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Chiefdom Ecodynamics and Muisca Cosmology in the Valley of Leiva, Highland Colombia

Michael P. Smyth

Abstract- The mysterious monoliths of El Infiernito, the Stonehenge of Colombia, have been the subject of much speculation and fanciful interpretation for over four centuries. Not until recently, however, has systematic archaeological investigation identified El Infiernito as an astronomical-meteorological observatory of the ancient Muisca culture. Modern surveys have begun to reconstruct the settlement history of the Leiva Valley, but little is known about the actual chiefdom community (ranked kinship society) for the stone observatory or how the it related to other communities in the region. Argued to have functioned as a calendar monument recording solar cycles, celestial alignments, and forecasting weather, many alternative interpretations are often uncritically accepted and fuel speculation for a local tourist industry as well as pseudoscientific fantasy. No serious study has attempted to ascertain if these monuments connect to anything tangible on the natural and cultural landscapes such as actual water features and specific celestial events. In an environment where effective rainfall is often insufficient or inconveniently timed for farming and alluvial farmland subject to intense erosion caused by periodic drought and flooding, the cosmological importance of fertility both agricultural and human tied to vital water sources and beneficial rainfall must have been of primary concern to Muisca leaders. A tangible response by a chiefly elite to such unpredictable conditions would include engineering a hydraulic landscape linked to intangible religious cosmology embodied in central stone monuments such as the monolithic observatory, temple structures, and artistic depictions of fertility.

This report discusses the subsistence and ritual roles of water at El Infiernito based on recent climate change and human ecodynamic (socio-ecological dynamics of coupled human and natural systems) research. Recently, an engineered hydraulic landscape consisting of irrigation canals, check dams and drainage conduits, as well as potential raised fields has been identified on the upland slopes and along the Rio Leyva alluvium near El Infiernito; pre-Hispanic canals and raised fields in this area were reported to be still in use in 16th century. In addition, a easy-west double row of stone columns (the observatory) diagonally aligned with the winter solstice and specific water fissures form the nascent waters of the Rio Leyva below the Cerro Santo looming behind the Colonial town of Villa de Leyva. Reconnaissance survey along these mountain arroyos revealed water pools, megalithic terrace tiers for a hilltop platform, and shaped monolithic stones adjacent to the confluence of mountain stream channels and the helio-elliptical rising of the winter solstice. Importantly, associated with the terrace platform are unique and finely carved Muisca stone portrait statues showing mythical figures emphasizing themes of fertility recalling the Legend of Iguaque, a myth of cosmic ontogeny and ancestral origin. These preliminary data strongly suggest that water sources, solar cycles, and rites of fertility were linked to the astronomical-meteorological observatory at El Infiernito and an important new highland water temple.

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I. Background

In the Leiva Valley, 120 km northeast of Bogotá, El Infiernito and its stone monuments including rows of aligned columns as well as dozens of phallus-like monoliths alleged symbols of fertility standing up to 4.5 m tall (Figures 1 and 2). The latter surround a dolomite slab tomb which is reported to have contained the remains of high status individuals (Silva 1983). Survey suggest that El Infiernito was the monumental center of a large town for a chiefdom by the 12th century AD if not earlier (Langebaek 201; Fajado 2011; Salge 2007). The astronomical and phallus cult interpretations of the various stone monuments remain perplexing because so little is known about the surrounding community.

The Leiva Valley is an altiplano region populated with Muisca chiefdoms along river floodplains and upland mountains between 2,000 m to 3,200 m (Langebaek 1995, 2001). Climate classification is *tierra frio* except for desert páramo found above 3,500 m. A dual rainy season occurs from March to June and October to November with intervening dry seasons; evidence for past valley erosion is intense. Overall, the river floodplain adjoining El Infiernito averages less than 1,000 mm of rainfall per year, though evapotransporation is nearly as high, but significant annual variation in precipitation throughout the valley is based upon geography, elevation, and major meteorological events such as the Southern Oscillation and its El Niño and La Niña Cycles (ENSO). The southernmost Leiva Valley is more arid extending into the Candaleria Desert. In addition, several major uplands rivers including the Rio Leyva flow near Muisca settlements, including the former chiefdom of Zaquencipá at El Infiernito (Falchetti 1975; Salamanca 2000; Henderson and Ostler 2005).

El Infiernito (2,075 m), also known as the archeological park of Monquirá, is located 4 km west of the Colonial town of Villa de Leyva. Monquirá was the first Spanish settlement in the Leiva Valley founded in 1556 later moved to Villa de Leyva in 1572. Famous for its carved stone monuments (*menhires*), especially two rows each with 54 columns aligned with the vernal equinox, is the astronomical-meteorological

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observatory. The site is dated between 700 and 1200 AD (Langebaek 2001:28), though a chiefdom community headed by a hereditary elite remained active into colonial times. Recent survey has documented the presence of a Herrera Phase (700-1000 AD) farming community when the first monoliths may have been erected (Botiva 1989; Langebaek 1995). Subsequent Early Muisca communities (1000-1200 AD), credited with constructing the "so-called" observatory, were concentrated in larger settlements that saw the formation of chiefdom leadership organization. Late Muisca (1200-1600 AD) occupations became progressively larger (Salge 2007) and more complex. In some highland regions Muisca chiefdoms were becoming centralized resulting in increased population distribution with nucleated settlements supported by intensified agriculture, interregional trade (salt, ceramics, gold, and textiles) organized warfare, and craft specialization; mummification of certain high-status individuals became a standard elite mortuary practice (Boada 1998, 2000). Before the Spanish Conquest, the Muisca at Tunja and Bogotá were ruled by powerful paramount chiefs who were becoming politically and perhaps economically stratified absorbing many regional communities into more complex forms of sociopolitical organization (Broadbent 1964; Londoño 1985).

Maize (*aba*) was the most important subsistence crop among the Muisca, though potatoes (*yomsa*) were also widely grown at higher elevations. Environmental conditions and an 8-month maturation rate for maize limited annual production to usually one crop and an average of about 2,000 kg per ha on the best farm lands, though irrigated agriculture on river alluvium was probably more productive. Production losses due to vermin and spoilage can be up to 30% even in a good year, and traditional maize varieties (*pollo*) used by the ancient Muisca had much smaller ears than today's hybrid varieties (Mangelsdorf 1974; Langebaek 1987; Smith 1988; Cardenas 2002). Drought, especially in the Leiva Valley, was and still is a constant problem and any rapid climate change effecting rainfall by reducing or swelling river levels (flooding) would have negatively impacted the production of maize as well as all crops. Such unpredictable climatic conditions arguably inspired water management strategies such as storage, irrigation, and raised field construction (artificially elevated planting surfaces).

Our contribution to site of El Infiernito is the newly discovered archaeological evidence for intensive agriculture and water management (Smyth et al. in press). Reconnaissance identified hydraulic works and evidence for major erosion events potentially related to rapid climate change, i.e., significant droughts and/or major flooding episodes. The Loma Carrera (Figure 3a), an upland area, contains a natural perennial spring (Cañada las Peñas) situated above a carboniferous shale deposit that produces hydrostatic surface water that empties into the Rio Leyva. Near the spring are two possible anthropogenic ovoid pools reminiscent of the ceremonial baths or "lavapatas" at the Alta Magdalena site of San Agustín in southern Huila (Duque Gomez 1964; Drennan 1995). Seasonal drainage was captured by a catchment surface and stone conduit that connect to a double alignment of upright megalithic boulders above a cross-channel boulder wall (Figure 3b). These hydraulic features are seemingly part of a reservoir and check dam system designed to collect and divert runoff water for irrigation agriculture.

Trenching along the Rio Leyva floodplain revealed that the current topsoil has little soil development but a topsoil buried by 175 cm showed greater development (below) suggesting major past flooding erosion and flooding events. Deeper cores indicated similar lower sequences, which showed evidence of more than one such cycle of erosion (Beach 2015; Beach et al. 2013; Smyth et al. in press; Wells et al. 2015). To combat flooding the Muisca may have built raised fields along river alluvium like those documented along the Rio Bogotá near the town of Funzá (Kruschek 2003) and elsewhere on the Sabana de Bogotá (Broadbent 1968; Boada 2006, 2007). Early Colonial sources from the Valley of Zaquenzipá (Leiva) clearly indicate that the Muisca had practiced raised field agriculture and canal irrigation long before European Contact, and that Prehispanic hydraulic features were still being used in the 16th century (Restrepo 1895; Mora Pacheco 2011, 2012, 2015; Langebaek 2013).

Muisca cosmology embodied a religious philosophy of the natural environment centered around astral deities of earth and sky governing forces believed to directly influence human affairs (Ingativa 2012). A class of priests centered on the cult of the sun but ritual offerings and ceremonies concerned many deities including those related to water and fertility. Offerings and sometimes mummies were placed at caves, hilltops, woods, and lakes and temples were erected at sacred places populated with idols such as the large wooden Sun Temple of Suamox looted and burned by Spanish Conquerors in September of 1537 and reconstructed in 1992 (Figure 4). Temple sites were places of religious pilgrimage, offerings, and ritual performance especially on days of special importance such as the Winter Solstice, considered by the Muisca to be a sacred time marking the end of the solar year and the start of a new agricultural season which were closely associated with human fertility enshrined in the Legend of Iguaque.

The legend revolves around several alpine lakes (Iguaque) sacred to the Muisca and not far from the Leyva terrace platform (Figure 5). According to legend, mankind was born when the mother goddess Bachué (the one with naked breasts) emerged

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from one of these lakes with the boy Iguaque in her arms. When the boy came of age, they married and their offspring populated the Earth. Finally, Bachué and Iguaque disappeared into the lake after being transformed into the bodies of snakes, where they are believed to still reside today.

II. The Observatory

The stone monoliths at Infiernito (little Inferno) have been the subject of speculation since the earliest Spanish missionaries maligned them as works of the devil because of their alleged associations with controversial Muisca rituals and orgiastic ceremonies, and perhaps most significantly, the native refusal to adopt Spanish Catholicism (Simón 1625). Among the first archaeological expeditions detailing the various stone columns occurred in 1846 (Zerda 1972). Shortly thereafter, Juaquin Acosta wrote a new appraisal of the site dismissing prior claims of any 'lost civilization' responsible for erecting the monoliths (Acosta 1850), while others began to argue correctly that *chibcha* speaking (Muisca) native peoples were the actual builders (Ancizar 1984). As archaeology became a formal discipline in Colombia, studies began to focus on classification of the stones as well as associated artifacts and human remains (Restrepo 1972; Saenz 1922; Triana 1922), though their excavations and analyses were not congruent with modern standards.

The most important recent study of the observatory was undertaken by Eliécer Silva Celis (1981) who excavated an area 38.5 m east-west by 16 m north-south and 1.5 m deep called the Campo Sagrado del Norte (Figure 2). Within this context, he uncovered a row of 26 finely carved cylindrical pillars equally spaced following the meridian each with a height of 2 m and diameter of .35 m--20 additional columns were reconstructed. A parallel southern row of 54 columns was completely restored without any stones found *in situ* but repositioned based upon the remains of broken column's debitage in association, the finding historic metal tools used to remove stones, worked shell cached by the Muisca at the foot of each column, details of associated soils (color, texture, hardness, compaction, etc.), calculations of inter-columnar spaces, as well as the incorporation of information from written accounts of travelers and visitors since the mid 19th century (Silva 1986:49-52). Unfortunately, few statistical and few graphical presentations were published or reported documenting critical context and association information from the excavations. Centered between the aligned stone rows was an alleged 5 m tall upright column functioning as a firmament to measure the height of the sun and presumably other celestial movements. Four meters south is the Campo Sagrado de Sur composed of 2 rows of four ovoid columns (Moncada 1979) whose function remains unexplained.

Dating of the observatory was based on three published radiocarbon assays recovered from excavations (2,180+/-140, 2,490+/-195, 2,880 +/-95 BP uncorrected) controversially placing the site to the 2nd and 9th centuries before Christ. However, there are two problems with these dating results. First, there are no descriptions of the contexts of association for the carbon samples except for vague references to animal bones and maize remains (Silva 1981:13). Second, the Instituto de Asuntos Nucleares, the laboratory where these C-14 samples were analyzed, has a reputation for providing inaccurate results (Langebeak 2001:28). Ceramic classification at Infiernito, conversely, dates the site to no earlier than 800 AD.

Two parallel rows of columns on the vernal equinox have a true azimuth of 91° and point east towards the Cerro Morro Negro (Morales 2009). The columns do not precisely align with the Laguna de Iguaque on the equinox as has been previously claimed (cf., Reichel-Dolmatoff 1982; Silva 1981). Importantly, a diagonal azimuth of approximately 113° measured from the westernmost column of the north row, passes through the alleged center column, continues to the easternmost column of the south row, and ultimately aligns within one degree of the true helio-elliptical rising of the winter solstice (Figures 6a-b) This significant alignment cannot be coincidental because it also corresponds to mountain fissures and streams within the Cerro Santo behind Villa de Leyva where the nascent waters of the Rio Leyva flow by El Infiernito some 5 km to the west of the Terrace Platform (Figures 7a-b). These alignments suggest that Infiernito was a solar observatory focused on water and human agricultural fertility, and not just a calendrical monument. The spatial connection between the water mountain and a terrace platform support the observation that the latter served as a water temple.

III. The Terrace Platform

A significant new Muisca site closely related to the Infiernito observatory emphasizes the vital interrelationships between water and fertility in the Leiva Valley. A terrace platform containing Prehispanic to Early Colonial Muisca surface ceramics, retaining wall stonework, large shaped megaliths, and the remains of megalithic tiers or staircase is located in the mountains behind Villa de Leyva. This possible Muisca temple aligns directly with El Infiernito on the winter solstice at one of the important times of the Muisca calendar year (*socum*)--marking the start of new agricultural cycle (Restrepo 1895:162). The mountain fissures in this same area are major sources of water for the Rio Leyva which was integral to an irrigation system constructed by the Muisca.

The terrace platform is situated upon a high hill that appears to have been artificially leveled (below

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the peaks of the Cerro Santo) along the path of the solstice alignment midway between two mountain fissures (Figure 8). From this mountain, water flows into various stream channels leading into the Quebrada San Agustín, which flows around the hill and platform deep forming ravines on the west side that today requires a pedestrian suspension bridge. The hill platform is clearly terraced on the west side where huge megalithic stones aligned 238° show four extant tiers or stairs of dry-stone masonry. With many stones fallen or scavenged for recent construction, this architectural feature was probably originally longer and higher than what is seen today (Figure 9a). Encountered were diagnostic ceramics of the Late Muisca and Early Colonial periods, including a cached Fine Orange ring-based vessel (Figures 9b-c). There also appears to be more terracing on the east side along a possible access ramp or stairway leading down to water giving the entire structure a pyramidal shape, but only intensive survey and architectural excavation can determine this for sure.

The platform itself is supported by a 11-m stone retaining wall of cut stone masonry oriented 14° east of north with block cornerstones up to 100 cm tall (Figures 10-a-b). The west wall exhibits stonework that could have supported a possible palisade and a raised stone surface on-platform near the northeast corner suggests a circular superstructure (*uta*) likely some form of Muisca perishable walled and roofed building (temple?). The west wall extends more than 20-m before integration into a zone of shaped megalithics some over 2 m long but fallen from their original upright positions. Many stones form a boulder alignment apparently as a division or western platform boundary (Figures 11a-b). In this area a Herrera phase potsherd was recovered and along the platform west wall were ceramics of all Muisca time periods (Figures 11a-c). These ceramic data indicate ceremonial activity spanning the entire indigenous occupation sequence and suggest that religious rituals were performed here until the founding of Villa de Leyva.

IV. Muisca Statues

Eight exquisite portrait statues from a private collection were examine in 2017 and are among the finest examples of pre-Hispanic stone carving known for the ancient Muisca (Figure 12a). Current evidence suggests that these statues were originally found at the same terrace-platform-temple or an associated context. Representing 12 individuals (6 males? and 6 females?), two adults (deities?) hug or hold from behind two seemingly adolescent children, while another adult holds two smaller children; all statues are three-dimensional portraits of seated-kneeling figures executed employing typical Muisca artistic conventions. In unsculpted form, interestingly, the stones resemble the shapes of the columns found at El Infiernito. Carved from local sandstone and limestone using stone tools, four statues are between 65 and 85 cm tall while the four smaller ones are about 25 to 35 cm. At least two of the larger statues exhibit a dark green patina or pigment, though it is difficult to rule out simple dirt or mold that has accumulated over the years. Three figures are damaged with impact scars resembling blows from a blunt instrument as well one statue which was repaired after a break at the waist and perhaps the top of the head. All statues show wear from being outdoors exposed to the elements for decades if not centuries suggesting great antiquity.

The statues are rendered in style and iconography typical for other Musica material culture: ceramics, goldwork, and textiles. All headgear are short conical caps, or *gorros*--some without decoration--others simply decorated with horizontal bands, pleaded-twisted rope, or simple triangles. One statue depicts long straight hair covering the ears hanging down at the back suggesting a female elite or deity figure. All others show shorter hair and stylized ears; one of the smaller male? statues is wearing earlobes and one female figure dones a stone necklace. However, one crown-like headdress, a sign of high rank, displays four vertical zones of complex symbols and motifs including spirals, embedded triangles bordered by horizontal bands set above a round element (jeweled mountains?), and a spiral flanking three dots topped by reptilian-like dorsal scales (Figure 12b).

Facial characteristics reveal elements of status and ethnicity. First, the wide, slit (closed?) eyes are stylistically Muisca as are the broad noses, though there are three figures with longer, thinner noses. Round owl-like eyes on one smaller statue suggest a transcendental animal-like appearance. Most notable are the decorations representing face painting (1-3 lines) but are noticeably absent on two bare chested females and two child faces (Figures 12c-d). One of the largest sculptures depicts cross-line painting on the cheeks as well as seven painted? notches on the bridge of the nose above a fanged mouth suggesting animal-like dentition. A child in arms shows half-moon symbols under both eyes perhaps lunar associations, while all other figures depict closed mouths some with thick lips, though one child mouth is open suggesting speech or sound. On all figures, the arms are in a natural position with hands resting at the waist or below the head of children figures; the fingertips are touching and six digits are represented on each hand.

Finding stone statues at a terrace-platform is not without precedence in Highland Muisca archaeology. Silva (1968) reported eight Muisca statues similar in style and size at two terrace platforms exhibiting a pyramidal form at La Salina de Mongua near Sogamosa, an isolated highland riverine setting some 80 km east of Villa de Leyva. Three of these statues, on exhibit at the Suamox Archaeological Museum, show

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similar decorative symbols and motifs as those described above (Figure 13). The Mongua site has been interpreted as a sacred religious temple for ceremonies and rituals related to a water cult and human fertility.

The Leyva statues are far superior in workmanship to the Mongua statues, which should not come at any great surprise because the Muisca of the Leiva Valley were famed stoneworkers actually responsible for building many of the early Colonial buildings at Villa de Leyva. Like the Mongua temple, the Leyva terrrace platform and statues must also relate to themes of water and fertility closely tied to worship of the sun as well as the origin myth of the Muisca. The alignment of the solar observatory at El Infiernito with a mountain water temple on the winter solstice surely emphasizes the great practical and cosmological significance of water for agricultural production. Human fertility is symbolized by female statues with large breasts (Bachué) while the portrayal of adults and children together clearly recalls the Legend of Iguaque.

V. Discussion and Conclusions

The observatory at Infiernito has been the subject of much public attention over the years mostly in the form of amateur archaeoastronomy conjecture and even wild pseudoscientific speculation. Non-scholarly interpretations have largely prevailed because so little is known of the ancient community and its hinterland which were integral to understanding the role of the stone monuments. Indeed, it was not until the 1980s that the archaeological establishment even recognized any community associated with the observatory. In addition, archaeological research of Highland Muisca chiefdoms in the Leiva Valley has not focused on the role of the natural environment despite the fact that dual wet and dry seasons vary greatly, drought is not uncommon, and farming without irrigation is often marginal at best. To redress this deficiency, environmental research into chiefdom ecodynamics has begun to contribute new archaeological evidence for intensive agriculture and water management. It is argued further that hydraulic systems in the Leiva Valley were closely tied to religious activity of a mountain water temple and astronomical-meteorological observatory at El Infiernito.

The preliminary data suggest that the El Infiernito observatory and water temple were important settlement features of the Muisca who observed a close cosmological relationship between the sun and water in both real and ritual terms. The precise diagonal alignment of stone columns connected to a water-related temple on the Winter Solstice undoubtedly marked a most significant time when the solar year ended and the agricultural cycle renewed. Born from a water mountain, this sacred water forming the Rio Leyva begins its journey towards the observatory, a symbol of fertility and solar power, that along the way was harnessed and controlled for agriculture via hydraulic means to ultimately sustain human fertility and the promise of continuing life.

Solar events and water mountains must have been times and places of cosmic ontogeny and ancestral origin. For the Muisca, the cosmology and environment of water were largely inseparable in that they saw no distinction or inconsistency between the physical and spiritual realms or actual or perceived aspects of their world. The uncertainties of drought, flood, famine, and hunger were all too real that required all manner of responses both tangible and intangible to survive the most significant challenges and unavoidable realities posed by their natural environment. In these regards, ecodynamic study explores the full-range of human adaptive abilities under conditions of environmental stress to determine how intermediate-level chiefdom societies responded to adverse climate-related conditions, a question largely unexplored in the archaeology of the Eastern Andean highlands. New understanding of the Muisca will add critical data about chiefdoms and diverse forms of subsistence agriculture no longer practiced in Highland Colombia. In this regard, multipartite ecodynamic approaches can represent an important new area of inquiry for archaeology and many of its allied disciplines.

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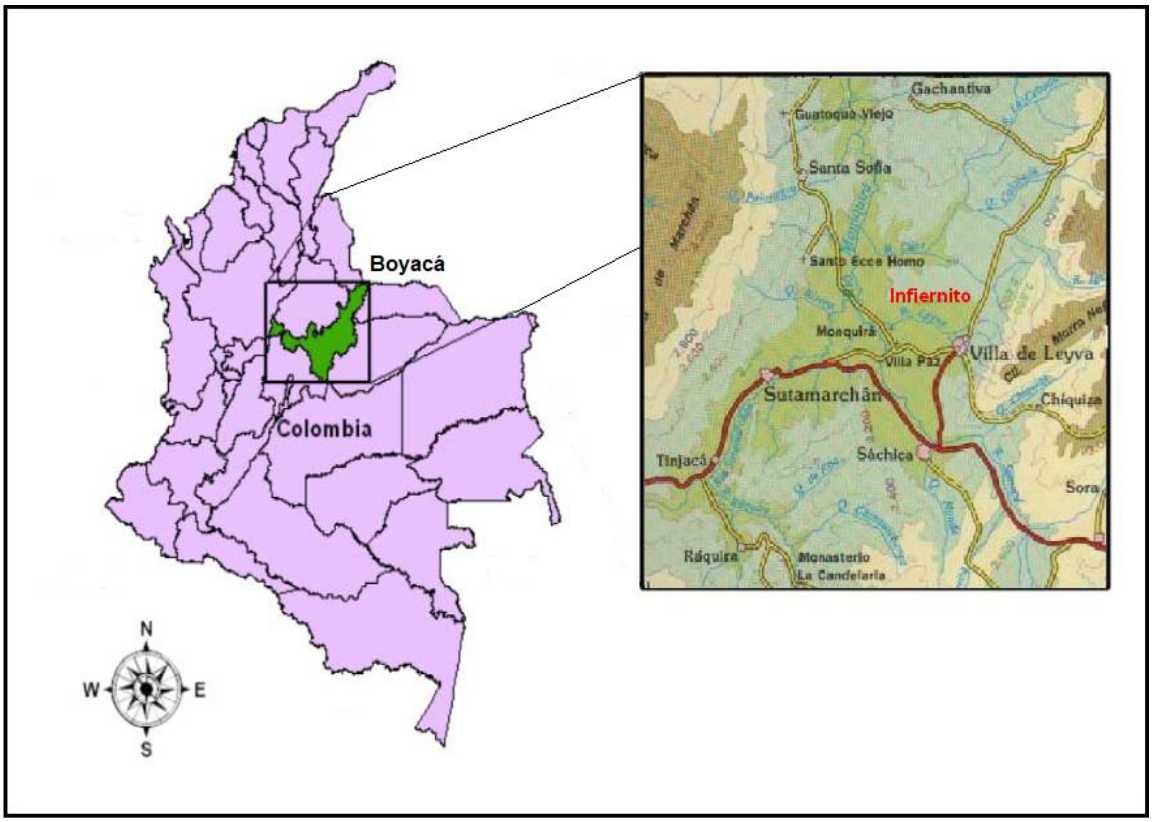

Figure 1: Map of Colombia and the Department of Boyacá showing the locations of Valley of Leiva, the site of El Infiernito, the town of Villa de Leyva, as well as other towns -sites throughout valley

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Figure 2: Photo of El Infiernito Observatory looking north showing two rows of stone columns mostly reconstructed by Eliécer Silva Celis in 1981



Figure 3a: Photo of the Valley of Leiva and Villa de Leyva looking northwest showing the location of El Infiernito and the Loma Carrera near the center-right of the photo

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Figure 3b: Photo looking northeast of a potential hydraulic feature showing shaped megalithic slab boulders once standing upright and now partially displaced that served as walls for a reservoir above a check dam and downstream from a catchment zone and linear drain conduit. Sean-Michael Smyth stands to the right for scale

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Figure 4: Photo looking east showing the replica Sun Temple of Suamox burned by Spanish Conquistadors in 1537 reconstructed at the Archaeological Museum in Sogamosa, Boyacá, Colombia

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Figure 5: Photo of the principle Laguna de Iguaque looking east, the alleged mythological place of human creation mentioned in the Legend of Iguaque located at approximately 3,500 m elevation in the Iguaque National Park. This body of water does not directly align with Infiernito Observatory on the equinox as has been previously claimed

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Figure 6a: Photo of the the north row (westernmost column) and south row (easternmost column) of El Infiernito Observatory looking along a diagonal azimuth for the Winter Solstice (~113°) aligning with the terrace platform-water temple, mountain water fissures for the Rio Leyva, and peaks of the Cerro Santo in the distance

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Figure 6b: Google satellite imaged of the Leiva Valley and Rio Leyva illustrating the actual azimuth (112° of the Winter Solstice (red line) passing from the El Infiernito Observatory to the terrace platform-water temple, mountain water fissures for the Rio Leyva, and peaks of the Cerro Santo some 7.118 km to the east-southeast where the winter sun appears on December 22nd

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Figure 7a: Photo of a colonial street of Villa de Leyva looking east-southeast towards the peaks of the Cerro Santo and the mountain water fissures and stream channels adjacent to the terrace platform where the sun of the Winter Solstice rises

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Figure 7b: Close-up photo looking east showing the path of water from the mountain fissures and stream channels overlooking the terrace-platform that lead to the Quebrada San Agustín and Rio Leyva

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Figure 8: Forested areas looking northeast surrounding the leveled hill for the terrace platform-water temple (center), adjacent stream channels, and the Quebrada San Agustín

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Figure 9a: Photo of the megalithic terrace tiers (or stairs) along the west side of the hill leading to the terrace platform-water temple. Dry stone masonry with abundant chinking stones and Prehispanic and Early Colonial ceramics were associated with this stone structure. Stones for the upper level courses have fallen, were removed, or reused recently

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Figures 9b and 9c: Photos of a low ring-base plate of Fine Orange found partially buried within and eroding out of the upper course area of the Megalithic Tiers (b), and the partial reconstruction of the same vessel (c). This vessel is believed to date to the Late Muisca or Early Colonial Periods (ca.1500 to 1572 A.D.)

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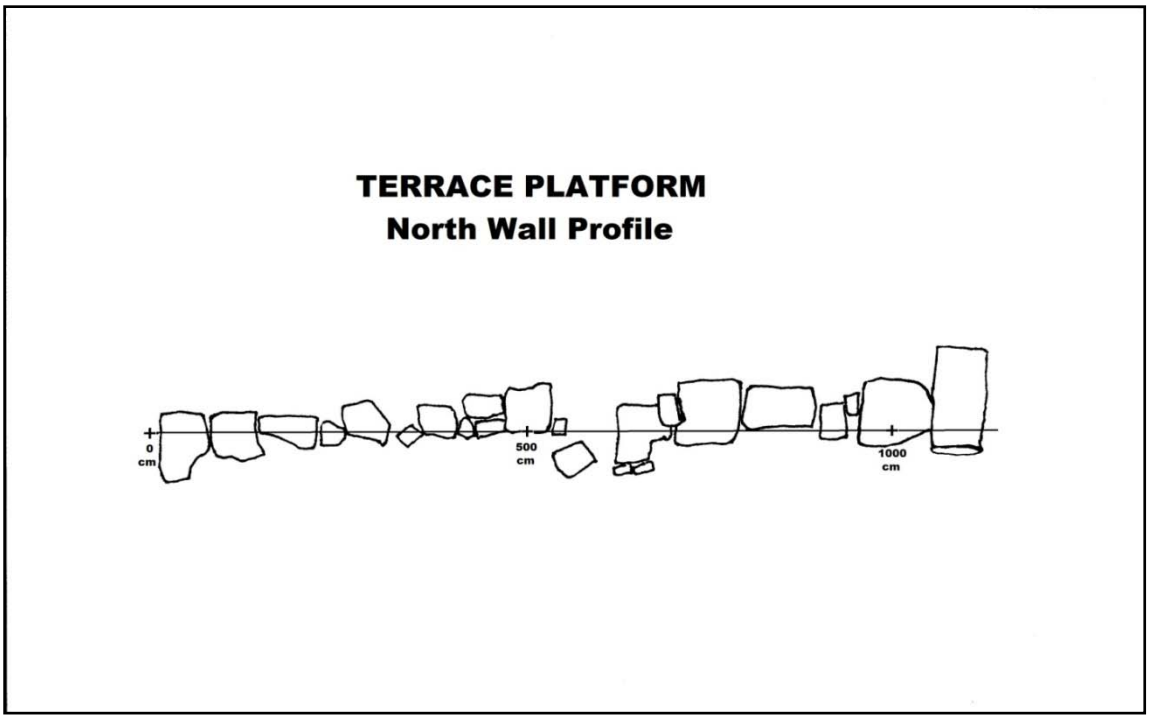

Figure 10a: Profile map of the Terrace Platform north wall on the hilltop



Figure10b: Photo looking east showing the aligned and faced monolithic stones for the Terrace Platform north wall

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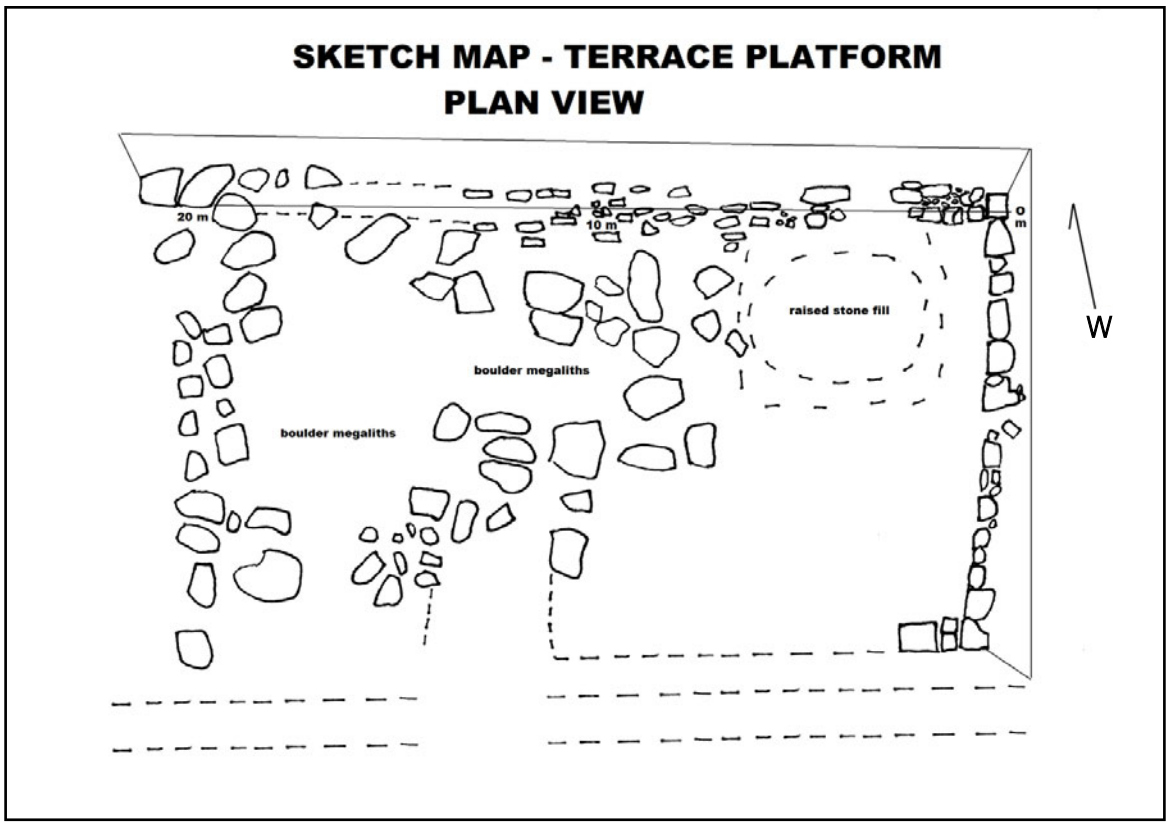

Figure 11a: Plan view sketch map of the Terrace Platform showing a west retaining wall, a northwest area of stone fill or pavement possibly for a circular temple *(uta*) and numerous shaped-carved monolithics many displaced and showing an alignment for a division or platform border area. The platform is terraced on the east side leading down to water. Herrera Phase, Early Muisca, Late Muisca, and Early Colonial Period ceramics were found on- and off-platform



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Figures 11b-c: Cut and shaped boulder megaliths on the platform surface many of which are now displaced and appeared to have been originally upright and spatially arranged. Some of these megaliths are still aligned forming a western border or division for the terrace platform



Figure 12a: Photo of eight carved limestone and sandstone portrait statues exhibiting typical Muisca decorative symbols and motifs from a private collection. These statues allegedly were found on or near the Terrace Platform. Many appear to be deity or elite figures associated with fertility (Bachué) and the origin myth of Iguaque

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Figure 12b: Close-up of one of the largest statues seemingly an elite figure holding an adolescent child recalling the-Legend of Iguaque

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Figure 12c: Maternal figure symbolizing fertility and perhaps depicting Bachué, an earth goddess and mother of humanity among the Muisca

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Figure 12d: Smaller statue of an adult holding two smaller children perhaps also related to the Iguaque origin myth

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Figure 13: Photo at the Archaeological Museum of Suamox in Sogamosa showing four Muisca stone portrait statues flanking a blackstone decorated disc adjacent to a frog fertility symbol within a reflecting pool. These statues were found at terrace platforms with Salinas de Mongua similar to those near Villa de Leyva

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