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The Redención del Campesino Valley Archaeological Survey



Research Year: 2002

Culture: Maya

Chronology: Classic

Location: Tabasco, México

Sites: Santa Rosa, Redención del Campesino, Ignacio Allende, Francisco Villa, Álvaro Obregón

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Abstract

During the 2001 field season of The Pomoná Kingdom and its Hinterland Archaeological Project my colleagues and I attended a report on the existence of a wooden box in the community of Álvaro Obregón, Tenosique, Tabasco that contained hieroglyphic inscriptions. The decipherment of these inscriptions suggested that at one point during the Late Classic Period the Valley of Redención del Campesino may have been under the aegis of Piedras Negras, a regional capital located about 30 km to the south of the valley. The main working hypotheses of this project is that control of the secondary sites located at points on the landscape constituted a constant preoccupation to the Maya kings of the region. Considering that the valley itself contains a natural pass through the sierra that represents an important access to the coastal plains, such passage must have been controlled from within the valley. Through the application of Geographic Information Systems (GIS) a model was designed that would assist us in identifying the areas where the likelihood of finding a site of such relevance would be high. The subsequent archaeological surveys carried out were geared towards the evaluation of this model and represent the first phase of the research project.

Resumen

Durante la temporada de campo 2001 del Proyecto Arqueológico Panhalé Reino de Pomoná, se atendió al reporte de la existencia de una cajita de madera con inscripciones jeroglíficas que se hallaba resguardada en la comunidad de Álvaro Obregón, Municipio de Tenosique, Tabasco. Las inscripciones nos sugieren que en algún momento del Clásico Tardío, el valle de Redención del Campesino pudo haber estado bajo el control político de Piedras Negras, localizada aproximadamente 30 km hacia el sur. Una de las premisas de este proyecto de investigación es que la ubicación estratégica de los centros subsidiarios de Pomoná y Piedras Negras fue de vital importancia para los gobernantes de estos reinos. Puesto que este valle tiene acceso a la planicie costera a través de un paso natural en la sierra, el control de esta vía de acceso debió ejercerse desde un sitio que debió estar estratégicamente situado en el interior del mismo. En este sentido, a través de la aplicación de los Sistemas de Información Geográficos (SIG) (Geographic Information Systems - GIS), se diseñó un modelo de predicción que nos fuera de ayuda en la localización de las áreas sensibles a la presencia de este tipo de sitios. El trabajo de campo estuvo orientado hacia la evaluación de dicho modelo, y representa la primera fase del proyecto de investigación.

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Introduction

During the past field season of the FAMSI funded project "The Pomoná Kingdom and its Hinterland", conducted in eastern Tabasco, Mexico in 2001, we were informed of the existence of an inscribed wooden box in a locality near Tenosique known as Álvaro Obregón. The community of Álvaro Obregón lies close to the eastern end of a valley that is approximately 16 km long by 2.5 km wide, named after the bigger town of Redención del Campesino ([Figure 1](#)). This valley is separated from the Tabasco Coastal plain by a low (300-600 masl) ridge of limestone hills, which limit easy access from the coastal plain. However near the northwestern end of the valley, some 13 km from Álvaro Obregón, a fault in the ridge has led to a cleft that constitutes a natural pass ([Plate 1](#)).

The wooden box proved to be an extraordinary find indeed. In fact, there were two wooden boxes; the other one, of roughly the same dimensions, is plain. These boxes were originally found inside a cave located in the vicinity of the community of Álvaro Obregón. Although the inscribed box is somewhat weathered and incomplete, a good portion of it is well enough preserved as to allow the decipherment of its hieroglyphic inscription (the missing section was reported in 2002 confirming the initial decipherment [<http://mesoweb.com/reports/box/piece.html>]). Two important implications were derived from this inscription and will be discussed in detail below; first, the text of the box clearly refers to a series of hierarchical relationships involving the kingdom of Piedras Negras. Second, the fact that this box was found in a cave within the valley, and the reference it makes to high dignitaries, may indicate the existence of an important center subordinate to Piedras Negras.

When we visited Álvaro Obregón to inspect the box several pieces of ceramics were also examined ([Plate 2](#) and [Plate 3](#)). These shards are quite different from the ceramics that we were recovering from the Pomoná/Panhalé region but seem to have a strong resemblance with those described by Forsyth and Hruby for Piedras Negras dating from the Late Classic Period (Forsyth and Hruby 1997:210-211). If this is the case, this identification may constitute another line of evidence that supports the hypothesis that the Redención del Campesino Valley was within the Piedras Negras kingdom.

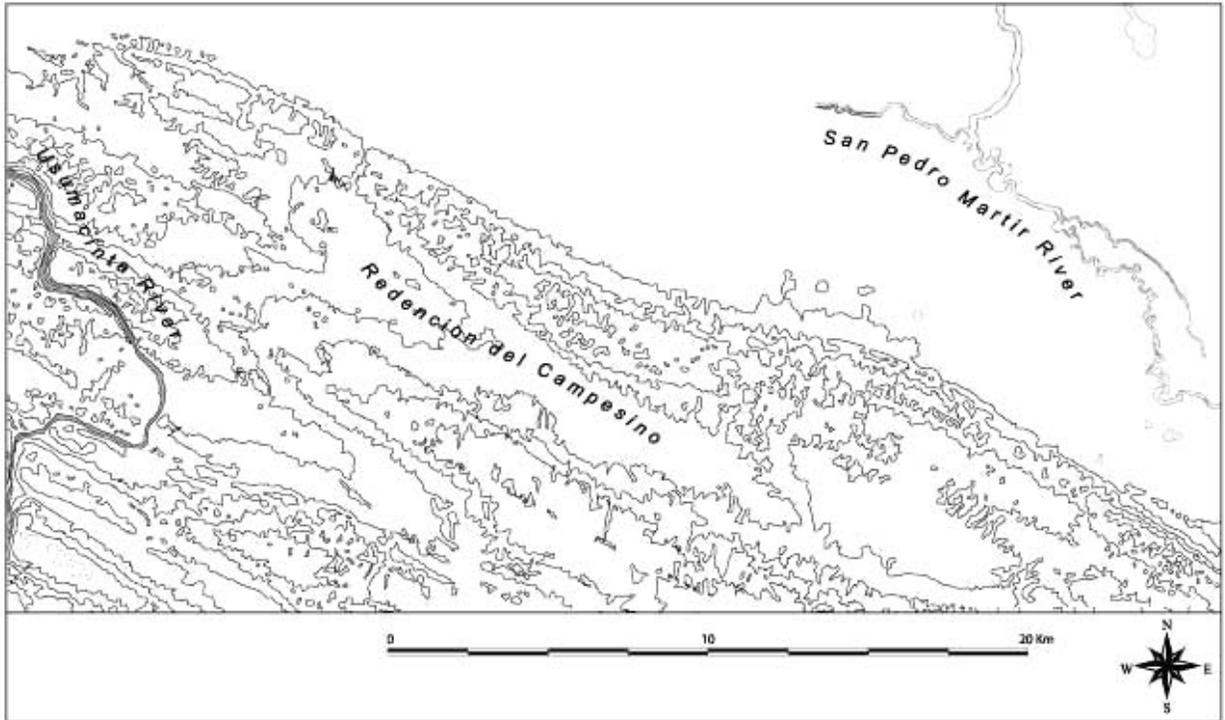


Figure 1. The Redención del Campesino Valley.



Plate 1. Access to the Redención del Campesino Valley.



Plate 2. Polychrome ceramics from Álvaro Obregón area.



Plate 3. Polychrome ceramics from Álvaro Obregón area.

In Álvaro Obregón, at the top of a small hill the remains of an architectural group can still be seen. These structures have been badly damaged by looter's trenches and by the construction of the community's water tank, as they were used as a source of readily available building materials ([Plate 4](#)). When inspecting the site we were told that a bigger site with standing painted walls was located in the vicinity. These reports and our initial reconnaissance of the area supported the assumption that a center of significant political standing existed within the Valley of Redención del Campesino, and prompted our research to be directed towards the archaeological survey of the valley.



Plate 4. Mound group at Álvaro Obregón.

Research Aims

The project has the following general aims:

1. To produce a working model of the Pomoná/Piedras Negras territorial limits in the area based on the characteristics of the physical terrain.
2. To produce a site predictive model aimed to identify those locations where the presence of secondary centers would be most likely. This in turn would assist us in establishing the survey strategy.

3. To conduct a comprehensive survey of the Redención del Campesino Valley and immediate surroundings that would assist us in outlining the settlement pattern of the area, and propose a site hierarchy scheme for the valley.
4. To conduct the excavation of the two caves visited and a test pit program on selected sites with the intent of recovering additional archaeological materials that will assist us in the reconstruction of the occupational history of the valley.

Unfortunately due to events out of our control the excavation of the caves could not take place. We are hopeful, however, that this stage will be accomplished in the near future.

Research Strategies and Methodology

As mentioned above, the results obtained during the field season of *The Pomoná Kingdom and its Hinterland* project constituted the basis of a spatial model that accounts for the territorial extent of the kingdom of Pomoná. The additional data recovered during the initial visit to the valley was essential in defining the criteria necessary to outline the parameters of the site prediction model. On this basis the strategies for the archaeological survey of the valley were established. To this effect the UTM coordinates of the central points of the high potential areas identified were downloaded to hand-held GPS units as waypoints to assist us in the navigation to these areas. A finer resolution Digital Elevation Model (DEM) was also created using a more sophisticated algorithm in ArcGIS. The resulting DEM was ground-truthed in the field. We feel that the subsequent fine-tuning of the DEM provides a greater reliability to the site predictive model generated and subsequent spatial analysis of the settlement pattern of the Redención del Campesino Valley proposed here.

Site identification was undertaken with the aid of topographic maps, aerial photos, GPS and mapping software, as well as through the consultation of the local communities. A variety of techniques, including pacing, compass and tape, and GPS were applied in the survey. Plotting and preliminary drafting of surveys was done *in situ* using a hand held GPS and a portable computer. This allowed for immediate identification and correction of errors, thus enabling us to compensate for the lack of detail and at the same time to help us manage in a more efficient way our resources.

Landscape and Political Geography

In his doctoral dissertation Aliphath concluded that for the Upper Usumacinta region site location and the definition of boundaries between socio-political systems were aspects intrinsically related to the physical landscape (Aliphath 1994:13). In relation to the former Hammond (1975) identified the interaction of two factors that influence settlement location; these are the tactical and the strategic factors. The tactical factors are those local and environmental factors, which influence the decision to establish a settlement, such as access to natural resources (e.g., good agricultural soils, water, flint or

obsidian, etc.). The strategic factors on the other hand, are extra local, and are linked to the relationships between settlements, and as it is argued here, they played an important role in the establishment and definition of the center's territorial extent.

From the outset, this research project has stressed that the location of the most important centers that were subsidiary to Pomoná or Piedras Negras was determined largely by the strategic considerations outlined above. The location of these subsidiary sites and the attention given to the local rulers by their overlords are an indication that indeed, the territorial integrity of their polities and the maintenance of its boundaries constituted a high priority for the Maya kings.

Piedras Negras Stela 12 and La Mar Stela 3 record the sacking of Pomoná in A.D. 792 and 794. In view of the difficulties to physical movement posed by the mountain ranges in the region, and the fact that an attack on Pomoná via the Usumacinta River would have been hindered by both the San Josecito rapids and the defensive outpost of Panhalé (Anaya 2001a) it is likely then, that the attack route followed had to be an inland one, one that could have offered swift and relatively safe movement to the combined forces of Piedras Negras and La Mar. If this was the case, then a military contingent this size could have only passed to the coastal plain via the only natural entrance available between Piedras Negras and Pomoná, that meets the conditions identified above. This access is the Redención del Campesino pass. If this was the case, then uncontested control of that pass would have represented a vital asset to the kingdom of Piedras Negras, and so it is reasonable to expect to find in this valley a subsidiary center of the latter.

The first step then was to obtain, on the basis of the physical characteristics of the terrain, the plausible limits between the territories controlled by Pomoná and Piedras Negras. By estimating cost of movement over the natural terrain a GIS-based model of the territorial extent in this region of these kingdoms was generated through a location-allocation analysis (for details see Anaya 2001b). Our results indicate that at some point during the Late Classic period (ca. A.D. 600-850), this valley was indeed controlled by Piedras Negras; and by extension, Piedras Negras would have also had control of this strategic pass through a series of political alliances with the rulers of the regional secondary centers ([Figure 2](#)).

The onus was now on identifying the ideal locations within the Redención del Campesino Valley (a valley with an area of over 6000 hectares) where the likelihood of finding a locally important political/administrative center would be high. To that end a GIS model based on Dempster-Shafer Theory was developed.

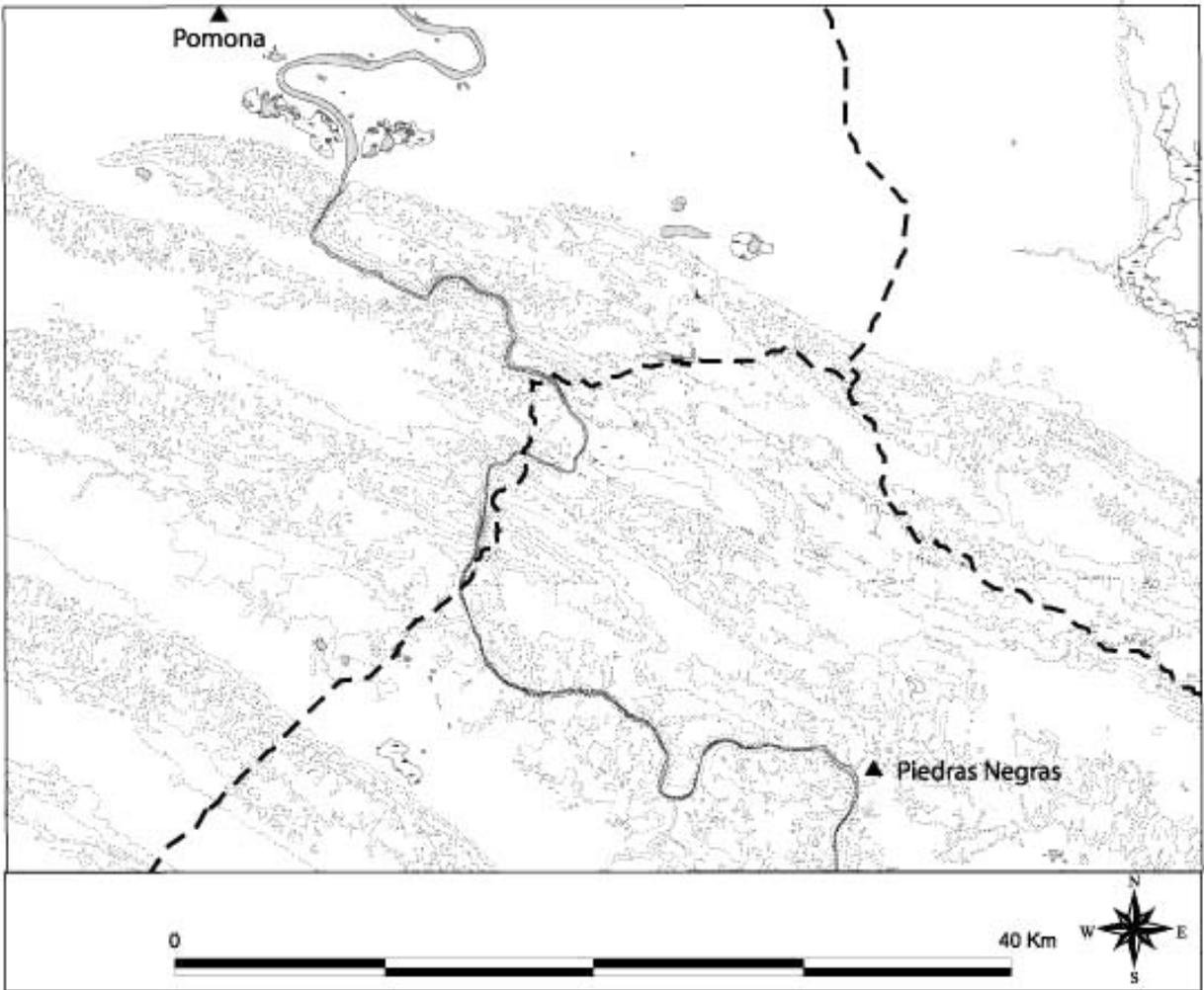


Figure 2. Proposed boundary between Pomoná and Piedras Negras.

Dempster-Shafer Theory and Site Prediction Modeling

In a previous study aimed to determine the whereabouts of an un-located polity of the Upper Usumacinta region: Sak Tzi'i' I, applied Dempster-Shafer logic to identify all the locations in the region where the likelihood of the presence of a major center would be higher (Anaya 2001b). The parameters used to evaluate this probability were proximity to main routes of communication and distance from other major centers.

Dempster-Shafer theory belongs to a relatively recent development of Decision Support Systems in GIS known as Uncertainty Management. This differs from the more traditional approaches in GIS where the models and databases are implied to be "perfect" thus leading us to take "hard" decisions. Dempster-Shafer theory instead recognizes as a working principle the concept of ignorance. To obtain a measure of the

likelihood that an archaeological site will be found at a specific location, Dempster-Shafer logic creates a frame of discernment. This is intended to exhaust all possible combinations of the variables involved. In this manner it takes into account ignorance by setting the variables in a frame of discernment that tests a "site hypothesis", a "non-site hypothesis", and the combination of both, "site-non-site" (Clark Labs 1997:9.23).

Thus the strength of this approach lies not only in recognizing these uncertainties, but also in providing us with the means to deal with them by the creation of three complementary measures of likelihood: *Belief*, *Plausibility*, and *Belief Interval*. *Belief* constitutes the degree to which evidence provides support for a given hypothesis (in this case the presence of an archaeological site). *Plausibility* constitutes the measure to which the evidence does not refute that hypothesis. And finally, the *Belief Interval* constitutes the difference between belief and plausibility, and it acts as a measure of uncertainty, thus allowing us to assess the degree of ignorance (Clark Labs 1997:9.32, 9.37).

In this case I want to emphasize on the results obtained in the Belief Interval image ([Figure 3](#)), because the most important aspects of this is the identification of those areas where further research is warranted. Notice that the highest values in this image concentrate on those areas where communication routes converge, and/or where critical points in terms of movement are present (e.g. rapids).

The results of my previous research prompted me to apply the same approach for the identification of those areas where strategically located subsidiary sites could be present. By comparing the various landscape attributes that other subsidiary sites such as El Cayo, La Pasadita, La Mar, Panhalé, Cascada Lacanha, Chinikiha and San José had (Anaya 2001b), the following variables were selected:

1. Distance from channels of communication (rivers, landing beaches, portages, mountain passes) from 0-1000 meters.
2. Located on gentle slopes: $\leq 5^\circ$.
3. Distance from steep slopes (defensible location) from 0-500 m.
4. Distance from Primary centers ≤ 5000 m.
5. Distance from other secondary centers ≤ 3000 m.

The results from the Dempster-Shafer analysis were reclassified to select only the high probability values and are presented in [Figure 4](#), overlaid on the topographic map of the valley.

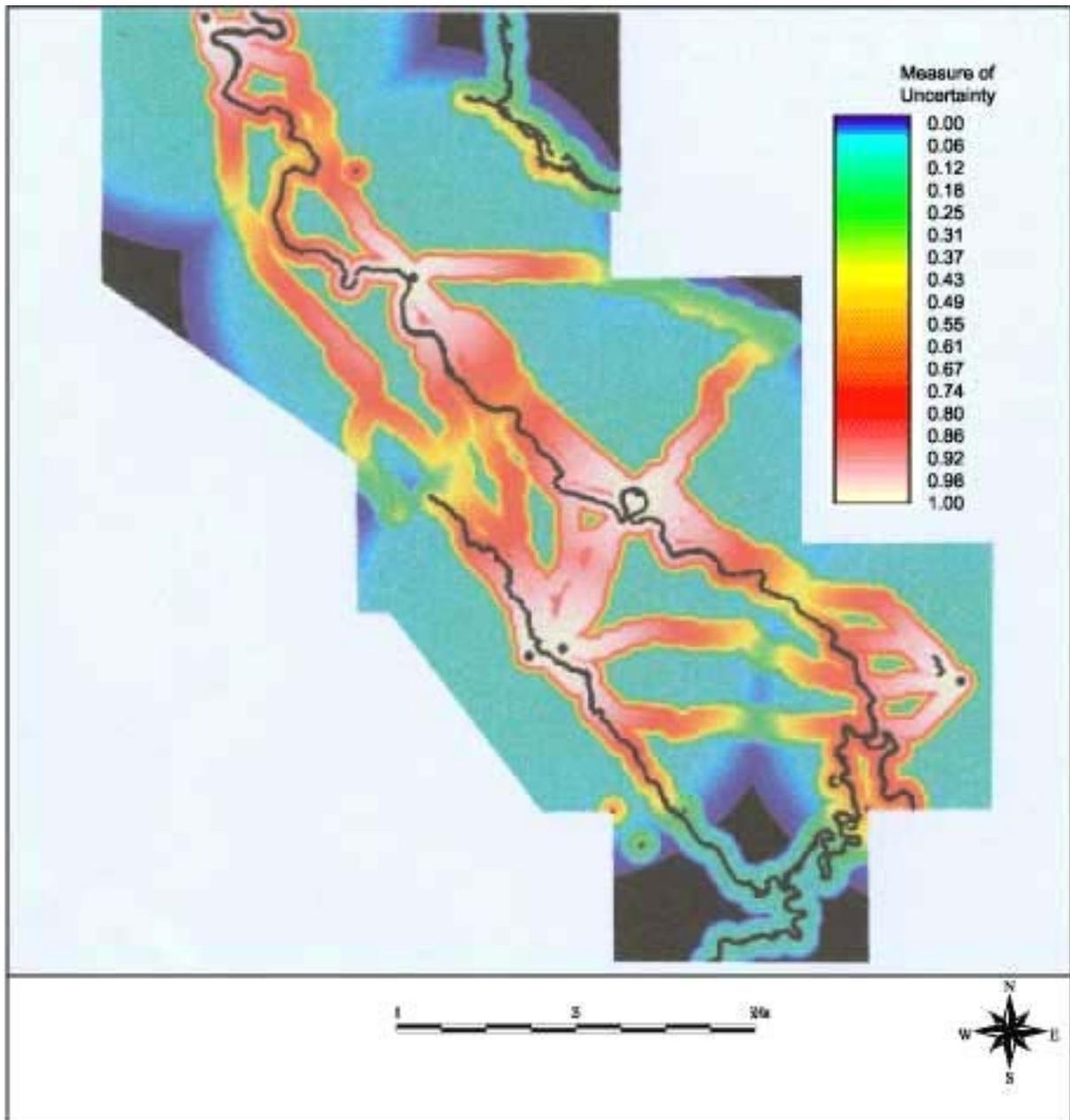


Figure 3. Belief Interval Image for the Middle Usumacinta Region.

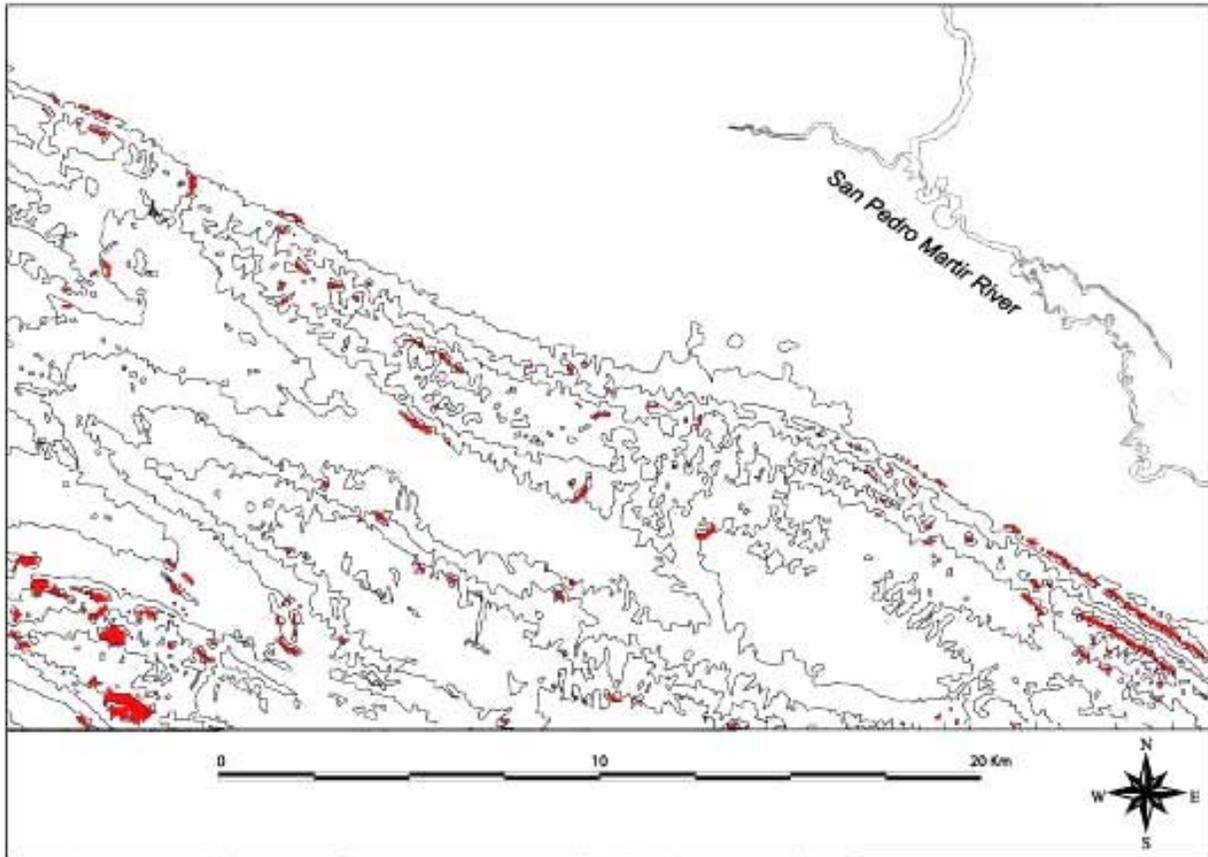


Figure 4. Dempster-Shafer results showing high probability areas.

As mentioned at the outset the inscription of the Álvaro Obregón wooden box provided substantial support towards the assumption of the presence in the valley of an important subsidiary site affiliated to Piedras Negras. The details of this evidence follow: Peter Mathews and Stanley Guenter have worked on these inscriptions and have presented a comprehensive reading of it elsewhere (Anaya, Mathews and Guenter 2002), thus I will not deal in great depth with the inscribed text, limiting my discussion on the pertinent details.

First, the two shorter sides of the box the title **Ochk'in Kaloomte'**, or "*West Kaloomte*" appears ([Figure 5](#)). The title *Kaloomte* is the highest personal title that is known from the Maya inscriptions, and was given only to a high king.

Second, the name of a high-ranking individual appears mentioned twice. Mathews and Guenter read this name as **Tajom U Haab**, a quasi identical name as the one appearing on Piedras Negras Panel 2, which reads **Tajom U K'ab' Tuun** who also has the title **Ochk'in Kaloomte** ([Figure 6](#)).

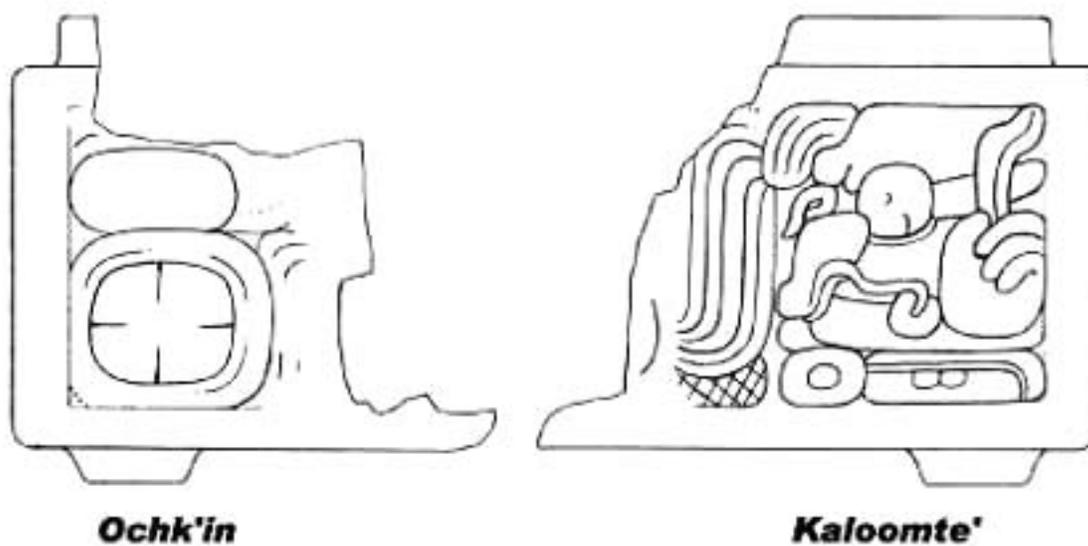


Figure 5. Royal title recorded on the Álvaro Obregón Box (Drawing by Peter Mathews).

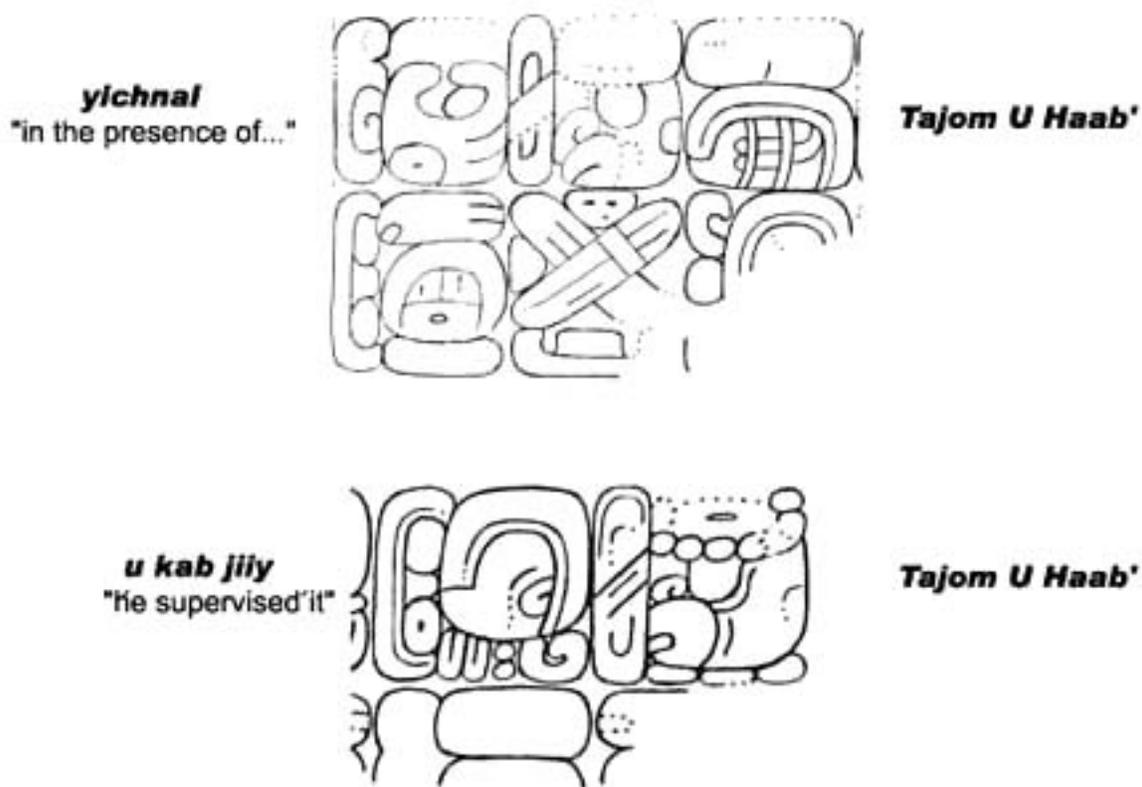


Figure 6. Name clause and titles recorded in the Álvaro Obregón Box (Drawing by Peter Mathews).

In the box the first occurrence of **Tajom U Haab's** name is preceded by the glyph **yichnal_** "in the presence of..." which normally appears between the name of the local ruler and his overlord. In the second instance the name is preceded this time by the expression **u kab' jiiy**, "he supervised it" both expressions imply a hierarchical relationship and are undoubtedly declarations of political subordination (Grube and Martin 1998) (Figure 6, shown above).

The significance of this text for our purposes lies in the implications of political subordination that existed between the local ruler of the valley and the Piedras Negras king. The box itself could have had the same symbolic function that Golden (1998) ascribes to the lintels of La Pasadita, as a means of cementing the relationship between the king and his under lords, which would in turn safeguard the integrity of their domain.

Results of Fieldwork

During the 2003/04 field season 30 sites were surveyed ([Figure 7](#)), most of which had been previously recorded by the Proyecto Atlas Arqueológico. It was noted that the UTM coordinates for some of the sites recorded during the Atlas Arqueológico Project were off in some cases by over 100 m. These sorts of errors are to be expected if we consider that GPS technology and accessibility to un-distorted satellite signals were limited. As mentioned above the survey transects were established on the basis of the predictive model results and proximity to tracks that may have been used in antiquity as routes of communication. Additionally surveys were conducted on an ejido by ejido basis, taking advantage with this of the local knowledge as well as the support of the communal authorities. Three of the visited sites lie in relative proximity of the high potential areas identified by the Dempster-Shafer. A brief description of a sample of these sites follows:

Ejido Santa Rosa

Agua Sucia: This site was originally recorded by the Atlas Arqueológico project. It lies close to the entrance to the valley, approximately 200 meters to the southeast of a location that was identified by the predictive model as having high potential area, and hence was targeted for a detailed survey. The site however is composed by a couple of non-masonry structures and no archaeological materials were observed on the surface.

Santa Rosa 1 is located at the natural pass of the Redención del Campesino Valley, opposite to Agua Sucia. This site was also first recorded by the Atlas Arqueológico project. No structures were recorded for the site, and our attempts to locate it were unsuccessful. Nevertheless, the site was included in the final analysis.

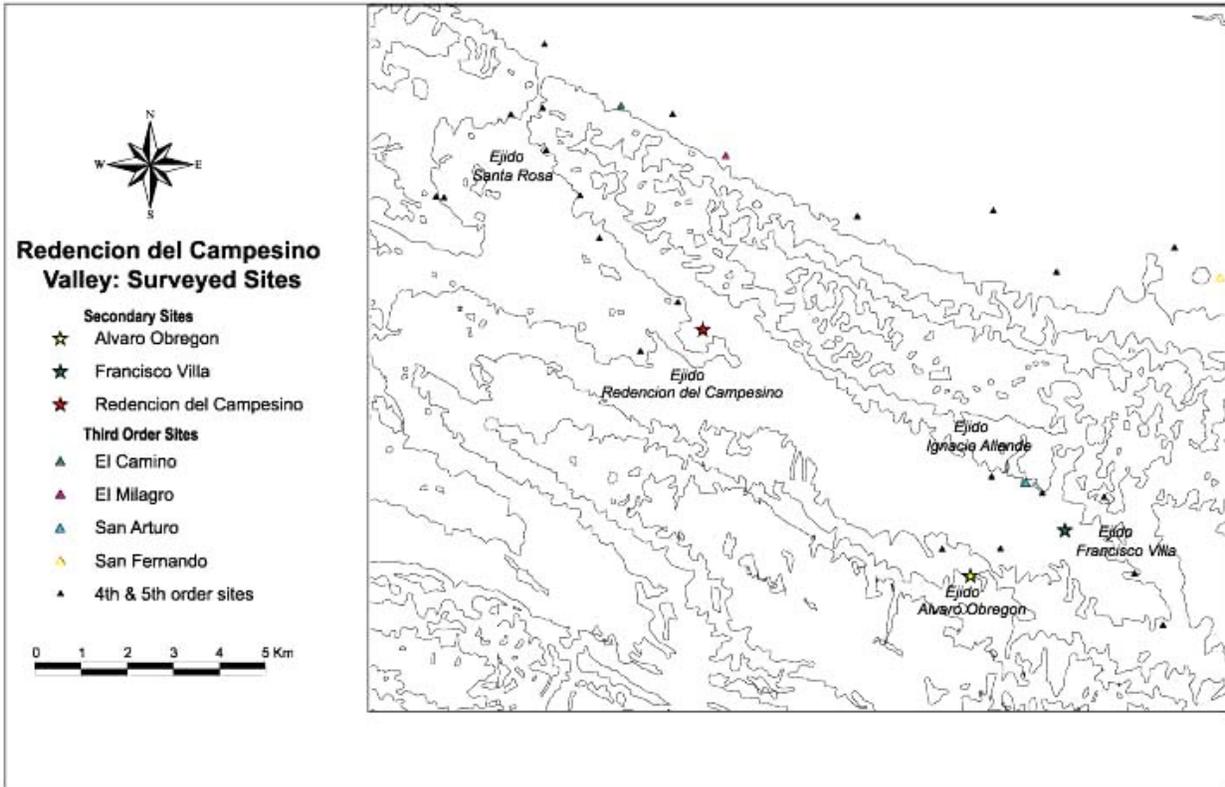


Figure 7. Sites Surveyed in the Redención del Campesino Valley.



Plate 5. Santa Rosa mound.

Santa Rosa 2: At this ejido an isolated mound about 50 × 40 m and 4 m high was found in the proximity of one of the high potential areas picked up by the model. The mound was constructed using amorphous limestone and packed dirt. Although most of the mound itself is within a milpa agriculture field, the area immediately to the south of it is covered by dense secondary acahual overgrowth, thus it is possible that other low platforms may be present ([Plate 5](#)). To the east the land turns into *bajo* swampland and a small perennial lagoon that reaches a depth of 5 m.

Santa Rosa 3: About 200 m to the west and south of the mound a series of steep sloped hills are found. The exposed escarpments suggested the presence of caves ([Plate 6](#)). In fact our guide informed us of the existence of a cave on the west hill. This is located about 40 meters above the mound's ground level on the southeast-facing slope ([Figure 8](#)). The cave has a 7 meter wide entrance ([Plate 7](#)), and a big gallery of about 30 meters high ([Plate 8](#)). Unfortunately part of the ceiling has collapsed thus disturbing considerably the cave interior. Various pottery shards were seen scattered on the cave's floor. Along with these, snail shells and a fragment bone shaft piece were observed ([Plate 9](#)), thus suggesting a strong funerary function.

It is reasonable to assume that the isolated mound (with the possibility that other low platforms lie beneath the secondary overgrowth) may be part of an architectural complex, where funerary rituals took place prior to the ascent to the cave where the individuals would be interred. Although seemingly this site did not constitute a site of secondary political importance, its location, at the entrance of a smaller longitudinal valley that leads to another natural access into the coastal plain, suggests that extra local communities may have used it.



Plate 6. Santa Rosa cave hill.



Plate 7. Santa Rosa cave entrance.



Plate 8. Santa Rosa cave gallery.



Plate 9. Archaeological Materials in Santa Rosa cave.

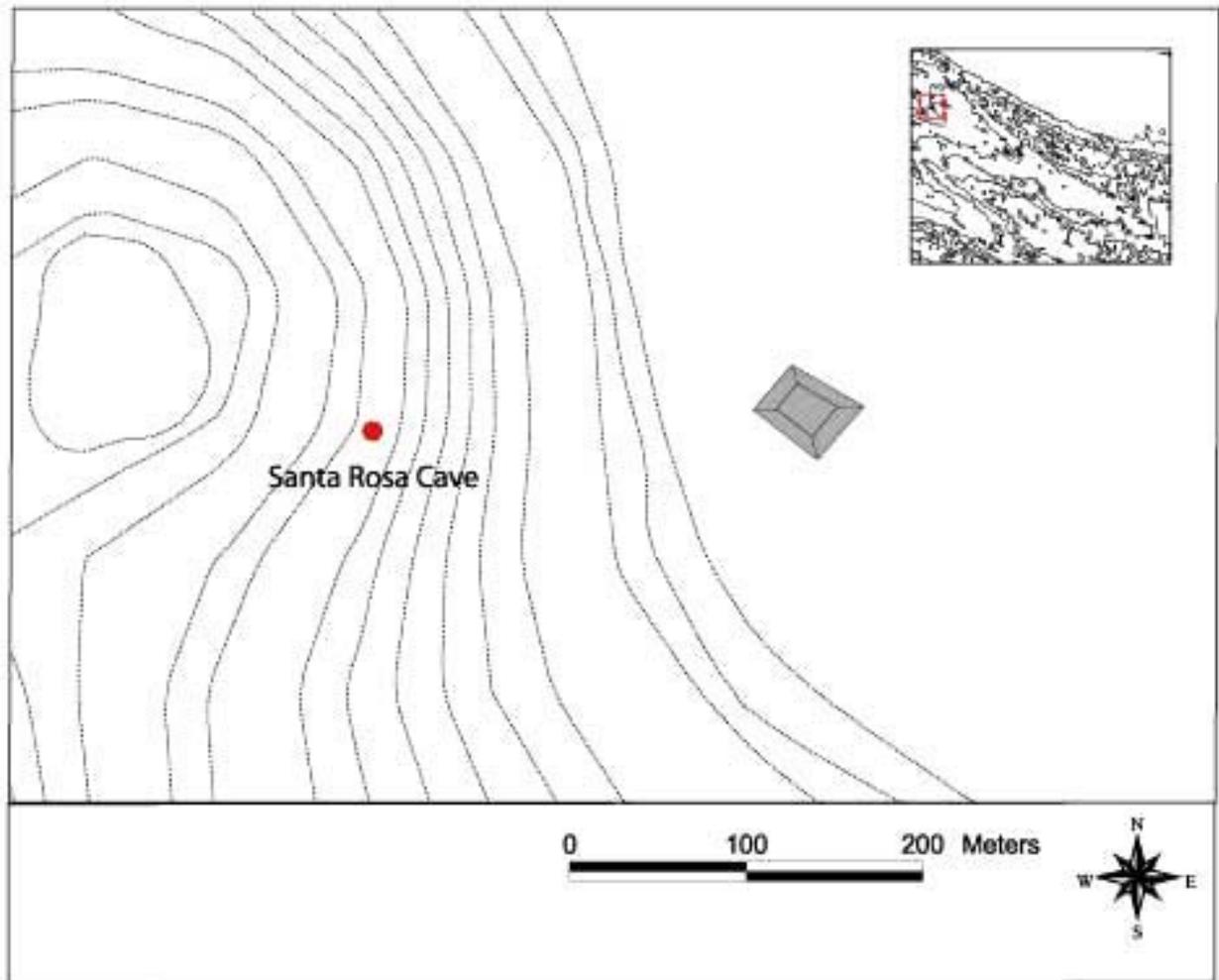


Figure 8. Santa Rosa mound and cave.

Ejido Redención del Campesino

Centrally located within the valley, judging by its extent this is by all means a site of major political importance within the Redención del Campesino valley site hierarchy. This site was previously recorded by the Atlas Arqueológico de Tabasco project as site E15D362705 (Redención del Campesino), with an extent of 104 hectares and a total of 7 structures. However, our survey revealed that the site may be over 128 hectares in extent of at least 30 structures distributed in four distinct groups temporarily dubbed Groups A, B, C and D ([Figure 9](#)).

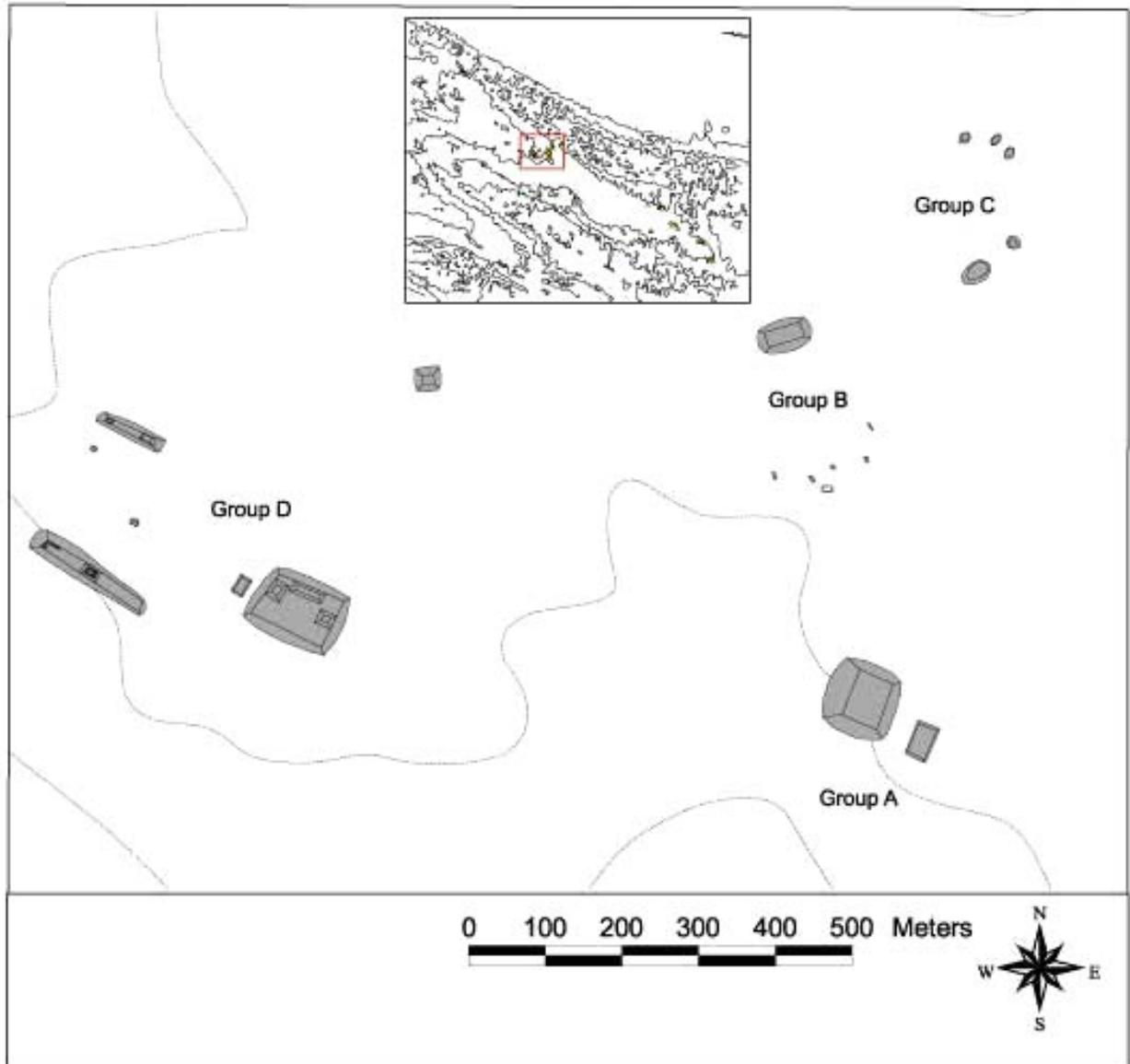


Figure 9. The Redención del Campesino site mound groups.

Group A: Located at the central plaza of the present day community of Redención del Campesino, Group A consists of a big multi-structured platform mound of at least 80 x 80 m area, and about 8 m high ([Plate 10](#)). The platform was built with coarse undressed limestone and packed dirt, taking advantage of an existing rock outcrop. This group has been considerably affected due to the urban growth of the present day village ([Plate 11](#)). The western portion of the main ground has been dug and leveled to support a series of houses and various smaller mounds were completely leveled and used as fill for the construction of the road and house foundations. A small platform located to the east of the main mound is now covered by a small dancing platform ([Plate 12](#)). Throughout the present village ceramic shards were noted to abound thus giving us an idea of the site density.



Plate 10. Redención del Campesino Group A, Mound 1.



Plate 11. Effects of urban growth on Redención del Campesino Mound 1.



Plate 12. Redención del Campesino dance platform and Mound 1.



Plate 13. Redención del Campesino Group B Patio Group.

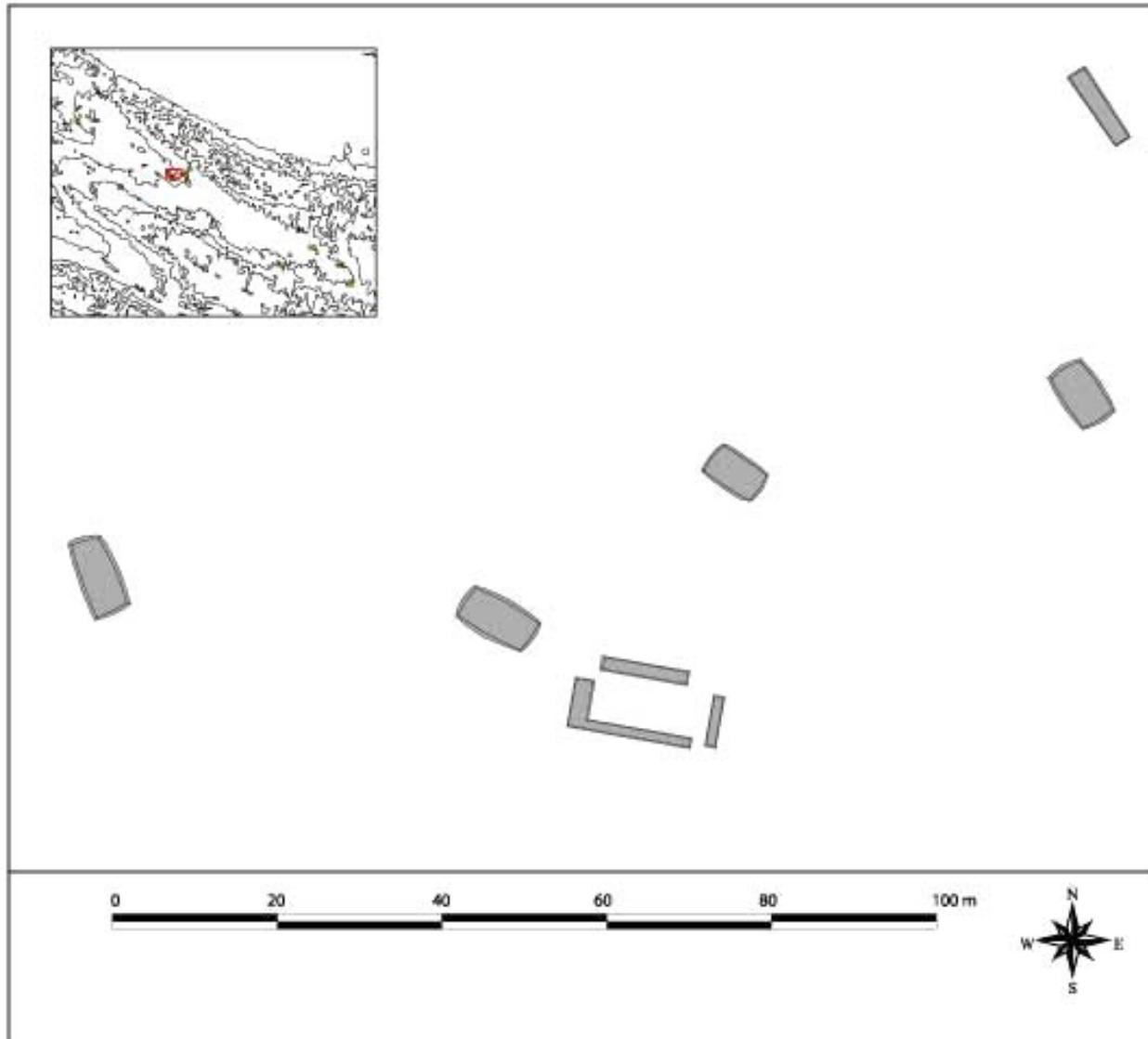


Figure 10. Redención del Campesino Group B.

Group B: This group consists of a series of low rectangular platforms, a distinct patio group and a large multi-structure platform ([Plate 13](#)). The patio group measures approximately 20 m × 10 m surrounded on all four sides by low platforms approximately 1.5 m high. To the north of the patio group five other low rectangular platforms were recorded, some of which a course of medium-sized dressed limestone blocks were still present ([Figure 10](#)).

About 200 m to the northwest of the patio group is a more sizeable platform. It measures approximately 70 m × 40 m and 4 m above the surface. Pothunters have heavily affected this platform as it presents several deep looters' pits. Nevertheless,

enough remains of the structure to discern that it contained various mounds and platforms at its summit.

Group C: This group is formed by a series of low mounds without a formal pattern built taking advantage of the knolls characteristic of the foothills of the nearby sierra ([Plate 14](#)). Various metate fragments and pottery shards were observed scattered around these mounds.

Group D: This is by far the biggest mound group of Redención del Campesino ([Figure 11](#)). Except for Mound 1 that is completely covered by secondary overgrowth, this group is located on pasture land. Mound 1 is approximately 30 m x 30 m, and 8 m high. The structure was built with a core of amorphous limestone and packed dirt covered with a veneer of well-dressed small to medium-sized limestone blocks. At its summit a big looters' pit was noted, our informant told us that not too long ago, remains of a standing wall could still be seen. However, due to the dense vegetation overgrowth it was impossible for us to assess if the quality of the debris suggested the presence of a masonry structure at the summit, or the presence of other lower structures adjacent to this mound.

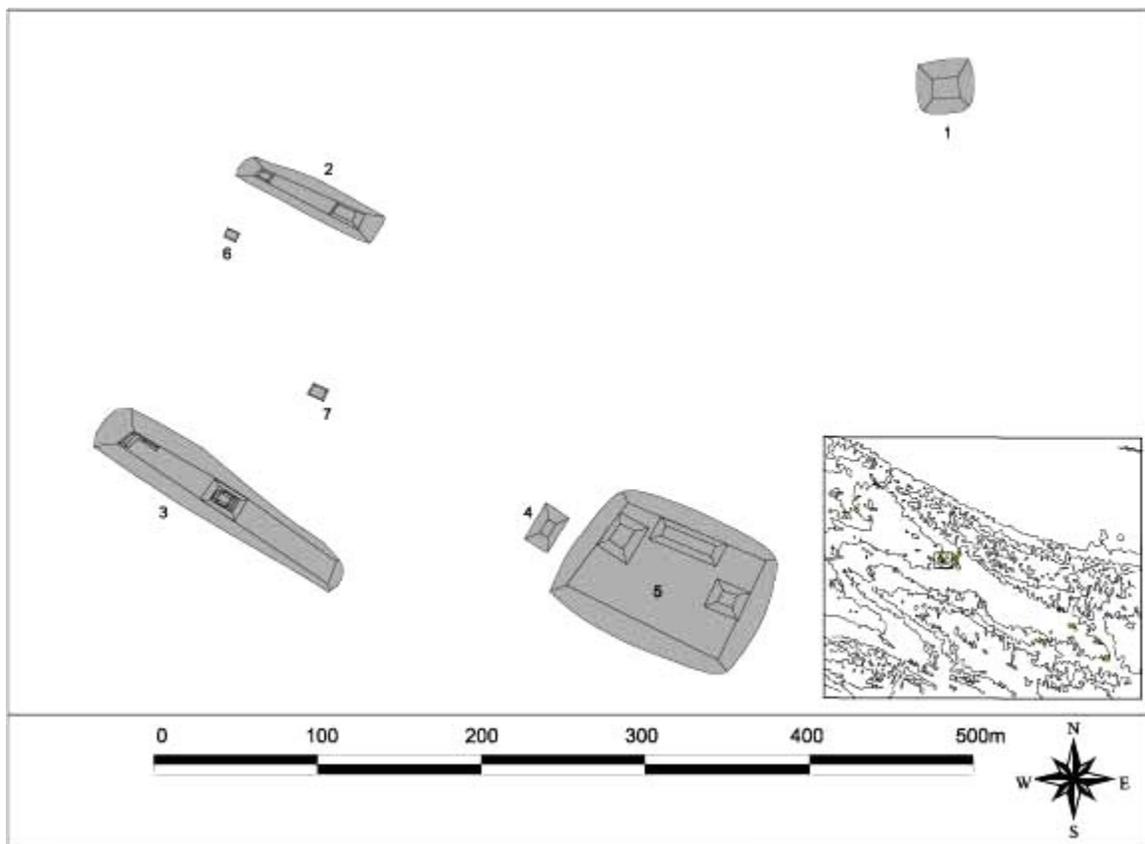


Figure 11. Redención del Campesino mound Group D.

About 350 m to the southwest of Mound 1 lies what could well have been the core area of the site. It consists of a platform and mound group laid out in a plaza of 280 m x 200 m. Two large longitudinal platforms limit the north and southern limits of the plaza. The northern structure, Platform 2, is 95 m long x 22 m wide, rising some 8 m above the plaza surface. At its summit two low platforms are located at its eastern and western ends. No evidence suggesting the presence of masonry superstructures was observed. Platform 3 marks the southern boundary of the plaza. It is about 175 m long x 32 m wide, reaching an elevation of almost 10 m above the plaza surface ([Plate 15](#)). Two low platforms limit the western end of the platform. Towards the central section lies a platform that supports a small patio group. This group consists of three low platforms limiting the north, south and west sides and a higher 2 m mound enclosing the east side. Platform 3 slopes gently to the southeast following the natural terrain.

Mounds 4 and 5 limit the eastern end of the plaza. Mound 4 is a 25 m x 17 m square plant platform about 5 m high ([Plate 16](#)), no evidence of a permanent masonry structure was observed at the top. Right behind this structure lays Mound 5; this is a 120 m x 90 m platform 7 to 8 m high. Three other masonry structures lie at the summit of this platform, the tallest of which rises almost 4 m above the platform floor ([Plate 17](#)).

The Atlas Arqueológico site E15D3627056 Redención del Campesino, was also visited. The records indicate that this site has an extent of 85 hectares, and contains 13 structures. Unfortunately the site has been irremediably ravaged by the urban development. Its masonry structures have been used as fill material for construction of the road, dwellings, and the village water tank ([Plate 18](#)). Our local informants mentioned that the site was composed of long low platforms arranged in a longitudinal layout.



Plate 14. Redención del Campesino Group C Mound.



Plate 15. Redención del Campesino south platform Group D.



Plate 16. Redención del Campesino Group D Mound 4.



Plate 17. Redención del Campesino Group D Mound 5.



Plate 18. Destroyed site at Redención del Campesino.

Ejido Ignacio Allende

Two Atlas Arqueológico sites were re-visited at ejido Ignacio Allende: Ignacio Allende (E15D3627061), composed by 7 structures in extending over 6 hectares, and San Arturo (E15D3527032) recorded as having one structure in an area of 1 hectare. The land on which the former is located was completely covered by secondary undergrowth, thus making it difficult to access. The site has been virtually destroyed by pothunters and urban development; its materials have been used as road fill. A single low mound was located. The mound was about 10 m × 8 m and no higher than 1.5 m, judging by the remains of metate fragments observed, it is possible that this mound corresponded to a domestic structure.

The site of San Arturo proved to be larger than the former and although the present day road cuts through it, it is in a better state of preservation than the previous site. It consists of a group of platforms located on a natural terrace situated along the gentle slope of the sierra foothills that are presently used for *milpa* agriculture ([Figure 12](#)). The platforms were built taking advantage of the natural slope using undressed limestone and packed dirt.

The predictive model identified a high potential area in the vicinity of Ignacio Allende. This area is located within a natural opening on the sierra ([Plate 19](#)), and was surveyed in the hopes of finding an access route to the coastal plain and a site associated to this ([Figure 13](#)). However, no access to the plains or large site was found during the survey. Nevertheless, a small 20 m × 7 m platform was found at the end of the track in the valley surrounded by seasonally flooded *bajos* ([Plate 20](#)).



Plate 19. Natural Pass at Ejido Ignacio Allende.



Plate 20. Ejido Ignacio Allende platform.

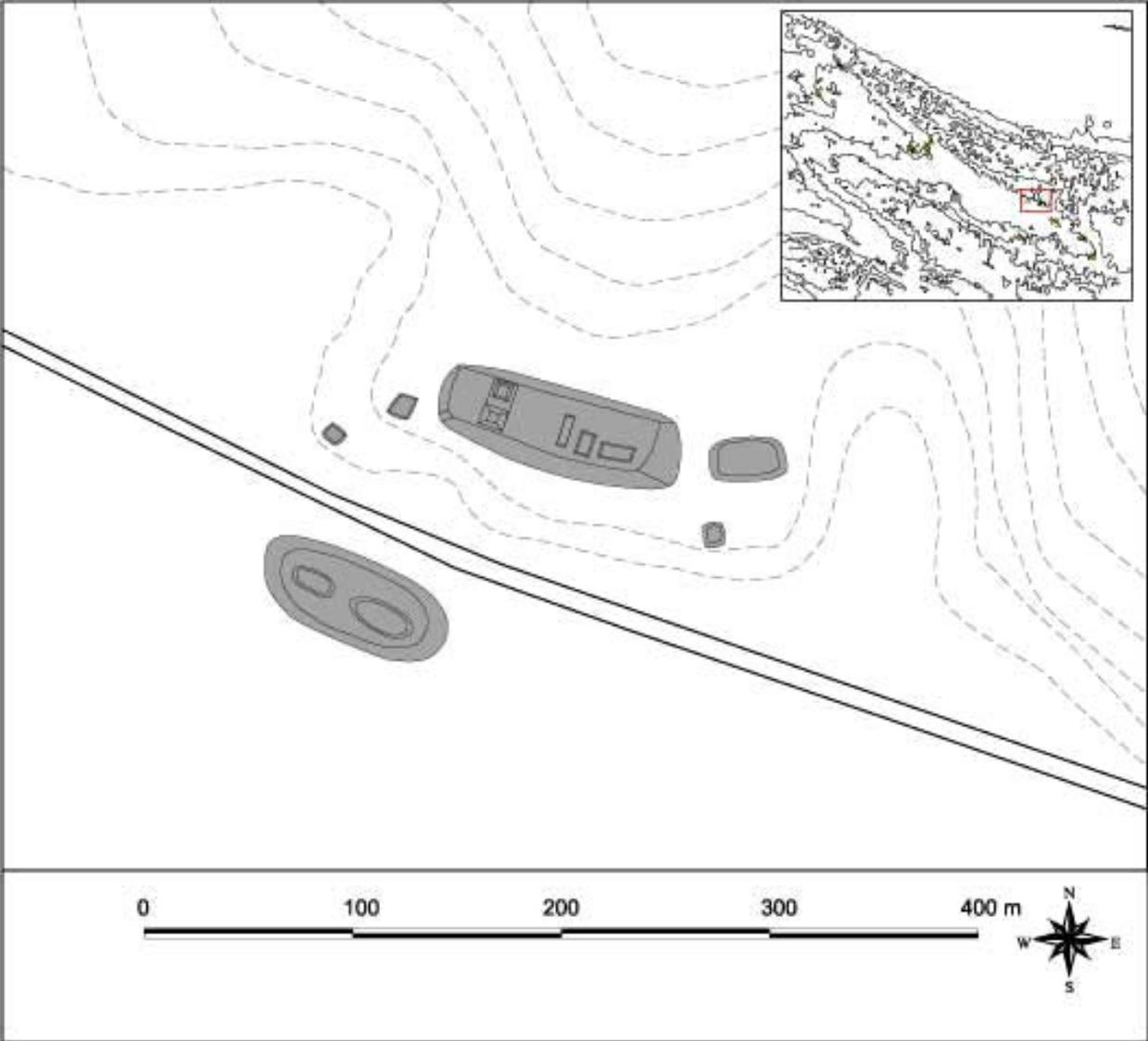


Figure 12. San Arturo mound group.

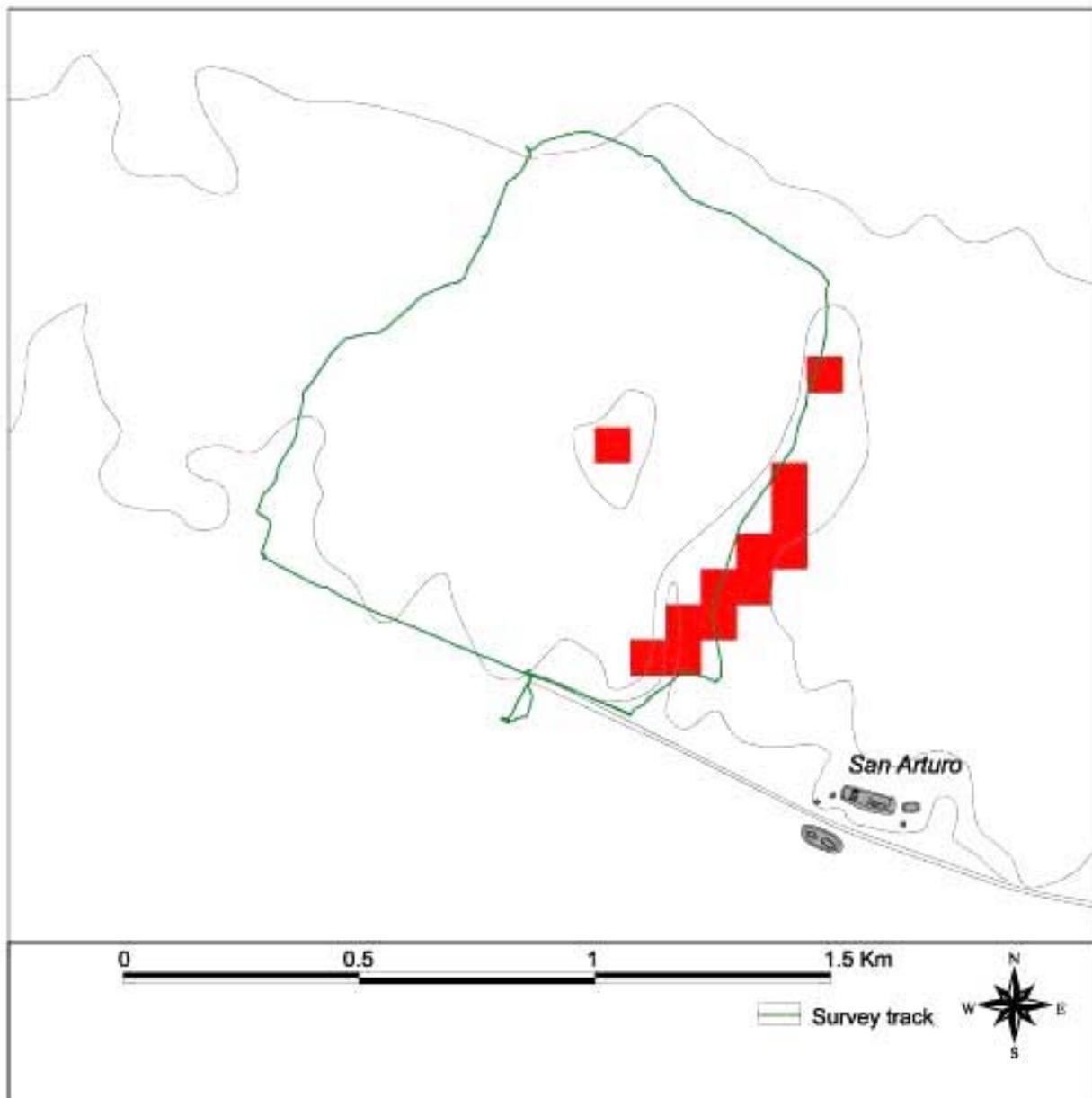


Figure 13. Ignacio Allende Survey track.

Ejido Francisco Villa

Four different sites were surveyed at ejido Francisco Villa, one of which was Atlas Arqueológico site El Tinaco (E15D3627040). Due to the GPS limitations mentioned above, this site's coordinates are off for about 600 m to the east and 350 m to the south. The site was re-visited because it's in the vicinity of the entrance to the smaller El Repasto Valley, situated to the east of the Redención del Campesino Valley. The site is recorded as having 16 structures extending over 2.4 hectares, hence had a potential for being a center of some political importance. The site in fact does not seem to warrant

relevant importance. Although it is likely that it may have been affected by the construction of the ejido's water tank (hence the name), its mounds were built taking advantage of rock outcrops and the natural rolling hills adjacent to the sierra. These were reconditioned using amorphous limestone and packed dirt ([Plate 21](#)). Albeit most of the land where the site lies is currently under cultivation, no surface materials were observed during the survey.

Francisco Villa: this site consists of a small disperse mound group consisting of 2 low platforms and 3 mounds ([Figure 14](#)). Platform 1 measures 16 m × 15 m, and 1.5 m high, built with packed dirt and amorphous limestone blocks. Platform 2 constitutes a small patio group measuring about 30 m × 30 m reaching a maximum height of almost 2 m ([Plate 22](#)). The patio is enclosed on all four sides by low platforms and mounds built with roughly dressed limestone blocks and packed dirt. Unfortunately this patio group has been subject to recent looting, presenting a couple of looter pits towards its northeastern section. Directly to the west of the patio group, in the middle of a cornfield, lie Mounds 3 and 4. These mounds were built with packed dirt taking advantage of the gentle foothills slopes. Abundant ceramic materials were observed throughout the cornfield. Overall, the site may represent a rural outlier of El Tinaco site, located just 700 m to the north.

El Tigre: this previously unrecorded site is formed by at least five major masonry structures constructed with dressed limestone blocks ([Figure 15](#)). Several smaller mounds and platforms built with packed dirt were also observed. Mound 1 is the smallest of the group, it measures approximately 27 m × 27 m rising about 6 m above the ground level. Structure 2 constitutes a reconditioned platform built on a natural hill ([Plate 23](#)). It measures about 85 m × 100 m and 10 m high. At its summit two low platforms built with well-dressed fine-grained limestone blocks are found. These may represent habitation structures, as scattered across the summit are metate fragments and pottery shards. About 200 m to the southwest lay Structure 3. With a 75 m × 75 m area and rising almost 20 m above ground level, this structure represents the tallest mound in this group ([Plate 24](#)). Although Mound 3 was built with well-dressed limestone blocks no evidence of having supported a vaulted structure was observed. Mound 4 is a 10 m high, 50 m × 50 m masonry structure, built with amorphous limestone blocks and packed dirt. Once more no evidence of a vaulted superstructure was observed. The last structure surveyed is a massive platform of around 140 m × 100 m supporting a 10 m high mound. This structure was completely covered by dense secondary overgrowth, which made it impossible to survey in greater detail, however, as with the previous structures, the latter did not show any evidence of having supported a vaulted structure.

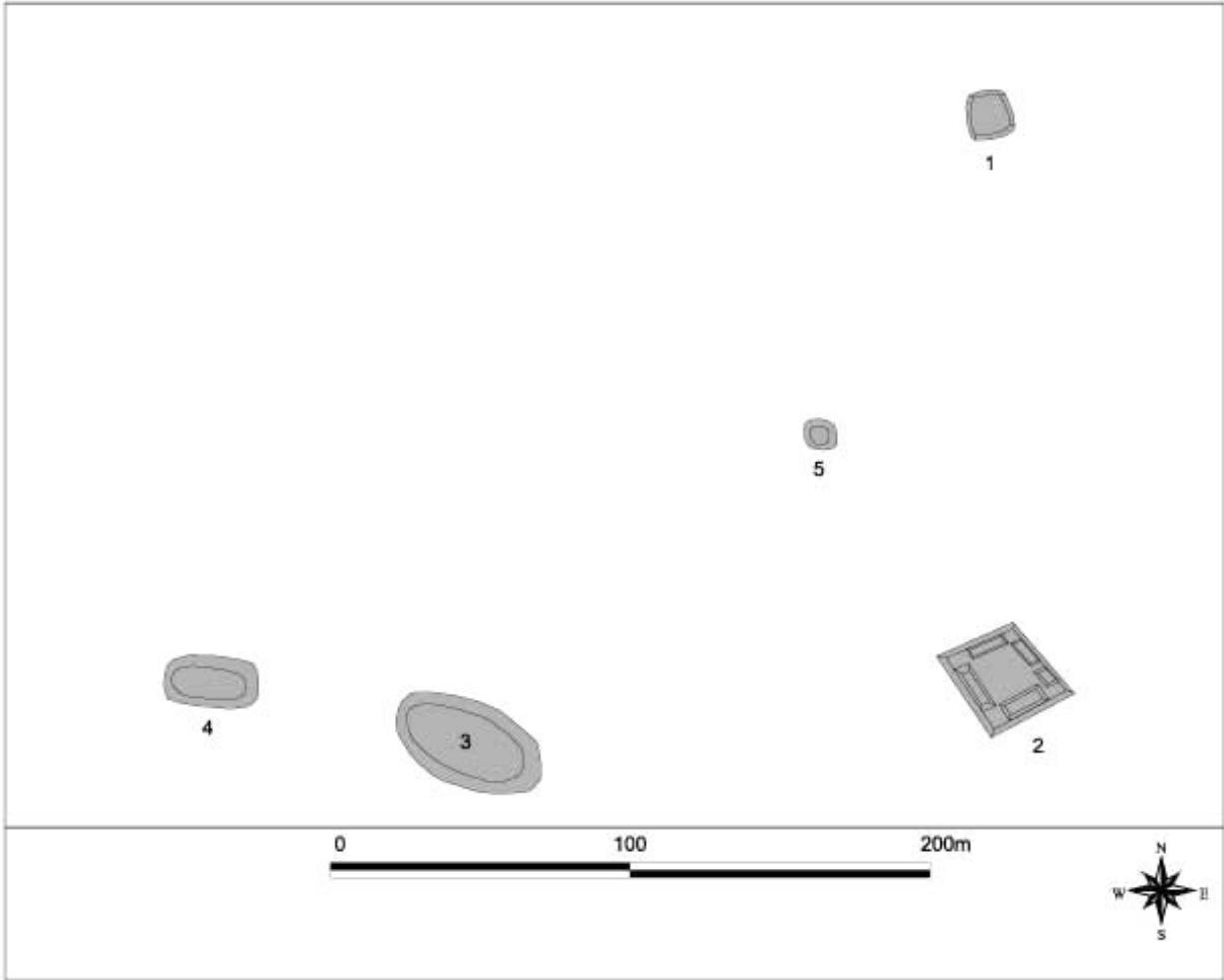


Figure 14. Francisco Villa mound group.

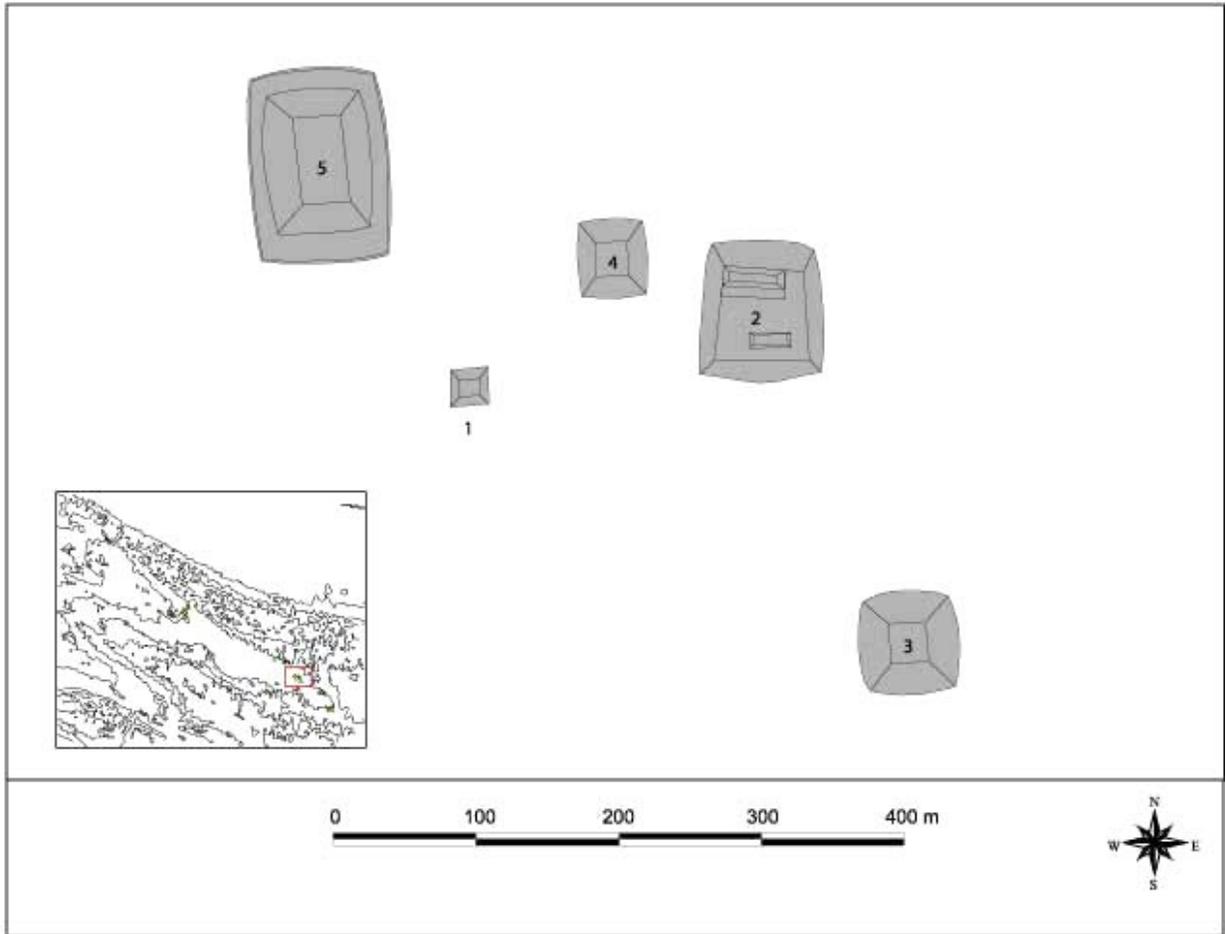


Figure 15. El Tigre mound group.



Plate 21. Ejido Francisco Villa "El Tinaco" site.



Plate 22. Ejido Francisco Villa Patio Group.



Plate 23. El Tigre Mound 2.



Plate 24. El Tigre Mound 3.

Ejido Álvaro Obregón

Three sites were visited in Álvaro Obregón, the first of which I have already mentioned at the outset, Álvaro Obregón 1. This is an isolated patio group located at the summit of a 40 m high hill situated behind the present-day village of Álvaro Obregón. The group may represent an elite domestic compound; the central patio measures around 20 m x 13 m and its enclosed on all four sides by low masonry mounds and platforms that range from 1.5 m to 4 m high ([Figure 16](#)). As mentioned before, this group has been seriously affected by the construction of the village water tank, as it was used as source of construction material. However, it is important to stress that the community of ejido Álvaro Obregón has taken an active role in protecting this mound group and other archaeological remains within their lands.

Álvaro Obregón 2: this is a new site that was not recorded by the Atlas Arqueológico project. It is the site that was mentioned to me during the last field season. Álvaro Obregón 2 is located in the close vicinity of the wooden box cave ([Plate 25](#)), and between 200 and 300 meters from where our probability model identified a high probability area ([Figure 17](#)). However, it is important to recognize that the site location is densely forested, thus faulty GPS readings are a possibility. Judging by the size and quality of its structures, the site seems to have been an important center within the valley's political structure. Álvaro Obregón 2 is composed by a massive platform located on top of a steep hill that supports various masonry structures. The structures were built with big limestone blocks of about 1 m x .30 m x .30 m, which by comparison with the other sites are the biggest so far observed ([Plate 26](#)). Likewise, this is the only site in the valley that we visited that has unequivocal evidence of the presence of vaulted buildings. We observed a big well-dressed limestone slab lying amongst the rubble of a collapsed building that has the characteristic shape of a cornice ([Plate 27](#)). Unfortunately the site was covered by dense vegetation hampering our attempts to produce a more detailed field map, however, various waypoints were taken to delimit the core area of the site where monumental structures were observed ([Plate 28](#)).

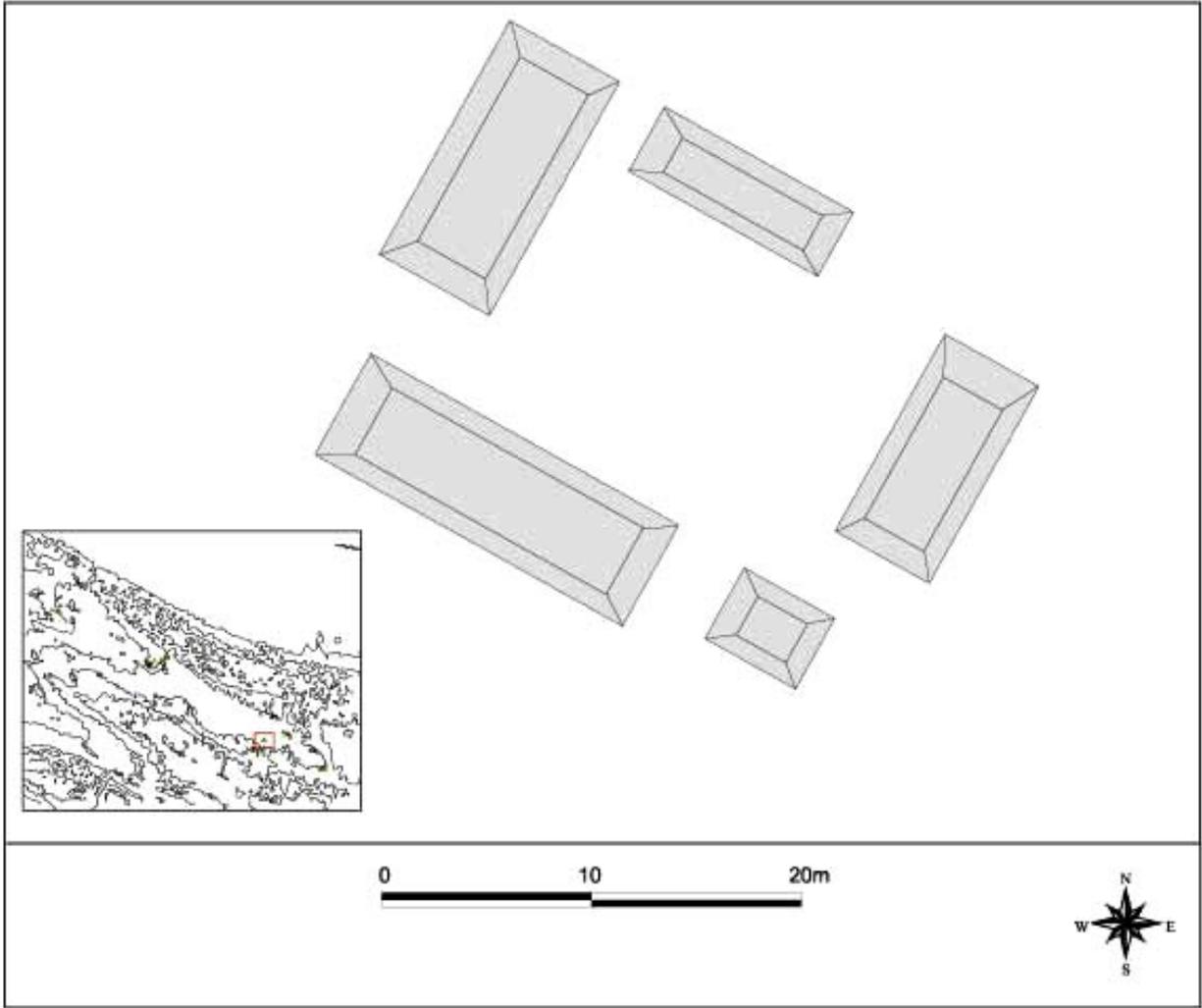


Figure 16. Álvaro Obregón I patio group.

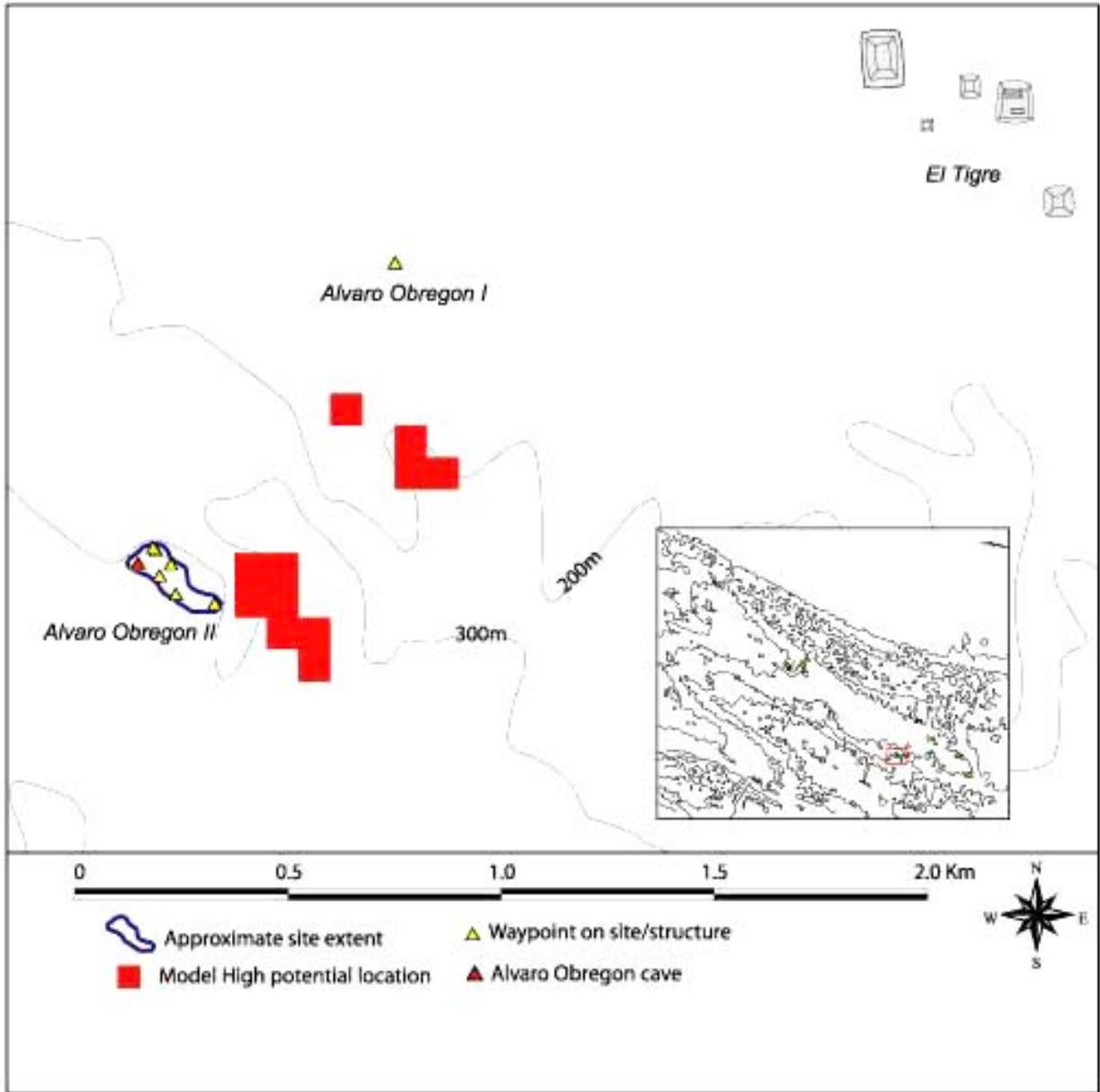


Figure 17. Location of Álvaro Obregón II.



Plate 25. Ejido Álvaro Obregón cave site.



Plate 26. Álvaro Obregón 2 platform wall.



Plate 27. Álvaro Obregón 2 cornice.



Plate 28. Álvaro Obregón 2 monumental platform.

Sites Outside the Valley

Due to their proximity to the natural access to the valley and a location identified as High potential by the Dempster-Shafer model, four sites outside the Redención del Campesino Valley were surveyed. These were: Francisco Ortiz, El Camino, La Antena, and El Milagro. Of these, only El Camino and El Milagro have remains of masonry architecture, albeit structures were constructed taking advantage of the terrain using undressed stone and packed dirt. Neither of these sites, however, suggests any strategic importance and may represent no more than rural outliers subsidiary to the main centers.

Site Hierarchy in the Redención del Campesino Valley

The information gathered during the archaeological survey of the Redención del Campesino Valley, and the Proyecto Atlas Arqueológico constitutes the basis of the site hierarchy scheme that we present. This takes into account number of structures, and quality of architecture (see [Table 1](#) below), as well as the actual location of the sites within the valley. In this context three sites dominate the landscape: Redención del Campesino, Álvaro Obregón, and El Tigre. We consider the first two to be equivalent to secondary sites such as Panhalé, La Pasadita, or La Mar, while El Tigre may represent an outlier of Álvaro Obregón and may have been exclusively an administrative center.

Albeit several sites within the Valley are recorded as having 10 or more structures, for the most part these are low mounds and platforms built with undressed stones and packed dirt. Only San Arturo warrants its consideration as a Third level site ([Figure 17](#)). Outside the valley, El Camino, El Milagro and San Fernando also fall within this class. The remaining sites were classed as fourth or fifth order sites that more likely represent rural outliers of the bigger centers.

In order to define the territory that could efficiently be serviced by the higher echelon sites, a location/allocation model was applied. This model took into consideration the characteristics of the terrain in terms of cost of movement, and is similar to the one applied to estimate the boundary between Pomoná and Piedras Negras (see section on [Landscape and Political Geography](#)). The resulting allocated areas are presented in [Figure 18](#).

Table 1. Redención del Campesino Valley Sites			
Name	Number of Structures	Dressed Masonry?	Vaulted Structures?
Redención del Campesino	30	Yes	No
Álvaro Obregón 2	20	Yes	Yes
El Tigre	17	Yes	No
El Tinaco	16	No	No
El Camino	14	No	No
San Fernando	12	No	No
Las Lomas	11	No	No
Los Corrales	11	No	No
El Milagro	11	No	No
San Arturo	10	No	No
La Union	8	No	No
Doña Salud	8	No	No
Ignacio Allende	7	No	No
La Antena	6	No	No
Álvaro Obregón 1	6	Yes	No
El Mangal	5	No	No
Los Frutales	5	No	No
Francisco Ortiz	4	No	No
Camino a San Marcos	4	No	No
Bejucal	4	No	No
San Antonio	3	No	No
La Parcela	2	No	No
Agua Sucia	2	No	No
Santa Rosa 2	1	No	No
Margarito	1	No	No
Reforma Agraria	1	No	No
Santa Rosa 3	0	No	No
La Mensura	0	No	No
Camino Viejo	0	No	No
Rogelio García	0	No	No
Corral de Don Braulio	0	No	No
Santa Rosa 1	0	No	No

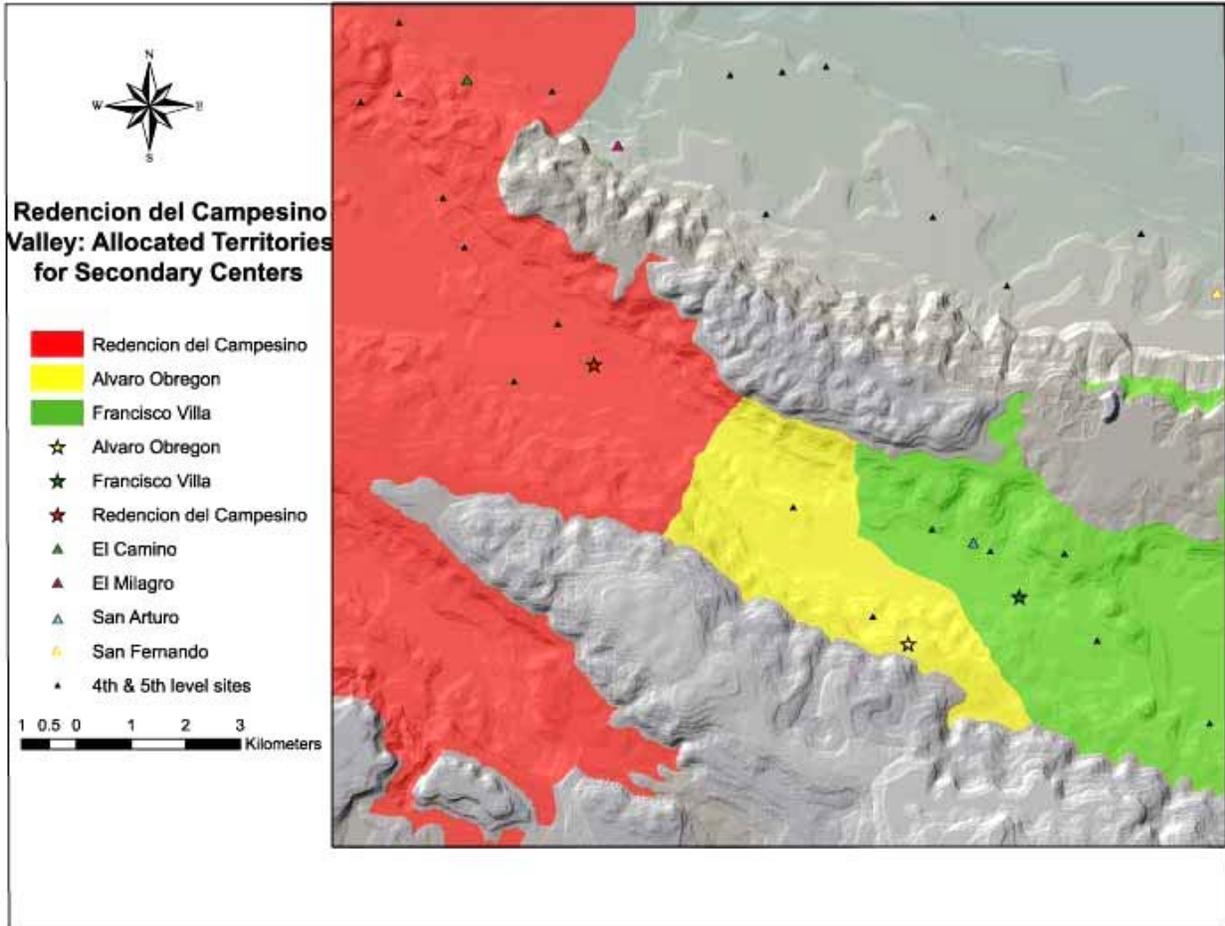


Figure 18. Extent of optimal areas serviced by secondary centers.

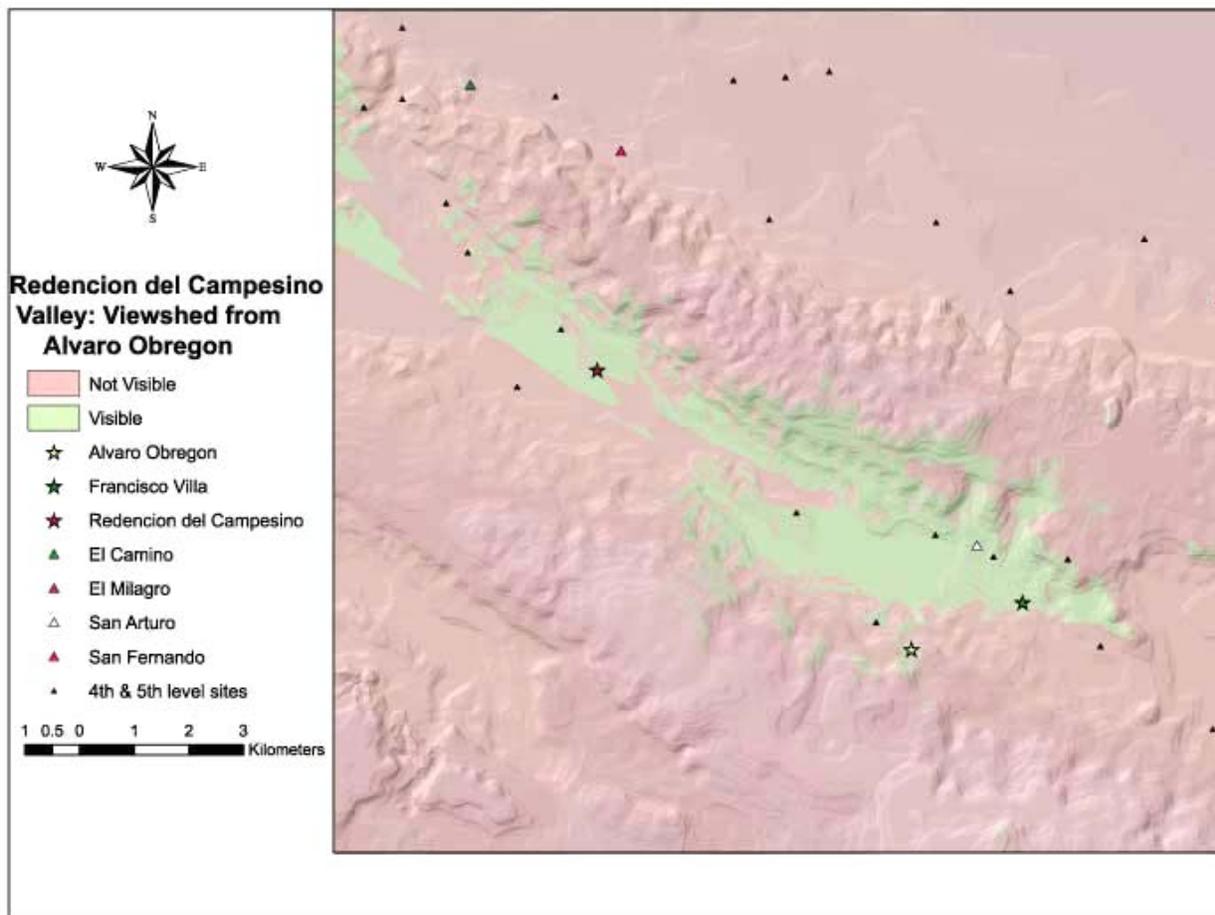


Figure 19. Area visible from Álvaro Obregón.

It becomes apparent that the central location of Redención del Campesino offers a definite advantage in terms of access and control of the main communication routes. Interestingly, although Redención del Campesino is the biggest center in the valley and contains the greatest amount of masonry structures, no clear evidence of vaulted buildings (an expected feature in a political/ceremonial center of any relevance) was observed. It's pertinent to point out that our initial assessment of the ceramics observed at the site reflects a longer occupation history, suggesting a site growth from west to east (Figure 9: Group D to A), thus the actual limits of the site are likely to have varied through time.

As mentioned above, Álvaro Obregón 2 albeit being smaller in extent compared to Redención del Campesino, represents the only site surveyed in the valley with unmistakable evidence of vaulted buildings and monumental platforms constructed with massive well-dressed blocks (see Plate 26, Plate 27 and Plate 28). The location of Álvaro Obregón provides a commanding view of the valley; potentially Redención del Campesino would be within visual reach (Figure 19). Furthermore, the very steep slopes surrounding this center, gives it a definitive military advantage particularly during the belligerent times that characterized the Late Classic.

Although Álvaro Obregón was definitely an important center within the valley, access to it was considerably hindered by its location. Thus the possibility that this site constituted the administrative hub of the valley is unlikely. Redención del Campesino is in a much better position to claim this status. Nevertheless, it is on the basis of its very location that we propose that this site was indeed the seat of the local ruler, especially in troubled times when a center of this nature may have offered safe haven to besieged nobility.

Conclusions

During the first phase of the Redención del Campesino Archaeological Survey the valley was intensively surveyed in order to ground-truth the site prediction model. The survey tracks were established in accordance to the high probability areas identified by the model. Of the sites visited only four were in close proximity to the high probability areas. The first, Santa Rosa represents a site that although may have been of certain ritual importance, it certainly did not constitute a political center. The second, Agua Sucia, consisted of a couple of mounds that perhaps functioned as a checkpoint for incoming-outgoing traffic. The third site, San Arturo, although a more complex multi-structure site was definitely not a center of administrative importance rather more of a residential outlier. The natural opening on the sierra located near the site ([Figure 13](#)), did not constitute a passage to the coastal plain. On the other hand, the site of Álvaro Obregón 2 proved to be a site of quite impressive masonry structures, thus suggesting a focal role. Álvaro Obregón 2's strategic positioning gives the site a commanding view of the valley from where it could have controlled traffic, while at the same time the steep hill on which it's located makes it easily defensible.

Overall the results of the predictive model were more than satisfactory. It identified within an acceptable range, the location of a very important political center. However, more work needs to be done, the fact that the locations of Redención del Campesino and El Tigre were not picked up by the model indicates that this will need further refinement. Likewise, when completed, the ceramic analysis will assist us in defining the occupational history of the valley.

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