At the Crossroads of Kingdoms: Recent Investigations on the Periphery of Piedras Negras and its Neighbors

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Since 2011, the Proyecto Arqueológico Busilja-Chocolja (PABC) has sought to understand the kingdom of Piedras Negras through the archaeological study of communities located at the kingdom’s periphery. Of particular interest has been the reconstruction of the diverse strategies employed by royal courts, local governors, and communities to navigate the complicated geopolitics of the western Maya lowlands during the Late Classic period (AD 500–800). While the Sierra del Lacandón Regional Archaeology Project (SLRAP) in Guatemala noted defined boundaries between Piedras Negras and Yaxchilan (Golden and Scherer 2006; Golden et al. 2008; Golden et al. 2012; Scherer and Golden 2009; Scherer and Golden 2014), our surveys in Chiapas, Mexico have suggested more complex territorial shifts over time. Indeed, the project area was contested throughout the Classic period by the kingdoms of Piedras Negras, Palenque, Tonina, and Sak Tz’i’, the minor centers of La Mar and El Cayo, and the numerous smaller settlements throughout the region (Figures 1 and 2). To understand the role that these smaller settlements played in the broader political dynamics of the region, we interpret survey, excavation, and ceramic data by adopting the concepts of landesque capital and persistent places to interpret long-term landscape modification from the Preclassic period to the present (Brookfield 1984; Schlanger 1992; Sen [1960]1968).

The concept of landesque capital was originally applied to agricultural features constructed over the course of multiple generations (Blaikie and Brookfield 1987; Brookfield 1987; Brookfield 2001; Marx [1894]1992:618-619; Sen 1959; Widgren 2007). While the Sierra del Lacandón Regional Archaeology Project (SLRAP) in Guatemala noted defined boundaries between Piedras Negras and Yaxchilan (Golden and Scherer 2006; Golden et al. 2008; Golden et al. 2012; Scherer and Golden 2009; Scherer and Golden 2014), our surveys in Chiapas, Mexico have suggested more complex territorial shifts over time. Indeed, the project area was contested throughout the Classic period by the kingdoms of Piedras Negras, Palenque, Tonina, and Sak Tz’i’, the minor centers of La Mar and El Cayo, and the numerous smaller settlements throughout the region (Figures 1 and 2). To understand the role that these smaller settlements played in the broader political dynamics of the region, we interpret survey, excavation, and ceramic data by adopting the concepts of landesque capital and persistent places to interpret long-term landscape modification from the Preclassic period to the present (Brookfield 1984; Schlanger 1992; Sen [1960]1968).

The concept of landesque capital was originally applied to agricultural features constructed over the course of multiple generations (Blaikie and Brookfield 1987; Brookfield 1987; Brookfield 2001; Marx [1894]1992:618-619; Sen 1959; Widgren 2007). Once established, these works can be maintained with minimal labor relative to the initial cost of their construction. This type of capital is ingrained in the landscape, where its value is reaffirmed over multiple generations through low costs of maintenance. Erickson and Walker (2006) have expanded the application of this concept beyond agriculture to encompass anthropogenic features, including paths,
Schlanger 1992). Changes in the experience and the perceptions of landscape are also tangible if we adopt the “dwelling perspective” of Ingold (1993, 2000), which suggests that the landscape represents a type of solidified performance that reflects social relations while continuing to impact and influence society. In this manner, the maintenance and control of movement across the landscape can be understood not only as expressions of a centralized political hierarchy but also at the scale of a community organized around local needs and the transformation of economic value and local experience.

The nature of dispersed settlement in the Western Maya lowlands during the Late Classic period provided opportunities where diverse communities had differential access and control over trade routes and areas of agricultural production in the Upper Usumacinta Basin. Within the Usumacinta Basin, examples of landesque capital include hydrologic features and the intensification of agricultural fields in the form of dams, channeled elevated causeways, and canals that facilitate the movement of people and things on a local and regional scale. Moreover, Kathleen Morrison (2014) has suggested that features including temples, shrines, and markets, as well as broader political and religious institutions that managed agricultural production should be considered as landesque capital. Although this broadening of scope does in some sense dilute the original significance of the term, it more meaningfully shifts the emphasis away from a particular landscape function (agriculture) to one that emphasizes the value of an enduring, heritable built environment.

For example, Elizabeth Arkush (2011:12) adopts the term landscape patrimony to describe the construction and maintenance of fortifications as perpetuating cycles of violence within contested landscapes. Such locations form persistent places, where repeated practice encourages and structures reuse (Chapman 2000:190; Moore and Thompson 2012; Rodning and Mehta 2016; Schlanger 1992). Changes in the experience and the perceptions of landscape are also tangible if we adopt the “dwelling perspective” of Ingold (1993, 2000), which suggests that the landscape represents a type of solidified performance that reflects social relations while continuing to impact and influence society. In this manner, the maintenance and control of movement across the landscape can be understood not only as expressions of a centralized political hierarchy but also at the scale of a community organized around local needs and the transformation of economic value and local experience.

The nature of dispersed settlement in the Western Maya lowlands during the Late Classic period provided opportunities where diverse communities had differential access and control over trade routes and areas of agricultural production in the Upper Usumacinta Basin. Within the Usumacinta Basin, examples of landesque capital include hydrologic features and the intensification of agricultural fields in the form of dams, channeled
fields, and terraces (Figures 3 and 4). In addition, as other archaeologists have done, we can apply this concept to other features that aid in movement including trails, landscape viewsheds, elevated causeways (*sacbeob*), river access, and caves, as well as natural and cultural features that restrict travel, including fortifications (Golden et al. 2008).

In the rugged terrain of the Sierra Lacandona, the Maya utilized the canyons and passes through mountains to facilitate as well as to impede movement, promoting at times integration, while at other times inciting conflict, among settlements. In addition, we must consider features like hilltops and other high points that improved visibility of the surrounding landscape. Such strategic locations allowed communities to control critical land routes and to participate in rituals and pilgrimages, and presented opportunities for military forces and political administrators to take in the ample extent of their territories (Davenport and Golden 2015; Doyle et al. 2012; Golden and Davenport 2013). When considered merely as natural features, such places appear to be stable or static; however, these areas required maintenance through the clearing of vegetation, opening of transects, and construction of platforms. Archaeologists have recovered abundant evidence of such persistent places in the Usumacinta region, particularly within conflict zones between rival kingdoms.

Local control of such examples of landscape modification directly impacted economic exchange. Based on results from earlier investigations, long-distance trade items such as jade and obsidian did not decline in frequency or quantity in a linear manner according to a site’s distance from sources along the Motagua River valley and the highlands. In fact, the rulers of political centers were not necessarily able to accumulate such riches in excess of their subjects along the political peripheries, as might be expected if the power to control such networks spread outward from the royal court.

**Figure 2.** The Piedras Negras hinterlands showing sites mentioned in the text.
Figure 3. Agricultural terraces near the site of El Eden, Chiapas (photo by Charles Golden).

Figure 4. Potential relict channeled fields near the site of Budsilha, Chiapas (Google Earth, map of Budsilha by Bryce Davenport, Charles Golden, Andrew Scherer, and Jeffrey Dobereiner).
Indeed, when comparing the quantities of jade and obsidian excavated from the urban centers of Palenque and Yaxchilan, Piedras Negras appears to have been isolated physically and economically from trade in lithic materials (Garciá Moll 2004; Golden et al. 2012; Ruz Lhuiller 1973). For example, while the royal burials of Palenque and Yaxchilan were adorned with jade, the rulers of Piedras Negras were buried with clay beads painted green (Barrientos et al. 1997:8; Butler 2005:128; Coe 1959:88).

In contrast, secondary and tertiary political centers in the vicinity of Piedras Negras had better access to imported lithic materials. For example, excavations in a single 2 x 2 meter unit on a structure at Budsilha have revealed evidence of an obsidian blade workshop. Over the course of a day of excavation, we recovered more obsidian in this unit than has been documented over more than ten seasons of excavation at Piedras Negras. Aside from the dramatic quantity of obsidian at Budsilha, we noted the presence of all stages of manufacture from prismatic blades to polyhedral cores (Scherer et al. 2013:21-31). Furthermore, in spite of the scarcity of jade in Piedras Negras, villagers in the vicinity of the archaeological site of Flores Magon, 20 km northwest of Budsilha, recovered a fragment of jade weighing approximately 5 kilograms when machinery destroyed various structures to construct the modern highway that passes through the site (Golden and Scherer 2011:112-113) (Figure 5).

Though limited, this evidence suggests that local administrators and community members at minor centers, like Flores Magon and Budsilha, had the power to import and produce valuable objects in parallel with or even bypassing the trade networks among royal centers. The significant presence of ceramics originating from the zones of Palenque and Chinkikha at Budsilha, in spite of the latter site’s proximity and clear political relationship to Piedras Negras, offers more evidence to support this possibility (Jiménez Álvarez et al. 2014). Perhaps the non-royal actors of these sites were more integrated with regional economic exchange than were the nobles and the royal family at sites like Piedras Negras. Indeed, this possibility has been explored more broadly throughout Mesoamerica by Golitko and Feinman (2015:209), who propose that networks of long-distance exchange diverged from simple least-cost predictions and top-down models of state control.

The ability of such communities to participate, and possibly control portions of these routes and networks of exchange relates to their positions at transport nodes. Secondary sites, particularly centers like La Mar and El Cayo, are located at the nexus of least cost paths connecting the royal centers of Tonina, Sak Tz’i’, Yaxchilan, and Piedras Negras (Anaya Hernández 2001). The broken terrain of the Upper Usumacinta Basin partly restricts movement across land and water, and with minimal investment, people could maintain control over the few mountain passes, as well as the beaches and other places of portage along the rivers. Armando Anaya Hernández (2001) and Mario Aliphat Fernández (1994) have identified the valleys in Mexico and Guatemala that run from southeast to northwest parallel to the Usumacinta River as the most important land routes that encouraged political integration and competition among the numerous communities and kingdoms of the Late Classic period in the region between Palenque and Yaxchilan. To these routes, we can also add the narrow valleys and canyons perpendicular to the Usumacinta River, particularly the path between Tonina (or modern Ocosingo) and La Mar (a route still used by pedestrians and vehicles) and the trails that cross from the Usumacinta River toward the San Pedro River and the Central Peten.

During the Late Classic period, these valleys became contested resources, often protected with military force. The maintenance and control of these landscape features were incorporated into the political strategies of diverse kingdoms to monitor movement (Golden et al. 2008). Anaya Hernández (2001) has generated GIS models to reconstruct the hypothetical boundaries of the kingdoms in the Usumacinta region, that correspond in part with controlled points of access on the landscape. In addition,
Scherer and Golden (2009, 2014) have documented archaeologically the presence of a line of sites, including Tecolote, La Pasadita, and potentially Chicozapote in Mexico, possibly purpose-built for military reasons. These sites are associated with landscape-oriented walls and watchtowers, representing a military strategy on the part of the rulers of Yaxchilan to protect, delimit, and expand the frontier of their kingdom (Figure 6).

Nonetheless, as Carballo (2013:10) has noted, the construction and maintenance of defensive features like walls and palisades provide a public benefit to the community and a form of capital at a local level. Archaeologists should therefore consider the costs and benefits of such works for the local community, not merely the royal court or kingdom. In this way, while examining the reasons the rulers of Piedras Negras did not focus their efforts and resources on the fortification of their political borders, as did their counterparts at Yaxchilan, we must also recognize that perhaps the non-royal inhabitants of the Piedras Negras territory perceived no benefit in occupying or investing labor in a contested and dangerous frontier.

Local Defense

In fact, in peripheral areas like La Mar defensive features appear to be community-oriented, focused on the protection of an associated settlement. Archaeological survey to the south and west of La Mar has demonstrated that due to the rugged nature of the terrain, movement across the foothills would have been restricted to the passes and narrow valleys that cross west toward Tonina and to the east toward the Usumacinta River and Piedras Negras (Figure 7). Least cost models, as well as the movement of people who continue to cross the range by foot, clearly indicate that the site of La Mar and its surroundings formed a type of funnel or junction of multiple paths (Golden et al. 2012: 12). From La Mar,
a system of control points could have been used to monitor the movement of large and small forces of people. Not surprisingly, the epigraphic evidence indicates that the rulers of La Mar were important allies of Piedras Negras and the victims of attacks and capture at the hands of the kingdoms of Tonina and Palenque (Martin and Grube 2008; Mathews 2001; Yadeun 2011:55; Zender 2002:176-183).

Archaeological evidence near La Mar confirms the interpretation that defense of the immediate area was a central concern of local actors. In 2013, Scherer directed investigations in the hillslopes above La Mar, where he documented a system of stone walls that served as the foundations for palisades and gates among the lowlying passages between the hills (Scherer, Golden, Guzmán López 2013) (Figure 8). These defenses included not only architectural features but also caches and deposits of weapons, including lanceheads, knives, and stones for slings. During further reconaissance of the area in 2013 and 2014, we documented similar features near settlements, clearly for local defense of other passes south of La Mar, taking advantage of the possibility to maintain palisades at a local level with minimal investment and oversight (Schroder 2014b). This strategy differs from examples along the northern frontier of Yaxchilan, where defensive walls appear to protect the territory as a whole (Scherer and Golden 2009, 2014). In contrast, the focus of the defensive systems in the La Mar hinterlands was the protection of local communities. In this manner, although the lord of La Mar was an important ally of Piedras Negras, the local La Mar community was more disposed to protect its own settlement than to defend a relatively distant dynastic center.

Another example of community-oriented defense is the hilltop site of El Infiernito, located approximately halfway between La Mar and Piedras Negras (Figure 9). This site appears to have been naturally conducive to defense, as the majority of settlement is located on a crescent-shaped escarpment (Figure 10) with expansive views of the valley to the west, with viewshed analysis suggesting that every documented minor center in this valley would have been visible from the summit (Schroder et al. 2015). Furthermore, access to the epicenter of the site from the northwest and the southwest is blocked by dry stone masonry walls, the latter of which measures 20 m long and 4 m high (Figure 11). In fact, this wall would have sealed off the opening in the crescent shape of the hill, restricting access to the site and protecting a water spring and agricultural terraces (Schroder and Roddy 2016). Excavations have documented Late Preclassic occupations at the base and summit of the hill and Late, Terminal, and Postclassic settlement on the summit, underscoring...
the persistence of this place as a refuge during times of crisis.

**Elevated Causeways or Sacbeob**

Modifications to the landscape did not merely serve the purpose of restricting movement but also to facilitate transport. One of the most significant terrestrial routes linking Yaxchilan, Palenque, Sak Tz’i’, and Piedras Negras is located in the wide valley west of the Usumacinta River. Today, the modern highway follows more or less this same least cost path. In fact, this highway likely covers large portions of a Precolumbian path that connected the sites La Cascada, Chancala, Flores Magon, La Mar, and Uch Chan (Scherer and Golden 2012), as we know that highway construction damaged large structures within these sites. Silva de la Mora (2008) confirmed this suspicion by documenting sections of a causeway connecting La Cascada, San Juan Chancalaito, and Chancala. The absence of a sacbe further south may be due to highway construction or it could signify a lesser degree of integration among sites outside of the Palenque kingdom.

During the 2014 field season, Dobereiner (2014) documented another section of a sacbe 10 km to the northeast of the Preclassic period site Rancho Búfalo. This causeway varies between 1 and 4 m in height, incorporating sections of modified hills to cross the surrounding landscape (Figures 12 and 13). The preliminary evidence suggests that this sacbe was a continuation of the La Cascada-Chancala causeway (Silva de la Mora 2008), paralleling the Chocolja River and possibly providing an alternate route to the Usumacinta River. Stone causeways stand in contrast with other landscape modifications described in this paper as features that imply a high degree of centralization. Though causeways would have benefited local communities and major centers alike, the coordination among sites required in their construction and maintenance would seem to demand state influence (Hutson et al. 2012; Shaw 2008; 2012).

**Beaches, Ports, and Portage**

Other settlements along the banks of the Usumacinta River exemplify other forms of landesque capital in the form of portage and ports. Canter (2007) has investigated...
the possibility of navigating the Usumacinta River downstream by canoe, and through this study he has noted a consistent pattern of river sites that include from south to north Anaite, Tecolote, Chicozapote, El Chile, El Cayo, and El Porvenir. Each of these sites is located at prime locations for portage, immediately before or after dangerous rapids. El Porvenir, for example, sits at the crossroads of land routes toward Tabasco to the north and Piedras Negras to the south (Kingsley et al. 2012) (Figure 14). The expansive beach adjacent to the site continues to serve as the main landing for canoes and motorboats along the way to Piedras Negras. The enduring importance of the site of El Porvenir as a nexus of terrestrial and riverine travel routes is further underscored by its long, nearly continuous history of occupation from the Preclassic period to the present, with settlements dating to the Early Postclassic, the Lacandon, logging camps, CPR-P villages, and finally an outpost for the Sierra del Lacandón National Park.

In 2014, our archaeological reconnaissance of the area documented further settlement between El Cayo and Piedras Negras on the Mexican side of the border, centered on the modern community of Arroyo Jerusalénl (Schroder 2014a). Arroyo Jerusalénl is located at a natural access point between the sites of La Mar, Budsilha, and El Cayo, and the route to Piedras Negras by river is short, approximately 10 km. Arroyo Jerusalénl’s core settlement is within the modern community, only 50 m south of the Usumacinta River (Figures 15 and 16). This stretch of river parallels a broad shingle beach along a gradual bend immediately upstream from the “Piedras Negras Canyon” and the “Raudal el Desempeño,” a Class 1 rapid (Canter 2007:11) (Figure 17). Above these rapids, approximately 1 kilometer northwest of Arroyo Jerusalénl, lies a small settlement, Ijik Xajlel. This location is notable locally for the presence of a large black rock in the middle of the Usumacinta River, local geology for which the site, as well as Piedras Negras, were named (Figure 18). Thus, Arroyo Jerusalénl and Ijik Xajlel offer the last opportunity for portage to avoid the rapids and swift waters above Piedras Negras. In addition, across the river from Ijik Xajlel, a land route through a series of canyons would have provided terrestrial access to Piedras Negras. Though we have not had the opportunity to conduct archaeological excavations in the area, looted...
Figure 15. Preliminary tape and compass map of the Arroyo Jerusalén epicenter.

Figure 16. View of Arroyo Jerusalén’s main structure.
Figure 17. Beach located 50 m below the epicenter of Arroyo Jerusalén.

Figure 18. Beach near Ijik Xajlel immediately above the rapids that begin in the background near the black conglomerate rock.
Shroder et al.

Ceramics from the site match types known from Piedras Negras during the Late Classic period.

After crossing the Usumacinta River at Arroyo Jerusalén, a traveler would have easy access to Piedras Negras and nearby rural settlement by land. Archaeological sites like El Cayo and Arroyo Jerusalén, with settlement on both sides of the river, are located along more gentle stretches of the Usumacinta River more favorable for river crossings by canoe. In contrast, the Usumacinta River near Piedras Negras is characterized by rapids, whirlpools, and steep canyons (Houston et al. 2003). Thus, Arroyo Jerusalén, Ijik Xajlel, and El Cayo may have provided not merely opportunities for portage along the Usumacinta River, but also safer places for river crossings (Figure 19), and loci where trade items could have been transferred from river to land routes. Maestri (2010; 2011) has proposed that Boca Chinikiha, an archaeological site located at the confluence of the Chinikiha and Usumacinta Rivers downstream from Piedras Negras, served a similar function as a transhipment center. In fact, such places were used historically and continue to be used to this day as ports. Though located in places that are naturally conducive to such activities, we must also recognize that maintenance would have been necessary to keep beaches clear of driftwood and vegetation. Furthermore, these areas would have been recognized by traders and travelers as dependable locations where canoes would be at the ready for river crossings and people could be contracted to assist with loading and unloading supplies for portage or transhipment.

Conclusions

As we continue to expand our archaeological research on both the Mexican and Guatemalan sides of the Usumacinta River, long-term modifications to the landscape will frame much of how we interpret the diversity of Maya politics and how peripheral sites were incorporated into royal strategies. This research will require

Figure 19. Least cost paths toward La Mar, showing river crossings at El Porvenir, Piedras Negras, Arroyo Jerusalén, and El Cayo.
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