraded animal fats. In addition, the presence of an odd carbon number fatty acid (C13:0) in one of the two shallow dish samples lends further support for the animal source of the residue. Further studies are required to identify the actual isotopic signatures of the residues and their precise animal origin. However, if the vessels contained animal remains or products, the observed spatial distribution could indicate the circulation or exchange of foods to interior communities such as Dayingzhuang.

(3) Biji: Because this narrow coastal strip now lies under the Huanhai freeway, ground conditions were not favorable for survey (Figure 1). Only two Bronze Age sites were documented near the Caohai region of the lake. Xiyuan is an extensive shell mound site that occupies a wide stretch of the beach while the adjacent site of Tianzimiao occupies the steep terraces that ascend 20m from the coast to mid slope. The proximity of the two sites suggests that they have been one settlement that extended 4.7804ha from the coast to the hills (Figure 7).

Two other sites in the Xishan District were previously recorded by Chinese archaeologists. Since the 1970s, archaeological work at the Wangjiadun Site in Xishan District recovered a bronze adze and bronze *ge*-dagger ax. These discoveries were associated with shell midden and pile structures, as well as metallurgical debris and fauna (Yunnan Provincial 1961). Haiyuansi, a shellmidden site north of Wangjiadun, was discovered in 1954–55 (Huang and Zhao 1959). Because both sites lie under urban sprawl, the 2010 survey team was unable to conduct surface collections.

3. Han period settlement patterns. Six settlements and two cemeteries of the Han Dynasty were documented in the survey region. Han occupation appeared to be most prevalent in the Kunyang basin. Bronze Age sites of Baozicun, Nancun, and Zhongyicun continued to be occupied into the Han period while a new Han settlement site was established at Chuyingcun. Check stamped gray potsherds typical of the Han domestic pottery were found at these four sites in the Kunyang basin. A significant Han presence must have been centered near the township of Kunyang as numerous brick-chamber tombs dating to the Eastern Han Dynasty have been found around the older parts of the city. A brick-chamber tomb with mound on the ground was found in Hanying Xincun in the northwest corner of Kunyang. In contrast, Han potsherds were only present at the Baita Village, Laojie and Tianzimiao Sites, indicating either sparse Han occupation in the Tanglangchuan valley or possibly a continued preference for Bronze Age pottery wares into the Han period.

## Conclusion

Investigations on the southern and western regions of the Lake Dian Basin showed that shell mounds previously identified as Neolithic Age occupations may actually represent Bronze Age settlements associated



Figure 7 Mapped sites in the Tanglangchuan valley and Biji Township. Sites with Bronze Age occupations are in black and Han period occupation are colored gray.



Figure 8 Comparison of different rough ware frequencies at sites occupying different ecological zones

with the Dian Culture. These sites occupied a variety of ecological and topographic zones complementing the lowland settlements in the Shizhaishan core. The observed differences in site size and density of occupation suggest localized communities in the Kunyang Basin and

Tanglangchuan valley were organized in ways to ensure extra-regional communication and exchange. If this organization of communities was indeed deliberate, then the territorial consolidation of the basin by an expanding polity centered at Shizhaishan must be considered. What were the economic mechanisms for social integration across the basin? It is possible that the extensive fertile lands around Shizhaishan provided the staples to support communities located in more marginal zones (e.g. Tanglangchuan valley). The communities of the rugged interior valleys and coasts extracted raw resources that were central to the manufacture of prestige goods. These sources potentially included copper, agate/carnelian, and most surprisingly, iron. Of course, much more research is needed to substantiate the organization of Dian political economy. These collaborative efforts have just begun to flesh out the dimensions of this lost polity.

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#### Postscript

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