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Choquequirao, Topa Inca's Machu Picchu: a royal estate and ceremonial center

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Abstract. We provide a history and description of the Inca archaeological complex of Choquequirao, located high on a narrow ridge above the Apurimac River in a remote region of the Vilcabamba of Peru. We suggest that Choquequirao was built as a royal estate during the late 15th century by the Inca ruler, Topa Inca Yupanki, modeled after Machu Picchu. It was built in part by workers imported from Cachapoyas in Northern Peru. The site has alignments with the June and December solstices suggesting a strong solar focus and year-round ceremonial activities. A large truncated hill served as a ceremonial platform or *ushnu*. The platform was accessed through a double-jamb entranceway, indicating that passage was probably limited to those of high status. We suspect Choquequirao functioned as a ceremonial center. It shares with Machu Picchu the remoteness, 'other worldliness', and liminality that are found in many pilgrimage centers of the world. Though Choquequirao, high above the Apurimac River, has a location that is equally as dramatic as Machu Picchu, it lacks the formable geological material required to create imperial-style monumental structures and shaped stone *huacas*. Choquequirao was occupied during the early colonial years by the Neo-Inca, and was abandoned sometime after the death of the last Inca in 1572. It is a fascinating puzzle that Spanish travelers of the time apparently never reached or described this major Inca complex, which was the most impressive in the Vilcabamba. Somehow, the Inca managed to keep it secret although relatives and others journeyed back and forth to colonial Cusco.

Keywords. Inca royal estates, Machu Picchu, solstice sun, Topa Inca

1. Introduction

The Choquequirao archaeological complex is situated at an elevation of 3000m on a southwest-facing spur of a glaciated peak above the Apurimac River, which flows some 500m below. The site is 98km west of Cusco in the rugged, cloud-forest covered, remote Vilcabamba Range. The large two-storey, gabled residences and abundance of high status double-jamb entranceways are similar to those of Machu Picchu and Topa Inca's Royal Estate at Chinchero. The site contains a number of features that are clearly ceremonial in intent such as the large ushnu built on a truncated hill, the Giant Staircase, and an aqueduct providing water to water shrines.

The Inca Pachacuti established a pattern for royal estates during the height of imperial Inca expansion across western South America. He first built an estate at Pisac near Cusco, next at Ollantaytambo, a preexisting town with ceremonial aspects then finally, Machu Picchu (D'Altroy 2003; Rowe 1990).

Topa Inca Yupanqui, the son of and successor to Pachacuti, expanded the imperial reach well beyond the borders of present day Peru. Faced with a desire to establish his own estates, he secured holdings not far from Cusco, the most notable being highland

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Chinchero (D'Altroy 2003). Viewing Pachacuti's magnificent mountain estate, Machu Picchu, he may have felt pressure to create something of equal grandeur. It is clear, for example that Pachacuti's grandson, Huayna Capac, was determined to surpass his father and grandfather in the grandeur of his estate (Niles 1999).

The Chachapoya in northern Peru were first contacted militarily by Topa Inca and later were fully incorporated into to the expanding Inca empire by Inca Huayna Capac. Moving colonists around the realm was established Inca policy, particularly those with skills needed for a particular project. Because architectural style of several important features at Choquequirao appears to be of Chachapoya design, it is probable that early imported Chachapoya workers were involved. The presence of these design elements eliminates Pachacuti's administration as builders of Choquequirao, leaving only Topa Inca and Pachacuti's grandson Huayna Capac. Although Huayna Capac established an estate near Urubamba (Quespiwanka), he concentrated on conquering the far north in Ecuador where he was building a new capital city at Tomebamba. It seems unlikely that he would have undertaken another major project in isolated Vilcabamba. Topa Inca favored high places such as Chincnero. The estate of Huayna Capac lies at the bottom of the Urubamba canyon. Topa Inca's desire would probably have to find another high site for his second royal estate. Additional evidence supporting the claim that Choquequirao was an estate of Topa Inca is provided by colonial documents in which his greatgrandson, Tupac Sayri, leader of the panaca of Tupa Inca, claimed owernship of Choquequirao and neighboring lands (Duffait 2005).

2. History

The first reported visit to Choquequirao was by a prospector, Juan Arias Díaz Topete, in 1710. Several others including the French explorer, Eugène de Sartiges, reached the place during the next century. The first mapping and survey was conducted by a party led by Hiram Bingham in February 1909 (Bingham 1910). Measurements and photos taken by Bingham and his associate, Clarence Hay, produced the first site map and a reasonable topographic chart of the surrounding terrain.

Choquequirao was then largely ignored until the Peruvian government showed interest in the late 1980s. Fewer than a hundred visitors were recorded to have reached the site since Bingham. In 1986, a preliminary study of Choquequirao was conducted for the government by the Peruvian architect Roberto Samanez (Samanez *et al.* 1995). In 1992, a government restoration, preservation and investigation project by the agency COPESCO, directed by the Peruvian archaeologist Percy Paz, was started (COPESCO 1998). Paz and team have completed a site survey, supplemented by aerial photos, a topographic map and GPS positioning. Our map, based upon that of COPESCO, is shown in Fig. 1. During May 2003, while we were searching for Llactapata, we tested our thermal infra-red camera on a flight over Choquequirao and obtained infra-red images of the site. One of the strongest infra-red signals came from the Giant Stairway because of its massive stone construction.

3. Description

Discoveries during the last fifteen years reveal Choquequirao to be a diverse, large archaeological complex spread over more than 6 km^2. The main structures are concentrated around two leveled plazas encompassing approximately 2 km^2 along the crest of the ridge (Fig. 2). Inca urban design frequently incorporates two distinct groups called *hurin* (lower) and *hanan* (upper). The main groups at Choquequirao appear to follow this

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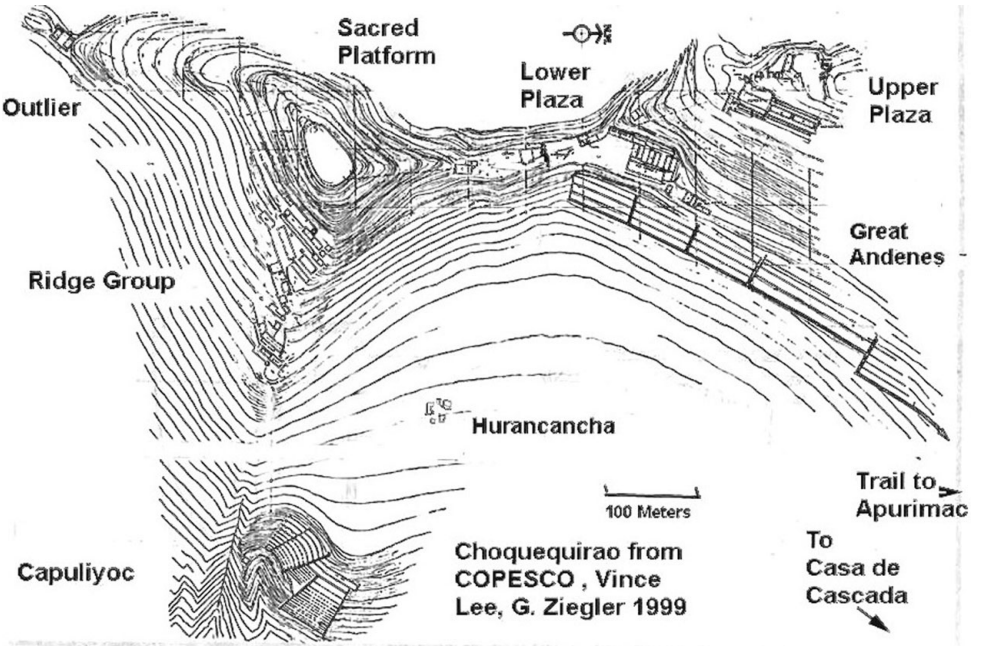

Figure 1. Map of Choquequirao.

plan. High-status structures, such as temple, huacas, elite residences, and a fountain/bath system are clustered around two plazas separated by about 200m.

The lower and larger plaza has a long multiple-entrance structure that we have identified as a *kallanca*, a multipurpose hall used for meetings, celebrations and sometimes as a shrine. A group of common buildings are clustered away from the plaza nearby. Excavations and surface items indicate they were probably used for workshops, food preparation by attendants to the residences and the kallanca. Two unusual temple huaca sites, incorporating carefully crafted step terraces down a steep slope, lie several hundred meters lower than the plaza groups. Both are associated with and designed around water. The first, Casa Cascada, is located below a waterfall; the other, Pincha Unuyoc, is several km away situated on the original Inca road leading up from Cotacoca, Yanama, and the Apurimac.

4. Architectural features and construction

Inca construction at Choquequirao is unique in several ways. It is unlike Cusco, where fine polygonal walls and elaborate huacas were shaped from limestone and andesitic rock, and unlike Machu Picchu, where walls and densely clustered huacas were carefully sculptured from coarse-grained granite. Perhaps the major huaca of Machu Picchu is the large sculptured rock of the Mortuary-Torreon, which is also the major astronomical feature of Machu Picchu. On the mornings surrounding June solstice, light from the sun enters the window of the Torreon to fall on the top of the rock, and sunlight also enters the cave underneath. In both these cases the sun may have been the *camaquin* for the huaca, animating it through the process of *camay* (Salomon & Urioste 1991; Bray 2009).

The fragile metamorphic rock available at Choquequirao cannot be formed into anything like the superb masonry at Machu Picchu. The builders were forced to create a different style of monumental construction. They entrances and corners were shaped from

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Figure 2. Choquequirao viewed from the ceremonial platform. Visible in the figure are the upper and lower plazas, the major acqueduct carrying water to a shine in the lower plaza, and the Giant Stairway (above the blue line, center left). Photo: A. Bauer.

quartzite. The rough, coursed ashlar walls were plastered over with clay inside and out, then painted a light orange color. Unappreciative of the geological restrictions, Bingham and other early visitors discounted Choquequirao, thinking it lacked importance. But free-standing rocks are rare at Choquequirao. One is at the start of the Giant Stairway. It is uncarved, but the risers of the stairway contain large shaped rocks, and when illuminated by the December solstice sun may have been a powerful huaca.

A waterfall shrine below the main section of Choquequirao has uncharacteristic slate cornices protruding from walls. This resembled a style seen at Chachapoya sites in northern Peru. An important new discovery is the recent uncovering of extensive stepped stone terraces inlaid with white quartzite figures representing a series of cargo-loaded llamas and their human handler (Fig. 3). The uppermost wall has a white inlayed zigzag pattern. The walls with the llama figures and a zigzag inlayed pattern are uniquely Chachapoya style, not seen elsewhere in Inca construction. It now seems that laborers from Chachapoya helped build Choquequirao. Choquequirao may be the only site where an imported ethnic labor group can be identified as a near certainty. As we have already noted, the Chachapoya construction at Choquequirao suggests a connection with Topa Inca.

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Figure 3. Chachapoya-style llamas. Photo: A. Bauer.

Figure 4. The Ceremonial Platform (viewed from above the Upper Plaza).

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5. The ceremonial center

Choquequirao has many of the characteristics of Inca ceremonial centers and pilgrimage centers, such as Isla del Sol, Quespiwanka (the palace of Huayna Capac), Machu Picchu/Llactapata, Tipon, and Saihuite (Bauer & Stanish 2001; Malville 2010). Architectural features marked the direction to June solstice sunrise or sunset. Ceremonial water or chicha flowed through stone-lined channels. The ceremonial platform at Choquequirao (Fig. 4) is unique in its size and prominence. The platform can only be reached by passing through a double-jamb doorway, limiting performance at the platform to royality and the priestly class. In other pilgrimage centers, participants were similarly separated by social class (Bauer & Stanish 2001).

The long pilgrimage pathway from Cusco to Choquequirao may have passed Machu Picchu and continued onto the treacherous face of Machu Picchu Peak. The dangerous nature of that path gives it the quality of liminality often found in pilgrimage paths, as for example the route to Isla del Sol (Bauer & Stanish 2001). From Llactapata the route, which today takes 7–10 days, drops down into the Santa Teresa valley, then crosses the Yanamia pass at 4670m, crosses Rio Blanco, and enters Choquequirao from above. The first view is truly spectacular, similar to that from the Intipunku, the Sun Gate, above Machu Picchu. The ceremonial platform seen from above is a remarkable sight.

Several features at Choquequirao mark solstice sunrises and sunsets, the most notable being the intriguing Giant Stairway (Fig. 5), which opens to sunrise on the December solstice. The stairway is 25m long and 4.4m wide, and is oriented to an azimuth of 114°. It is a unique feature of Choquequirao, which is entirely ceremonial and ritual in function. The stairway ends abruptly part-way down the hillside and leads nowhere. Terraces at Ollantaytambo similarly open to the December solstice sunrise. Terraces at Moray open to the June solstice sunrise. The Stairway contains large boulders on its risers, which are fully illuminated by the rising December solstice sun. We postulate that the illumination of the sun, similar to the illumination of the large stone of the Torreon in Machu Picchu, may be another case in which a huaca is animated by its solar camaquen. In the lower plaza there is a group of structures appearing to be water shrines and baths, similar to those of sector II of Llactapata (Malville *et al.* 2006), fed by a water channel. In that group of structures, a short corridor opens to the June solstice sunrise, which at the elevation of the northeastern mountains occurs at an azimuth of 60°. The June solstice sun sets at 293° near the summit of the ice peak, Nevado Panta.

Reinhard (2002: 103) suggests that Machu Picchu was no ordinary settlement but was "built in a location selected in large part by the sacred geographical features surrounding it". The sacred geometry of Machu Picchu included a dramatic landscape of mountains that coincided with celestial phenomena, the circulation of water in deep river canyon below the site and through stone-lined channels within it, a remarkable collection of huacas, and a design that facilitated ritual and ceremony. Much of the same (though to a lesser degree) can be said of Choquequirao.

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Figure 5. The Giant Staircase. Photo: A. Bauer.

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