

**BETWEEN LATACUNGA AND SAN AGUSTIN DE CALLO: TANICUCHI, SIX
CENTURIES OF PREHISPANIC OCCUPATION IN THE CENTRAL
HIGHLANDS OF ECUADOR**

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ABSTRACT

BETWEEN LATACUNGA AND SAN AGUSTIN DE CALLO: TANICUCHI, SIX CENTURIES OF PREHISPANIC OCCUPATION IN THE CENTRAL HIGHLANDS OF ECUADOR

CECILIA JOSEFINA VASQUEZ PAZMIÑO

The Inkas occupied ancient Ecuador during the 16th century. Monumental architecture such as *tambos* (inns), fortresses, and towns were strategically located along the royal Inka road. In the Central Ecuadorian highlands, the sites of *Latacunga*, *San Agustín de Callo*, and *El Salitre* remain a prominent testimony of Inka imperialism. Surprisingly, Inka remains were scarce in the archaeological survey at *Tanicuchí*, between San Agustín de Callo and Latacunga.

The systematically aligned survey of Tanicuchí supplied information concerning six centuries of Prehispanic occupation in the area. Surface collection and analysis of material culture defined Tanicuchí's origins and chronology. Relative dating suggests that initial Tanicuchí occupation began during the Integration Period (A.D. 800-1500), followed by Inka (A.D. 1500-1534) and Early Colonial (A.D. 1534-1580) periods of conquest.

The imposition of Inka and Colonial rules imposed changes on politics, economics, and social relationships reflected in the frequency and distribution of pottery types. A conspicuous sample of Tardío and Cosanga pottery found at Tanicuchí indicates intensive trade and alliances between highland and lowland populations during the Integration Period. The following Inka conquest strategically controlled roads, populations (*mitmakuna*), and the movement of trade goods. The survey provides important information to better understand the nature, function, and cultural history of Tanicuchí.

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In memory to my beloved grandfather Manuel Pazmiño Vivas
(1920-2003)

CHAPTER 1: INTRODUCTION

- Manuelito, did you bring the holy water and the candles?
- Yes, Uncle Luis! I have that, also the matches, my shovel... I hope I have not forgotten anything...
- Did you bring my "*varilla de San Cipriano*"?
- Yes! But what is this for, uncle? Are you going to dig with this?
- No, no... You will know soon... Let's pray. Give me a candle, please!

Manuelito and Uncle Luis are ready to loot somewhere in the Ecuadorian highlands. Looting is still an informal way to survive in all parts of Ecuador. The *varilla de San Cipriano* consists of a rod that looters bring to their midnight expeditions with a dual mission: finding gold and acquiring protection against evil (Manuel Pazmiño, personal communication 2002). The *varilla de San Cipriano* works like a metal detector and determines the place for looting. Traditionally, the rod is made of three metal alloys and has a closed ring at one end and a hook at the other. If the ground attracts the hook, a burial with golden offerings appears to be "close". Prayers and an offering of alcoholic beverage to the burial assure good luck and gold. If you excavate and cannot find anything, evil came and stole the treasure before you. The key elements are performing an accurate ritual and not demonstrating fear while digging.

Stories like this still occur in Tanicuchí, a small village within Latacunga County and the Cotopaxi Province in the central highlands of Ecuador (Figure 1). Mestizo and Indigenous communities live in Tanicuchí today. Tanicuchí consists of a rural community of Latacunga County that has 349,540 inhabitants (INEC 2001:1).

The current village has an increasing number of 2,033 households and a total of 9,196 inhabitants (source: Infoplan 2000). As was likely in the past, today most of the

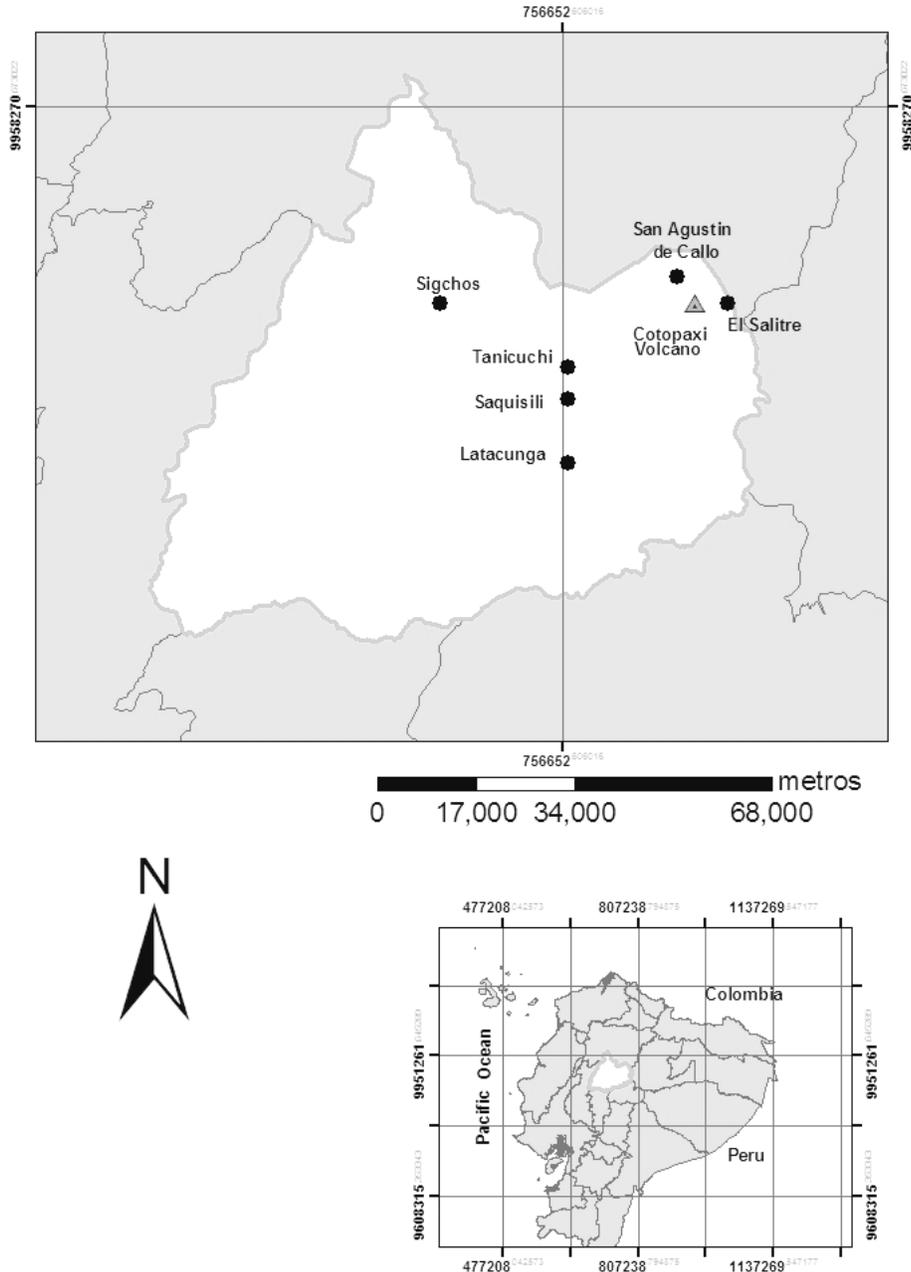


Figure 1. Cotopaxi Province and Location of Tanicuchi.

commoners of Tanicuchí own a domestic “*chacra*” or garden behind their houses. Since pre-Columbian times, Latacunga functioned as an urban center for employment or larger commercial activities.

Latacunga became one of the three main administrative centers of ancient Ecuador during Inka subjugation (Moreno-Yánez 1990:78). Nearby, Tanicuchí (*CT-III-001*)¹ lays unnoticed alongside the Panamerican highway, one of the preferred north – south routes along the Ecuadorian Interandean corridor (Figure 2). Today, villagers and looters believe that Rumiñahui Inka’s treasure remains hidden in the surrounding areas of Latacunga or in the Llanganates Mountains (Eastern cordillera of the Andes). In oral tradition, people still pass memories regarding the Inka conquest and the Inka road. When I began the Archaeological Survey of Tanicuchí, I hired a group of students from the Tanicuchí’s High School for field and laboratory tasks. They expressed to me their enthusiasm for finding Rumiñahui’s treasure. The crew, however, got a little disenchanted when I explained to them that our pilot survey would mainly employ surface collection instead of excavation.

My research aim at Tanicuchí was to make available material evidence to complement the information gathered for adjacent Inka sites recorded for Latacunga regional history. Thus, I set two goals. The first focuses on tracing Tanicuchí’s occupational sequence. I expected that a systematic surface collection would provide pottery wares and types to obtain relative dates by association to coeval sites and materials. The second goal was to place Tanicuchí in a local context by revealing data about its dimension, boundaries, and intrasite relationships. This required mapping,

¹ The Tanicuchí site number is *CT-III-001* following the Institute of National Heritage (INPC) requirements, based on Toacazo topographic sheet (Mulaló): CT- ÑIII-E2c,-3892-I-SW.

and statistical analysis of artifacts to generate a spatial model of non-elite residential location along the *Inka Capac Ñan* between Latacunga and San Agustín de Callo.

Though, the survey at Tanicuchí provides data about site boundaries, function, and cultural affiliation of local populations of ancient Latacunga County. Financial constraints discouraged further excavations at Tanicuchí for achieving a clear picture of the site. Prior to my survey, I based my assumptions on ethnohistoric sources. Tanicuchí seemed like a household settlement deliberately located near relatively productive agricultural zones. Neither monumental architecture nor domestic structures characterize Tanicuchí. It may consist of a residential settlement for a non-elite population. However, due to the set of connections that implies the presence of the *Capac Ñan* (Fresco 2004), I assumed the existence of an ethnohistoric *mitmakuna* at Tanicuchí that are related to the Inka architecture at San Agustín de Callo and the ash-covered Inka village under Latacunga.

My interest in Tanicuchí resulted in the first formal archaeological survey in the western side of the Panamerican highway. The archaeological survey of Tanicuchí, as a pilot project, addresses the need for investigations in a potentially diverse prehistoric landscape. The significance of studying Tanicuchí encompasses the role that its location had during the Inka and Spanish conquests, and provides the likelihood of finding traces of subjugated peoples. My choice of Tanicuchí also stems from the allure that *Rumiñahui Inka*'s legend has over the entire Cotopaxi region and its proximity to the Inka sites of San Agustín de Callo, El Salitre, and Latacunga (Figure 2).

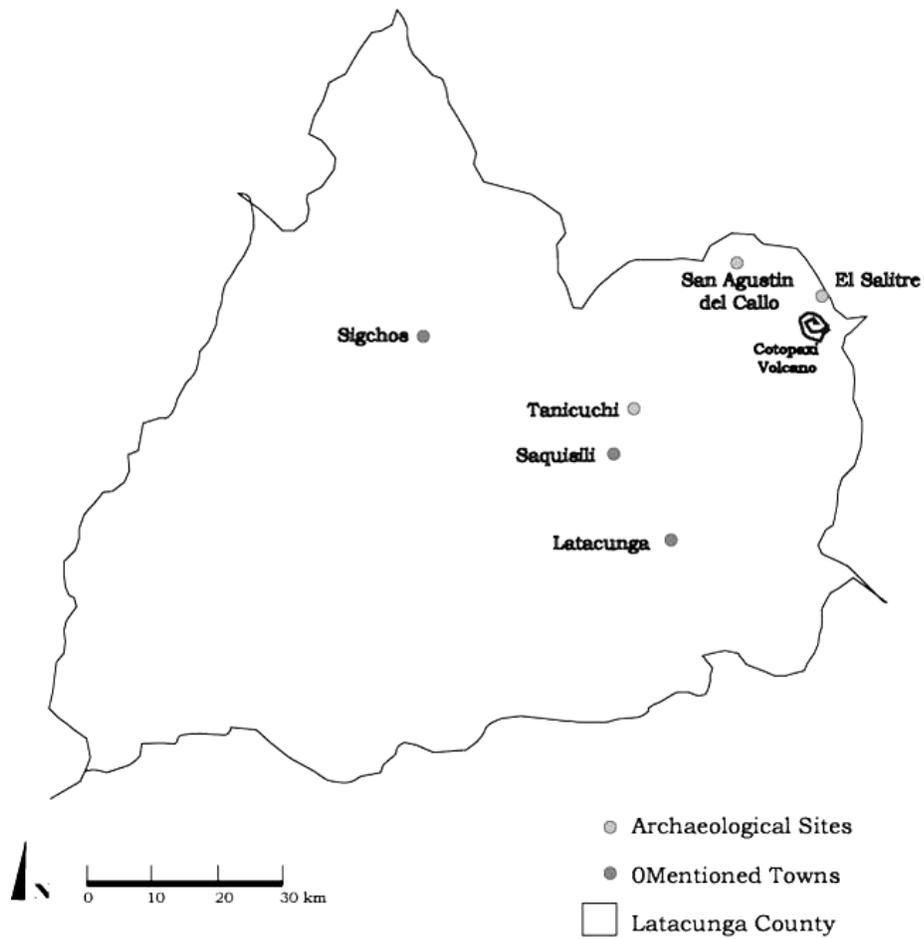


Figure 2. Latacunga Province Showing Mentioned Inka Archaeological Sites.

In terms of methods, I divided my survey area into seven sectors and evaluated the recovered artifacts to define site boundaries and chronology. The archaeological survey employed surface collection and test excavation units. The density of collected artifacts supports the interpretation that the site functioned as a domestic residential cluster. Using spatial distribution of ceramics, I reconstructed the local cultural dynamics of Tanicuchí's continuous past occupations.

Tanicuchí Before and After the Inka arrival

According to historic narratives previous to the Inka arrival to the Ecuadorian central highlands, Tanicuchí belonged to a non-Quichua indigenous speaking population known as *Latacungas*, *Sigchos*, and *Mulalos* (Verneau and Rivet 1912:22; Moreno-Yáñez 1990:71). The Inka conquest of the ancient Latacunga region included Tanicuchí and coincided with the Spanish arrival. The Latacunga region became a socio-political and economic core with the arrival of the Inka people. The Inkas conquered ancient Ecuador and brought *mitmakuna* (resettled foreign colonies) and moved local communities to other places in order to manage politics and economics from provincial centers (A.D. 1500-1534).

Even so, Tanicuchí cultural history begins during the Integration Period (A.D. 800 – 1500). A local small chiefdom governed the Latacunga area during the Integration Period (Moreno-Yáñez 1990:71) and the market located at Saquisilí supported an intensive exchange based economy (Fresco 2004:19). The ethnic composition of the Latacunga population changed and increased with the introduction of foreign *mitmakuna*. Latacunga functioned as the foremost urban core of the Ecuadorian central highlands throughout the Inka occupation during the sixteenth century (Moreno-Yáñez 1990:80).

Apparently, Tanicuchí has antecedents of being an ancient *mitmak* community, since the Cotopaxi province represents one of the best known regions for having *mitmak* settlements during the early 16th century (Verneau and Rivet 1912:23; Moreno-Yáñez 1990:70). The Inkas resided at Latacunga (Newson 1995:40), a

provincial capital underneath large layer of volcanic Cotopaxi's ashes, a few kilometers south from Tanicuchí. Native and resettled populations assimilated the political situation of the region under the Inka rule (A.D. 1500-1534) and transformed the Latacunga region into a multifaceted social cluster.

It seems that Tanicuchí maintained cultural ties with San Agustín de Callo and Latacunga prior to and during Inka rule. Tanicuchí probably fits into the region under the control of the Latacunga chiefdom before and after the Inka arrival. Tanicuchí may have formed part of the facilities of the road network including *chaquiñankuna*, *Inkañan*, *tambos*, and *mitmakuna* settlements among Ecuadorian Andean corridor.

San Agustín de Callo (Figure 2) is an Inka fortress or *tambo* (road station) built in Peruvian Inka architectural style (Brown 2001:7). The *tambos* consisted of storage places, store houses, and rest places located within the nodes of the arterial road network known as *Inkañan* or *Capac Ñan*. As a fundamental infrastructure to build the Inka strategy of expansion, the *Inkañan* linked urban and provincial centers, and the mobile *mitmakuna* settlements with production areas and long distance trade outposts.

Mitmakuna settlements consist of resettled peoples brought as slaves by the Inkas from distant regions in order to exploit mines or to produce crops or craft, exotic goods such as salt, coca, metal artifacts, textiles, basketry, and ritual pottery. An important economic strategy to complement subsistence and obtain a variety of products was the vertical control of lands through *kamayok* (specialist enclave) and *mitmakuna* settlements (resettled populations) in provincial regions. These populations produced labor and wealth surplus in order to support the Tawantinsuyu

elite (Bauer 1992:18). Essentially, the *mitmak* was a system of political control imposed to rebelled populations trough the entire *Tawantinsuyu*. Rostworowski, accurately, explains that *mitmakuna*

“were more or less numerous groups sent, with their families and under their own subordinate ethnic chiefs, from their places of origin to other regions to fulfill specific tasks or missions” (1999:172).

Following ethnohistoric documentation, I hypothesized that Tanicuchí was a resettlement of Inka *mitmakuna* brought from Peru. Unexpectedly, preliminary work in Tanicuchí determined the site occupation mainly during Integration Period rather than Inka period. Interestingly, only a few Inka sherds were recovered in contrast with the large number of Integration Period and Colonial wares. The 2002 survey season at Tanicuchí suggest a pattern that supports a continuous, multi-component site representing the local Integration (A.D. 800 - 1500), Inka (A.D. 1500-1534) and Early Colonial (A.D. 1534 –1580) Periods. The ceramic assemblage of Tanicuchí consists of Tardío, Cosanga, and Colonial wares. The scarce Inka material found at assumed Inka sites such Tanicuchí, corresponds to a common pattern, appearing also in the neighboring San Agustín de Callo site (Brown 2001).

The present chapter introduces the Tanicuchí project which is further developed in the following six chapters. In Chapter two, I synthesize the environmental landscape of the central Ecuadorian highlands in which Tanicuchí setting is also described. Chapter 3 discusses the cultural history of Tanicuchí and neighboring areas of interaction. I detail the methods of survey, test excavations, and ceramic analysis in Chapter 4. The ceramic inventory, description and interpretation

appear in Chapter 5. Chapter 6 summarizes the spatial distribution of the material evidence by sector, and offers a picture of Tanicuchí site and its chronological occupations. Chapter 7 summarizes a discussion of Tanicuchí during consecutive Prehispanic periods. I end by pointing out that this is a pilot project in the area, and thus I encourage the development of regional research and excavations to expand the information of Integration and Inka occupational boundaries in the Ecuadorian Central Andes.

CHAPTER 2: THE LANDSCAPE OF TANICUCHI

Ecuadorian Central Andean Region

Contemporary Ecuador encompasses the Northern Andes, where female and male volcanoes shape popular beliefs and oral traditions. The mythic couple, Taita Chimborazo and Mama Tungurahua, mark the boundaries of the southern and western Ecuadorian Andes. The Cotopaxi volcano defines the border of the Amazon and the highlands in the north-central Andes. The imposing view of Cotopaxi from Tanicuchí suggests how the mountain's power structured local settlement patterns, fears, and devotion (Figure 3).



Figure 3. A View of the Ice-Capped Cotopaxi Volcano from the Town of Tanicuchí.

In the northern Andes, two well-defined “*cordilleras*” (mountain chains) delineate the Andes and shape the tripartite division of broad ecological regions: the

coast, the highlands, and Amazonia (Figure 4). These correspond to the spatial distribution of human settlements and to the interpretation of cultural prehistory and history of the Ecuadorian landscape. To the west, the lower *Cordillera Occidental* (3,000 meters) contains the Pichincha, Corazón, Illinizas, and Quilotoa volcanoes, among others, as part of the mountain range that separates the coast from the highlands. In the slightly higher *Oriental Cordillera* (4,000 meters), snow-covered and active volcanoes, such as *Tungurahua*, *Sangay*, *Cotopaxi*, and the mythic *Llanganates* Mountains comprise the east flank that splits the highlands from Amazonia (Newson 1995:25). The sixty kilometer wide interandean valley forms a highland corridor that separates the Occidental and Oriental cordilleras. The rough geography features deep valleys connected by gorges lying between the mountain chains as a result of the intense periods of volcanic activity. The interandean corridor breaks into fifteen basins “by transverse knots (or *nudos*) formed by volcanoes, volcanic materials or alluvial and lacustrine deposits” (Newson 1995:25).

Acosta-Solís (1961) classified the ecological variability of Ecuadorian Andes on the basis of altitude and its corresponding changes in temperature (Figure 3). Microclimates and microvertical characteristics such as in the Tanicuchí valley include the *páramo* region. The Andean *páramo* of Ecuador is rather small in area and corresponds to the humid and cold landscape at heights between 3,600 to 4,600 meters. Underneath this ecotone lays the *tierra fría* ecological zone which ranges from 2,000 to 3,200 meters (Newson 1995:27).

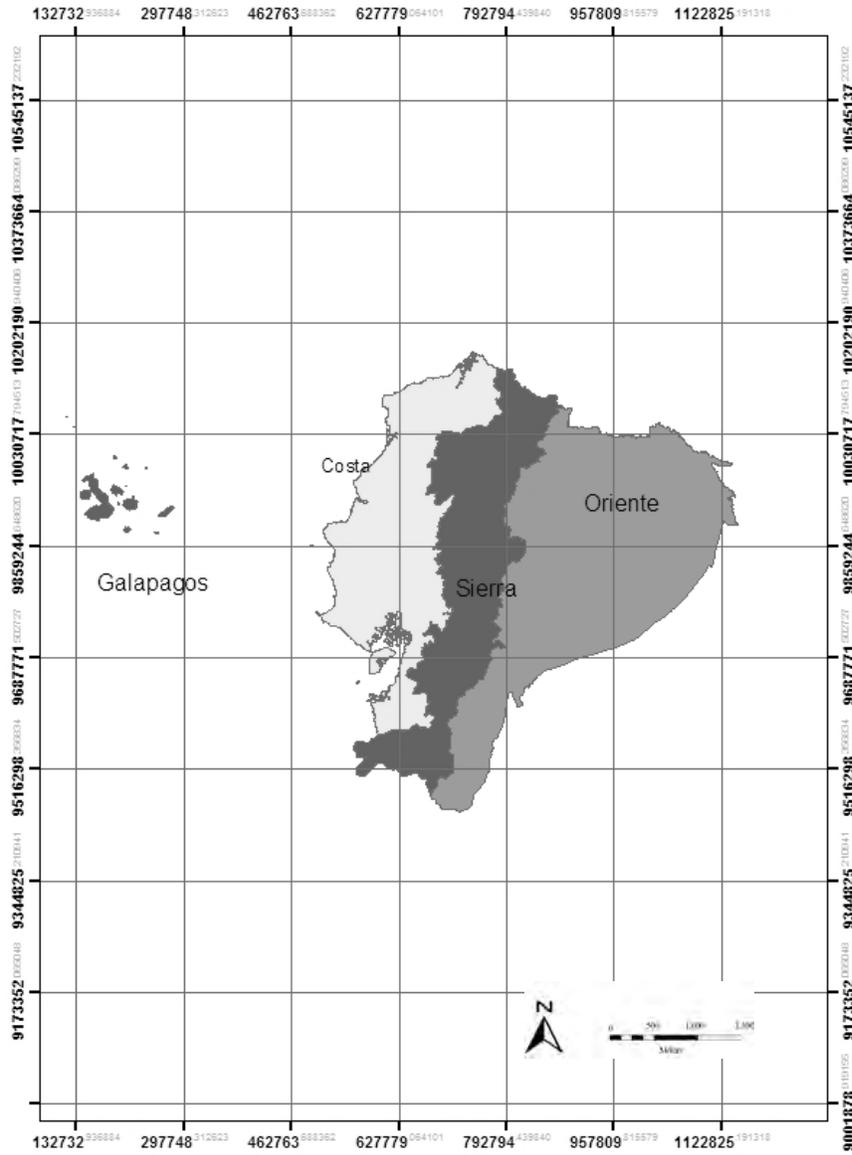


Figure 4. The Three Ecological Regions of Ecuador.



Tanicuchí's Environmental Landscape

Tanicuchí is located within the Latacunga-Ambato basin (Latacunga County, Cotopaxi Province). The Cotopaxi volcano as well as the Illinizas Mountains and the Toachi River (west), constitute the natural boundaries of Tanicuchí region. The village of Tanicuchí spreads over a small hill at an elevation of 3,015 meters in the Latacunga plain, some twenty kilometers southwest of the crater of the Cotopaxi volcano located at 5,911 meters above sea level. According to Mothes and Hall (1998:27), soils of the Tanicuchí valley are not very fertile due to the volcanic material and pumice deposits that constitute the local geomorphologic landscape. Tanicuchí's altitude varies between 2,998 to 3,029 meters above sea level.

The presence of the Cotopaxi volcano is an important feature that characterizes Tanicuchí's landscape (Figures 3 and 5). The eruptions of Cotopaxi volcano produced surfaces of andesitic and riolitic formations that severally impacted the landscape. Throughout the Latacunga valley, more than ten meters of ash and pumice cover the surface. Both, the Cotopaxi and the "Chalupas formation" (extinct volcano) contributed with most of the ash being deposited over thousands of years: *"the mentioned deposit filled the valley from Saquisilí and Latacunga to Ambato, leaving a porous plain of little utility for agriculture"* (Hall and Mothes 1998:27)².

Between 10,000 and 6,000 years B.P., a series of eruptions produced around 3 to 6 meters of lapilli's ash and pumice in the Machachi and Latacunga Valleys (Hall and Mothes 1998:24). An eruption dated on 5,800 B.P. expelled piroclastic outputs that descended through the *Pita* and the *Cutuchi* Rivers covering the western

² Translated by the author.

boundary of Mulaló and Tanicuchí sectors (Hall and Mothes 1998:24). A 1 to 2 meter layer of fine ash covered the Quito, Latacunga, and Machachi's Valleys (Hall and Mothes 1998:24). The huge "*Valle de Los Chillos Lahar*" mud deposits dated to 4,500 B.P. inundated the land surface from *Mulaló* to Tanicuchí and the lower basin of the *Patate* River (Mothes and Hall 1998:25). The intensity of the volcanic eruption of Quilotoa at the beginning of the Integration Period (A.D. 800 years) marked a decrease of agricultural production all over the central and northern highlands.



Figure 5. The Tambo Mulaló known also as San Agustín de Callo According to Villavicencio in 19th Century (From Fresco 2004).

Since 4,500 years ago, the 10-20 meter coat of porous and sterile materials remains fruitless for agricultural purposes and the pressing need of increasing populations (Hall and Mothes 1998:27). Nevertheless, ethnohistoric written sources describe the neighboring "fertile basins of Quito and Latacunga-Ambato (that)

contain some of the most productive farmlands in Ecuador, and consequently they supported dense native populations” (Newson 1995:41-42; Zúñiga 1980). Even so, receiving the impact of Cotopaxi’s eruptions the poor soils of the valley, where Tanicuchí rests, contained diverse faunal resources. “Wild game was the main source of animal protein. Fish made only a minor contribution to the native diet, being obtained in a dried form by trade from the coast” (Newson 1998:42). The presence of glacial lakes such as *Limpiopunku* and *Sicchos* formed from Cotopaxi provides ecological nests for deer, rabbits, insects, and fish. The natural vegetation of the zone is sparse and the most common plants are *pajonal* (*Stipa*) and small shrubs such as chillca, mortiños (blackberries), and moras (berries).

The *Cutuchi* and *Pumanchuchi* rivers, as well as *Quebrada Goteras* (small canyon), have direct influence over Tanicuchí surroundings, and they remain constantly feed by seasonal rainfalls and Cotopaxi’s snowmelt. The temperature typically ranges from 11°C to 14°C but nocturnal temperature, generally drops to 2° or 0° C. Annual rainfall varies between 500 to 1000 mm. Taking advantage of the humidity and the nearby presence of lakes, game represents a critical resource for trade that probably complemented diet of Prehispanic inhabitants of the central Ecuadorian highlands. Today, part of the land is also used for livestock, pork and sheep herding activities.

Poor soil quality does not allow large production and thus, agricultural resources are for local consumption and mainly consist of tubers, maize, beans, and vegetables. Nevertheless, industrial crops are grown today and produce flowers for export. Newson (1998) suggests that in *tierra fría*, the principal crops cultivated are

tubers, especially potatoes (*Solanum tuberosum*), oca (*Oxalis tuberosa*), ullucu (*Ullucus tuberosus*), and mashua (*Tropaeolum tuberosa*). Quinoa (*Chenopodium quinoa*), amaranth (*Amaranthus* spp.), corn (*Zea mays*), and the chocho (*Lupinus mutabilis*) are part of the plant inventory

The Tanicuchí cultural deposit represents a long period of occupation from prehistoric through Colonial and modern times. The location of Tanicuchí and Latacunga in the axis of the route between the coast, highlands, and Amazonia is important to its persistence through time. Fresco (2004) describes *Saquisilí* as a market place and mentions *tambos* in *Samanga* and *Panzaleo*. Their exact location is unknown, but they have been reported by chroniclers that followed the route of *Capac ñan* (Inka royal road) near the Cotopaxi volcano.

In summary, this chapter examines the landscape of Tanicuchí in relation to the volcanic activity that influenced the patterns of settlement, agriculture development, and population concentration. Considering Tanicuchí soils are limited to local production, it was not a massive zone for agricultural production.

CHAPTER 3: CULTURAL HISTORY OF TANICUCHÍ

No general consensus has been reached regarding the ordering of time and cultural development of pre-Columbian Ecuador. Whether this is a result of the lack of systematic research and/or the absence of absolute dating, most archaeologists are dissatisfied with the six-period framework that is most commonly employed (Figure 4). More than half century ago, Meggers (1966) established an Ecuadorian Pre-Columbian chronology ranging from Paleoindian (10000 – 7500 B.C.), Archaic (7500 – 3300 B.C.), Formative (3300 – 300 B.C.), Regional Development (300 B.C. – A.D. 800), Integration Period (A.D. 800 – 1500), and Inkan Periods (Figure 4). Although many remain dissatisfied with this chronology, archaeologists continue to utilize the six-period scheme and incorporate absolute dates into it (Marcos and Michezynski 1998; Salazar 1990; Stothert 1998; Zeidler and Pearsall 1994; Deboer 1996). However, it is not the purpose here to provide a critique of Megger's scheme but to establish a framework for understanding Tanicuchí's cultural history. No early occupations existed at Tanicuchí, the local occupation starts during the Integration Period (A.D. 800 – 1500). However, it is primarily the last two Prehispanic periods and the beginning of the Spanish Colonial Period that are relevant for the purposes of the present research. Thus, discussion focuses on Integration (A.D. 800 – 1500), Inka (A.D. 1500 – 1534), and Colonial Periods.

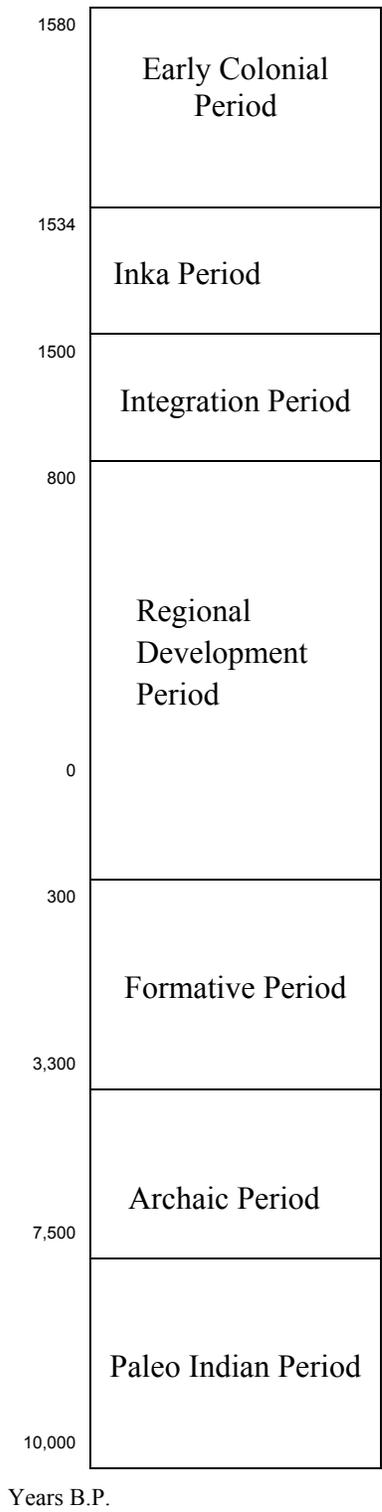


Figure 6. Chronological Chart of Ecuadorian Cultural Prehistory.

Integration Period

The Integration Period refers to the time when local native chiefdoms developed in the Northern Andes and interacted through alliances and trade, instead of military confrontations. Diverse ethnic groups in local territories governed portions of the highlands and had connections with lowland peoples in the coast and in the rainforest. The interandean corridor was the best route to transport products and to connect and move people from different ecological zones and regions. The advantage of short distances between ecological environments facilitated trade and consumption of foreign products and discouraged tensions among ethnic borders (Salomon 1997: 60). Latacunga (Figure 2), for instance, functioned as an ethnic-political center having influence over Tanicuchí, Saquisilí, Mulaló, among other settlements before the Inka arrival into the central highlands of Ecuador (Moreno-Yáñez 1983:78). During the Inka occupation ethnic chiefdoms formed an alliance against the Inka armies (Moreno-Yáñez 1983:77).

The occupation of Tanicuchí begins with Integration Period. Although this occupation has a long temporal span from A.D. 800 -1500, the eruption of the Quilotoa volcano provides a precise indicator of its beginning: “Given the excellent control of the Quilotoa 800 years B.P. ash, it can be reliably employed as a marker unit for Ecuador’s Integration Period” (Mothes and Hall 1998:130). However, some researchers have found that the,

Pre-Inkaic settlement pattern of the Quito and Latacunga-Ambato basins is extremely difficult to reconstruct because of the changes wrought during Inka rule and Spanish conquest. [...] Inka attempts to control newly conquered territories witnessed the massive transfer of

populations, the foundation of major administrative centers at Quito and Latacunga, and the establishment of a large number of minor settlements along the Inka highway (Newson 1995:43).

Salomon suggests that the Latacunga region contained a series of local socio-political organizations, named *curacazgos* (1985). Native chiefdoms, or *curacazgos*, taking advantage of the physical characteristics of the landscape developed a trade network allowing easy access to long distance products such as coca leaves, fish, game, and fruits. In contrast with the socio-political landscape of the central Andes, the northern chiefdoms consisted of agricultural and trade economies. In ancient Ecuador, local chiefdoms established their interdependence and formed social relationships throughout the interandean corridor. Agriculture, game, and trade activities supported the local economy (Moreno-Yáñez 1983:76).

The archaeological record of the surveyed area at Tanicuchí does not provide material evidence of an early settlement in Tanicuchí. Possibly, under the large ash and volcanic detritus sediments, earlier occupations are present, and perhaps these will be located and recovered in the future. Ethnohistoric sources however, give information about two specific chiefdoms in Latacunga Valley, Saquisilí and Tanicuchí.

Inka Period

The Inka state emerged in Peru as one of the chiefdoms in the Cuzco valley before A.D. 1438 (Bauer 1992:38). Cuzco served as the Inka capital and from this central location the Inkas developed alliances with neighboring chiefdoms and engaged in warfare in order to expand their influence over the Peruvian, Bolivian, Ecuadorian, and Chilean regions (A.D. 1,500 –1,534).

Inka political power appears “ritually hierarchical but not highly centralized, therefore compartmentalized among the multiple provinces annexed by alliance and conquest to the state” (Malpass 1993:11). A bureaucratic stratum regulated societal relationships, labor, economy, and religion in which reciprocity was the axis of the organizational system. Labor organization and specialization as well as storage technology supported “a mixture of staple and wealth finance in the state political economy” that “allowed the Inkas flexibility in regional and interregional finance” (D’Altroy and Earle 1985:196). D’Altroy and Earle assumed that the Inkas measured reciprocity with their allies according to the amount and quality of wealth. It was therefore, easier for the Inkas to maintain or expand their alliances with other chiefdoms. The different levels of reciprocity expressed publicly under redistributive forms like public feasts and displays offered to the lords of small and large ethnic groups proved important in the case of reciprocity in the Andean world (Rostworowski 2003).

The Inkas dominated local natives and assimilated local political and economic features in conquered lands. They approached local polities, either by force

or by alliances, based on reciprocity to assure the empire's government. "With the partial exceptions of the [...] highlands of Ecuador, Andean societies did not rely heavily on specialized, integrated economies" (D'Altroy 1992:152). Depending on the success of the conquest strategies, the Inkas used military force or diplomacy with the hope of establishing alliances with local ethnic groups. Most of the native communities consisted of scattered chiefdoms articulated by kinship administrative cores (Delgado 2001). The political power was embodied in the Inka himself as a deity, a direct descendant of his *mallqui* (ancestors) that governed with him (Conrad and Demarest 1984:185). Military forces controlled regional trade and the system of roads through bridges, *pukaras* (fortresses), *tambos* (inns), *chasquiwasi* (outposts), and emissaries called *chasquis*. Monumental and abstract geometric architecture linked to socio-political control evokes Inka praxis of "an artistic imperialism, spreading their style by force, as they required the production of highly standardized ceramic and textile objects from subject populations" (Niles 1992:350).

The Inka Empire was divided into four quarters (*suyus*), contemporary Ecuador comprised *Chinchaysuyu* (the northern side) of the region under Inka domination (Dillehay and Netherly 1998; Hyslop 1998; Idrovo 1998; Morris 1998; Netherly 1998; Rostworowski 1999:85-86). Tanicuchi's proximity to Saquisilí's strategic market worked like a central axis of pre-Inka roads that linked trade from Amazonia (East) and the coast (West) with the highlands. The Inkas conquered present-day Ecuador during the first half of Sixteenth century. At the time of the Spanish Conquest, the Inka state was still consolidating its rule trying to annex,

mostly by force, the Northern region of Ecuador (Moreno-Yáñez 1990; Newson 1995; Ontaneda 2002; Salomon 1985).

The Inkas built a central road through the Andes called the *Inkañan*, and other secondary roads boarding the Pacific coast and connecting the Amazonian region from Chile to Ecuador. The Inka royal *Inkañan* marked the peak of geographical expansion of the Inka state (Rostworowski 2003). The presence of military fortresses and *tambos* (road stations or inns) emphasize the critical role of the *Inkañan*. The Inkas exploited resources from other ecological zones in order to facilitate the production of pottery, metallurgy, textiles, and basketry, as well as obtain access to coca (*Erythroxylum* spp.) and other items from the lowlands (Salomon 1980:177-181). In order to maintain a low profile within annexed regions (D'Altroy and Earle 1985:201), the Inkas expanded their political control through processes of acculturation, comprising “patron-client relations, alliances, direct assimilation, and the reorganization of local hierarchies into less complex forms” (Covey 2000:120).

Pachacuti Yupanqui Inka was an Inka ruler who unified the Cuzco valley's macro ethnic groups with chiefdoms as distant as those located within the territorial boundaries of present-day Ecuador. Pachacuti Yupanqui arrived in Northern Ecuador to manage the populations living in the Interandean corridor. Later, under the rule of Huayna Capac, the Inkas invaded most of the Ecuadorian highlands. Huayna Capac Inka conquered Chinchaysuyu and changed the name of the Cañari town of *Surampalli* or *Guapondelic*, to *Tumipamba*, the most important Inkan urban center in the Ecuadorian Southern highlands (Rostworowski 2003). During Huayna Capac, “a defensive league was organized among the *Caranquis*, *Otavalos*, *Cayambis*,

Cochasquis, and *Pifos*, something the Inca did not expect” (Rostworowski 1999:84).

After a short period of hostile confrontations in what is now Ecuador, the Inkas subordinated local populations, founded three main urban centers (Tumipamba, Quito, and Latacunga) and introduced *mitmakuna* settlements, by force, as part of the strategies of socio-economic assimilation (Oberem 1997; Rostworowski 1999:82).

The Inka Period in Ecuador is dated between A.D. 1500 and 1534 (Lumbreras 1981; Oberem 1997) and represents a period of Inka subjugation, acculturation, and collapse. In the Latacunga region and at Tanicuchí specifically, the Inka Period events are crucial for understanding the increase of population and the transition to the Colonial Period. The Inkas annexed provincial regions of their empire through indirect administration. Using bureaucratic local elites, the Inka collected tributes and redistributed through feasting and giving imported crafts to native chiefs (Bray 2003; Salomon 1990:100). Additionally, the Inkas introduced *mitmakuna* and Inka governors for consolidating the conquest (Rostworowski 2003). In the Latacunga region, at the time of the Spanish arrival, *mitmakuna* brought from Peru added to the local native populations (Newson 1995:130).

Reproducing the Cuzco urban pattern in Quito had the purpose of unifying the Northern capital of Tawantinsuyu (Newson 1995). The Inkas built three main urban centers in today’s Ecuador: *Tumipamba* in the south, Quito in the North, and Latacunga in the middle. As the Inkas built Tumipamba in the Southern Sierra, they began to build Latacunga in the Central Sierra as the third urban center of the *Chinchaysuyu*.

The history of Prehispanic Ecuador indicates that under the domination of the Inka state, *mitmakuna* (replaced settlements from outside of the region) arrived to populate Ecuadorian lands during the beginning of 16th century (Rostworowski 1999). Ethnohistorical sources suggest that the Inkas brought a *mitmakuna* settlement from Peru to Tanicuchí:

One colony probably comprised of Indians from Guayacondo, and another established near Saquisilí. Mitmaq from the latter settlement claimed that their ancestors had arrived as soldiers with Tupa Inca Yupanqui and had been given lands in the Tanicuchi Valley³, from whence the Spanish later moved them to Saquisilí. In 1591, the Latacunga region still possessed 558 mitmaq (Newson 1995:130).

Nearby Tanicuchí, in the community of Saquisilí, local community members maintained a marketplace during the Inka and Early Colonial Periods: “from Doña Francisca Sinasigchi’s testament, we deduce that at this time, her husband [Don San Hacho] had abandoned her. She, herself had moved from Latacunga to Saquisilí” (Oberem 1993:133). Even though there is apparently minimal Inka occupation of Tanicuchí, the Inka presence during this period marked the process of population mobility in the entire region. *Don Sancho Hacho*, the “*cacique mayor*” (major chief) of Latacunga, left a testament of his wealth and lands in which he declared himself different from the Inkas and descendant of local lords that governed Latacunga before and after the Spanish arrival (Oberem 1993:17). The Inkas seem to have occupied the town of Latacunga, giving it the status of the third urban center as well as removing the local elites to the surrounding areas such as Tanicuchí and Saquisilí.

³ Underlined by the author.

Tanicuchí's proximity to the Saquisilí market perhaps became a convenient location for the *mitmakuna*'s settlement that functioned as a state institution under the Inka rule. The archaeological survey of Tanicuchí evaluates the presence and density of occupation of the site in relation with the surrounding important Inka areas. Tanicuchí could represent an archaeological example of Inka subjugation in the Northern Andes. According to Oberem and Salomon's (1985) ethnohistorical sources, Tanicuchí resembled a Peruvian *mitmakuna* settlement.

Latacunga was a major Inka provincial capital and minor native chiefdoms such as *Mulaló*, *Toacazo*, and *Saquisilí* were identified as some of the villages in the valley north of Latacunga. "The Tanicuchí area had to be home to locals, *mitmakuna*, or Inkas under the Inka rule" (David Brown, personal communication 2002).

Tanicuchí and Saquisilí were probably associated with the same *mitmak* and could have been related to the architectural compound of San Agustín del Callo excavated by Brown in 2000. Brown (2000: 78) states that San Agustín del Callo and Latacunga are Inkan and Colonial because they are closely associated geographically and they are mentioned in the ethnohistorical sources. San Agustín del Callo was never completed by the Inka (Brown 2000:71). It has many Inka architectural characteristics but the absence of Inka ceramics and the abundance of Colonial sherds associated with local native wares suggest that it was reconstructed and occupied later by Agustinos priests in Colonial times. According to Brown (2000:78), San Agustín del Callo was a tambo: "the site worked as tambo, it had many illustrious guests during colonial centuries, and perhaps, partially was used in its original function as a tambo – where the Inkas and the elite of their conquered chief used to stay"

San Agustín del Callo, known in oral tradition as an Inka palace, consists of several buildings erected in Inka style. Few walls and structures are complete but enough to recognize the architectural fashion of the “Cuzco style wall construction with rectangular blocks and junctions without any space. The rocks are of volcanic origin; most are of the andesite variety, which are very hard, while some are of a light type composed of volcanic lava. The walls show a series of trapezoid niches under overhanging rocks”⁴ (Brown 2001:4). Today the archaeological site has been converted into a resort and is located within the hacienda lands of ex-President Galo Plaza-Lasso. A view of the current hacienda and resort shows the simultaneous maintenance and destruction (re-decoration) of this important archaeological site by one of the richest Ecuadorian families (Figure 5).



Figure 7. Hacienda San Agustín del Callo, Inka Architectural Style.

⁴ Translated by the author

The Inka presence remains evident in the Latacunga region. Monumental sites, such as San Agustín del Callo (Brown 2001), El Salitre (Fresco 2004), and the ethnohistorical narratives about Latacunga as the main regional center reveal the degree of Inka influence. However, the region needs more archaeological investigation to understand the relationship between small settlements such as Tanicuchí, Saquisilí, Mulaló, and others to the past urban centers in Latacunga.

Early Colonial Period

At the time of the Spanish conquest, Ecuadorian territory was in the process of Inka acculturation and subjugation. Local chiefdoms resisted full incorporation under Inka rule and found in the Spanish an opportunity to revolt against the Inkas (Salomon 1990:102). Leading up to and following the conquest, new epidemics, civil wars, village resettlements, torture, subjugation, and human massacre against native inhabitants under the Spanish surely made these extremely dark times. Smallpox, scarlet fever, measles, influenza, typhus, among other diseases, moved south from Cartagena and north from Cuzco following the process of incorporating Ecuador into the expanding Spanish colonial empire. Salomon (1990: 102) illustrates that Smallpox acted as an ally to the Spanish and exterminated about half of the native populations. Around the second half of the Sixteenth century, the aboriginal population of Latacunga-Ambato valley was reduced from 160,000 to 31,937 inhabitants. Although the rate of decline was about eighty percent at the end of the Sixteenth century (Newson 1995: 341), indigenous resistance against colonization

developed throughout the first Early Colonial period (Salomon 1990: 115). The demographic reduction added to the civil war among the Inkas and the provincial annexed territories destabilized the Inka Empire and created the perfect environment for a fast entrance of the Spanish (Salomon 1990:101).

The Early Colonial Period, from A.D. 1540 to 1570/80, has two main divisions. The Early Period (A.D. 1548-1563) marked the process of colonial stabilization and the end of the military conquest. The organization of the colonial administration departed from utilizing native elites for representing Spanish interests and economic advantages (Salomon 1990:94). Within the kinship system, characterized as a royal bureaucracy, the stratified native populations organized work and collected tribute from native commoners (Salomon 1990:94). Salomon (1990) indicates that this first Colonial phase used an indirect government by manipulating native chiefs and occupying original native centers instead of founding new settlements in empty places. Not only did the role of edifices change during the Colonial period but the ethnic chiefs recovered power lost during Inka occupation. The Spanish created new institutions and political positions where private property and individual enrichment emerged instead of prestige and communal lands and goods (Spalding 1974:73). Another source of control was the beginning of ethnic mixture through convenient Andean-Hispanic alliances using arranged marriages and patronages (Salomon 1990: 118). Newson argues that during the first period of Colonial rule (1540 - 1580) there occurred a division of ethnic groups in Ecuador. This event separated and weakened native political forces, and in the Latacunga

region, the “Panzaleo, [...] were split between the *corregimientos* of Quito and Latacunga” (Newson 1995:19).

The Middle Colonial Period (A.D. 1563-1573) corresponds to the direct Spanish royal administration through the *Virrey de Toledo* laws and institutions that designated Spanish authorities to displace native elites that acted as links at the beginning of the conquest (Salomon 1990:119-122). By the middle of this period, Spanish military conquest was complete. Local authorities, represented by religious orders and by legal Spanish governors, controlled, in part, the abuse of natives that occurred during the first part of the conquest (Salomon 1990:94). The Middle Colonial Period continues to the end of Sixteenth century, based on textile production required by the Spanish crown (Jácome 1990:125-126). Potosí was the principal market of textiles and this period ended with the decrease of textile production that coincided with a series of natural catastrophes. The Late Colonial Period began in the first decades of the Seventeenth century as an economic recuperation, but ends in 1820 without ever achieving the levels of the previous profitable boom (Cristóbal Landázuri, personal communication 2003).

In the Latacunga region the Spanish developed religious centers for Christianization and for consolidating the production into “*reducciones de indios*” or forced concentrations of natives, where the Inkas settled years before. In San Agustín del Callo, for instance, Brown (2001:78) identified Inka and Colonial occupations. This fact suggests that the colonial occupation by the Agustín priests dates from the Early Colonial Period. In Tanicuchí, a few kilometers from San Agustín del Callo, the presence of Colonial wares reveals the temporal relationships with the regional

Spanish administration of Latacunga. Saquisilí and Tanicuchí, as well as other coeval native settlements functioned as *Encomiendas*, locations directed by the Spanish and supervised by the Catholic missionaries. San Agustín del Callo served as the Agustín priests' home since 1750 (Humboldt cited in Fresco 2004: 368).

In sum, after seventeen years of Inka invasion into present-day Ecuador, the anti-Inka resistance of local chiefdoms facilitated the Spanish conquest and the Inka collapse (Salomon 1990:102). The Spanish occupied Latacunga and surrounding areas taking advantage of local native chiefdoms' continued resistance to Inka rule. The boundaries between the end of the Inka rule and the beginning of Spanish colonialism appear ambiguous in sixteenth century Ecuador. The limits between resistance and subjugation alter the consensus about the Colonial Period boundaries. The wide spectrum of the Colonial rule incorporated a multitude of processes and facts that lasted for almost three centuries (Salomon 1990:101). Probably, the most accurate scheme derived from the economic history, especially for Ecuador in colonial times, is called the "*Royal Audience of Quito*" (Cristóbal Landázuri, personal communication 2003).

The Early period, from A.D. 1540 to 1570/80, corresponds to the consolidation of colonial institutions, the organization of the colonial administration under the rule of the Toledo's Vizroy (A.D. 1570), and the end of the indigenous resistance (Salomon 1990: 115). Salomon (1990) defined the first part of Colonial Period as a phase of indirect governance that manipulated native chiefs for acquiring tributes and organizing indigenous populations. The second phase of the Middle Colonial Period corresponds to the direct Spanish royal administration through the

Virrey de Toledo that designated Spanish authorities in the Americas (Salomon 1990:119-122). In Tanicuchí, the presence of Spanish can be traced through ceramics to San Agustín del Callo and Tanicuchí, sites that indicate only Early Colonial presence in the archaeological record (Brown 2001: 6).

CHAPTER 4: ARCHAEOLOGICAL SURVEY OF TANICUCHÍ

The original aim of my pilot project in the Tanicuchí valley consisted of an archaeological survey and a surface collection that covered a hundred percent of the current village of Tanicuchí. The abundance of ceramic fragments readily visible throughout the area compelled me to survey the village with the goal of determining site boundaries and chronology. In addition to prehistoric remains, the ethnohistoric data, as well as the birth archives of the local Catholic Church, show that Tanicuchí may in fact be a village with at least a five hundred year old settlement history. The survey of Tanicuchí helped define the boundaries and periods of occupation for the Tanicuchí area.

I divided the survey area into seven sectors depending on the accessibility of the terrain and presence of barriers. The seven sectors are totally arbitrary and represent sampling areas where my crew and I examined the ground surface. Each sector is a different size depending on the barriers found while surveying. The center of Tanicuchí village, including architectural features and streets were not included in the survey area. The flower plantation greenhouses, the bullfight arena at San Lorenzo Plaza, the rodeo and soccer fields, and the local cemetery also remained outside of the survey area. The relationship among sectors will be discussed more fully in chapter six.

The Tanicuchí survey consisted of a site-scale archaeological reconnaissance of 146,700 m². I systematically sampled Tanicuchí area using a pedestrian aligned survey. Although I wanted to perform a full coverage survey, the division of sectors

did not allow one hundred percent coverage of Tanicuchí since some physical features of the current village blocked access and ground visibility.

As Orton (2000:77) proposes, the main objectives of survey consist of the “management of the archaeological resource of the region, and research into its past”. Surface collection allows determined horizontal (extension) and cultural affiliation boundaries of the archaeological site. In addition to the surface collection, I excavated four units to provide stratigraphic control. Excavation unit profiles identified volcanic deposits and layers of ash below cultural occupations.

Surface Collection

To begin the survey I placed a grid oriented to the cardinal directions on the survey area. The sampling units were 20 m² quadrants aligned following the cardinal axis. The 2 x 2 m surface collection units were aligned along the grid and separated by 20 m intervals. Surface collection units correspond to the surface of a 2 m radius collection. We collected all materials within the 2 m diameter, even tiny sherds of about one centimeter in width because diagnostic Cosanga fragments, for example, can be identified with small sherds.

Test Excavation

For the pilot project fieldwork, a combination of surface collection and test excavation to control stratigraphy worked successfully for recognizing archaeological indicators of Prehispanic and Early Colonial occupations in Tanicuchí. Unlike in the village of Tanicuchí, surface sherds appear in large amounts over the ground or in

plowed areas. In areas lacking of surface visibility, small shovel tests were critical for finding cultural deposits (Figure 8).



Figure 8. The Beginning of the Excavation Test Unit 1, Sector 3.

The objective of the test excavations was to support the surface collection spatial boundaries by recognizing vertical boundaries in terms of depth. We excavated four one-by-one meter units to a depth of one meter (Figures 8 and 9). The excavation test units were profiled, mapped, and photographed (Figures 8 and 9). Following arbitrary levels of 10 cm, the excavation ended at 1 m of depth.



Figure 9. Excavation Test Unit 2, Sector 3.

Analysis

We collected diagnostic and non-diagnostic pottery fragments as well as lithic artifacts during survey and excavation for analysis. I carried out the laboratory work in Tanicuchí at the same time as the fieldwork. I did not screen the soil, thus no macroremain samples were collected during the pilot survey.

A record of counts was kept on data collection tags. Ceramic and lithic materials were cleaned, weighed, tabulated, drawn, photographed and entered into a database system. Pottery fragments were identified as Cosanga, Inka (in one case), Tardío, Colonial, and Modern wares corresponding to Integration, Inka, and Colonial time periods.

Pottery Analysis

I compared and classified Tanicuchí's pottery to organize Tardío sherds into types. I propose a beginning typology for Tanicuchí (Chapter 5) where I classified Cosanga, Tardío, and Colonial sherds into existing wares and types from coeval sites of the highlands. In addition, I organized a few types for the local Tardío pottery at Tanicuchí (Chapter 5). To classify the ceramics I examined manufacturing technique, firing atmosphere, color, temper, texture, surface finishing, walls, vessel forms, and decoration. Based on the ceramic analysis, using SPSS 10.1, I identified patterns in pottery distribution (Chapter 6). A spatial distribution of different wares indicates ceramic components of individual sectors that constitute the basis for determining the chronology and spatial distribution of components at the site.

The spatial distribution of sherds in each sector of the site as a whole supports the successive occupation of Tanicuchí. Using statistical data analysis, I compared the sherd distribution of different sectors. Contour maps plotted in Surfer 7.0 indicate the spatial distribution of sherds by sectors and by periods of time. Although collected, lithic materials were not analyzed due to the focus of this thesis. However, they are illustrated in Figures 10 and 11.



Figure 10 . Mano Fragments and Basalt and Obsidian Artifacts from Tanicuchí.



Figure 11. Circular (A) and Rectangular (B) Metates in Tanicuchí.

The pilot survey at Tanicuchí collected a variety of ceramic materials analyzed in Chapter 5. As an initial project in the Tanicuchí area, more research needs to be done in the future. Further investigation at Tanicuchí is required in order to obtain data for developing lithic and paleoethnobotanical remains. The excavation of some sectors is needed to better understand the site, radiocarbon dates are also needed to obtain absolute dating to confront ethnohistoric narratives and intrasite episodes.

CHAPTER 5: TANICUCHI CERAMIC WARES

Discrepancy and confusion frame the pre-Hispanic pottery typology of the Ecuadorian highlands. The absence of radiocarbon dates and the lack of systematic surveys and excavations deprive archaeologists of accurate sources to compare cultural affiliation and temporality of late pre-Hispanic pottery (Tardío). Tardío pottery is often called various terms. Jijón y Caamaño (1997[1952]) elaborated a typology for the southern and central highlands, particularly for the *Puruhá* region. Porras (1975) like Jijón y Caamaño (1952) developed Cosanga types simply based on decoration. These pottery classifications disregarded undecorated materials, manufacture procedures, and temper identification as elements of the typology. As a consequence, an “ordinary” category remains as the only place to put the undecorated and thick sherds (Tardío) that often dominate the highland pottery assemblages. Another Tardío ware comes from the Amazon lowlands and is denominated “*Panzaleo*”. *Panzaleo* refers to a very thin pottery whose main characteristics are mica inclusions in temper and zoomorphic and anthropomorphic figures or additions to vessels. The *Panzaleo* type appears potentially confusing since the name belongs to the highlands but its origins are in Cosanga (Los Quijos Valley).

To make *Panzaleo* even more complicated, Ontaneda (2002) published the results of Machachi survey and associated the recovered pottery to his “typological matrix” for Integration Period pottery in Quito. Ontaneda changes the term “*Panzaleo*”, used for describing the fine ware, to the Machachi’s ware that is local Tardío in Machachi. Ontaneda presents a formal classification but no typology for what he calls the *Panzaleo* chiefdom in Machachi (2002: 45-58). Ontaneda asserts

that the Panzaleo ware was misunderstood by Jijón y Caamaño in his linguistic interpretation of ethnic groups described in chronicles (1997[1952]: 78-80). Hence, the Panzaleo ware today corresponds to the local Tardío pottery found in the Machachi survey (Ontaneda 2002: 44), and Cosanga, earlier identified as Cosanga-Píllaro (Porrás 1975), represent the Amazonian trade ware that comes from Los Quijos valley, Cosanga (Bray 1995:137; Andrea Cuellar, Personal communication 2002; Delgado 1997: 462), and the local Cosanga from Píllaro (Porrás 1975: 63). To add to the problem, the large temporal extent of the Integration Period (A.D. 800 – 1500), makes it difficult to examine cultural change in the interandean region.

Table 1: Cosanga Ware Names and Distribution Mentioned in Text.

Ceramic Name	Distribution	Citation
Cosanga	Quijos Valley	Porrás (1984)
Cosanga-Píllaro	Píllaro, Tungurahua Province	Porrás (1984)
Cosanga	Cochasquí	Lumbreras (1990)
Panzaleo	Guayllabamba Valley	Bray (1995)
Cosanga	Quijos Valley and Misaguallí	Delgado (1998)
Cosanga	Machachi and Quito	Ontaneda (2002)

Cosanga Ware

The origins of Cosanga ware, as well as its typology, provoke several kinds of interpretations among archaeologists (Table 1 and Figure 12). Bray argues that a “plethora of labels reflects the general lack of agreement among archaeologists, regarding the origins and significance of this pottery” (1995:137). Often associated with the ethnohistoric Panzaleo ethnic group located “between Panzaleo and Mocha, which encompassed the towns of Mulahaló, Latacunga, Muliambato, and Ambato” (Newson 1995:40), Cosanga constitutes a pottery assemblage that appears in small

percentages associated mainly with Tardío ceramics in the Ecuadorian highlands: “Panzaleo pottery has a wide but irregular distribution throughout much of northern Ecuador [...] Yet no “pure” Panzaleo sites have ever been reported” (Bray 1995: 134).

Newson states that “clearly more research is necessary before the northern boundary of the Panzaleo can be defined with any certainty, this relationship of the Panzaleo to other Indian groups is not clear” (1995:41). Indeed, Newson illustrates the confusion between Cosanga fine ware and Panzaleo. However, she is confident that the Cosanga tradition spread over large distances among the Cotopaxi region, the North of Quito, and the Quijos Valley (Ecuadorian Amazon region).

Bray conducted an analysis on Panzaleo’s mineralogy (1997: 143-145). Her results prove there to be a significant similarity between chemical and mineralogical compositions of highland non-local Panzaleo and Panzaleo local sherds from the Quijos Valley (1995:145). The fact that “Panzaleo wares were most likely to have been produced with materials from the eastern side of the Cordillera Real” (Bray 1995: 145) provides strong evidence of the trade networks between the highlands and the eastern Amazonia since the Prehispanic Period (Bray 1995: 151).

Ontaneda (2002) assigned the name Panzaleo to a Tardío ware he found in the Machachi Valley survey (2002:44). Ontaneda uses the term Cosanga to refer to pottery sometimes classified as Panzaleo, and corroborates the view that its origins are found in the Quijos Valley. However, Bray’s Panzaleo ware, following Jijón y Caamaño’s original proposal, still corresponds to the fine ware. In the present report I identified fine ceramics as Cosanga and I use the same label. However, I agree with

Bray's suggestion that Cosanga (her Panzaleo) "is a trade ware that likely reflects prehistoric exchange relations between northern highland and eastern lowland groups" (1995: 137). Furthermore, according to Bray, Cosanga type "provides evidence of the historical depth and ritual significance of exchange relations and highland-lowland interaction in the equatorial Andes" (1995: 137). Cosanga's wide dispersion from Los Quijos valley to the central and northern highlands suggests a significant magnitude in the mobility of ceramics as well as in potters and traders (Table 1).

In Tanicuchí, all seven sectors have Cosanga wares. Following a typical pattern of Cosanga distribution within the highland Tardío context, Cosanga materials exist in small quantities and in comparison with Tardío. As a fine ware, easily identifiable due to special characteristics, Cosanga ceramics are "readily recognizable to even the casual observer" (Bray 1995:137). I consider previously discussed information and Tanicuchí Cosanga examples to provide a general description of Cosanga ware. Based on the analysis by Lumbreras (1990) and Bray (1995) of Cosanga materials, I identified Cosanga types and decorations (Figure 12).

Cosanga's Temporal Range

Porras obtained radiocarbon dates from excavation context from 420 B.C. to A.D. 700 (1975: 184-185). Porras' sequence of Cosanga – Pillaro has four phases (1975), although Bray warns that "the 13 uncorrected radiocarbon dates that Porras obtained from carbonized remains recovered from excavation in the Quijos region would give Panzaleo pottery a time span of nearly 2000 years" (1995:138). Cosanga-

Píllaro I and II (400 B.C. – A.D. 700) correspond to the Amazonian occupation in the Quijos Valley, and Cosanga-Píllaro III and IV (700 B.C – A.D. 1500.) relate to a gradual exodus from Quijos Valley to Píllaro and surroundings in the central highlands (Porrás 1984: 206-213).

Using the same material collection as Porrás, Lumbreras (1990) established a three-phase sequence for Cosanga: Cosanga Temprano (early), Cosanga Medio (middle), and Cosanga Tardío (late). Lumbreras noticed that the Cosanga Tardío presence remains in the Quijos Valley until the Colonial Period, contradicting the idea of migration advanced by Porrás in 1975. Lumbreras's time span is based on decoration and offers only a few dates through association with Cochasquí. Cosanga Temprano (early) pottery had predominately negative paint, red slip, punctate, and modeled decorations. In Cosanga Medio "A", one finds that negative paint and red bands, white bands, and black bands are the main decorations. Lumbreras associated Cosanga Medio "A" to Cochasquí Phase I (A.D. 950-1250) in the northern País Caranqui (Lumbreras 1990: 57-64). Cosanga Medio B presents red and white, and Red-on-white with black bands. Cosanga Tardío (A.D. 1250-1550) commonly has rims with knot appliqué, stamped rims, and red bands (Lumbreras 1990: 61-64). Cosanga ceramics (Figures 13 and 14) found in Tanicuchí are described in the following paragraphs and sites having Cosanga association appear on Figure 12.

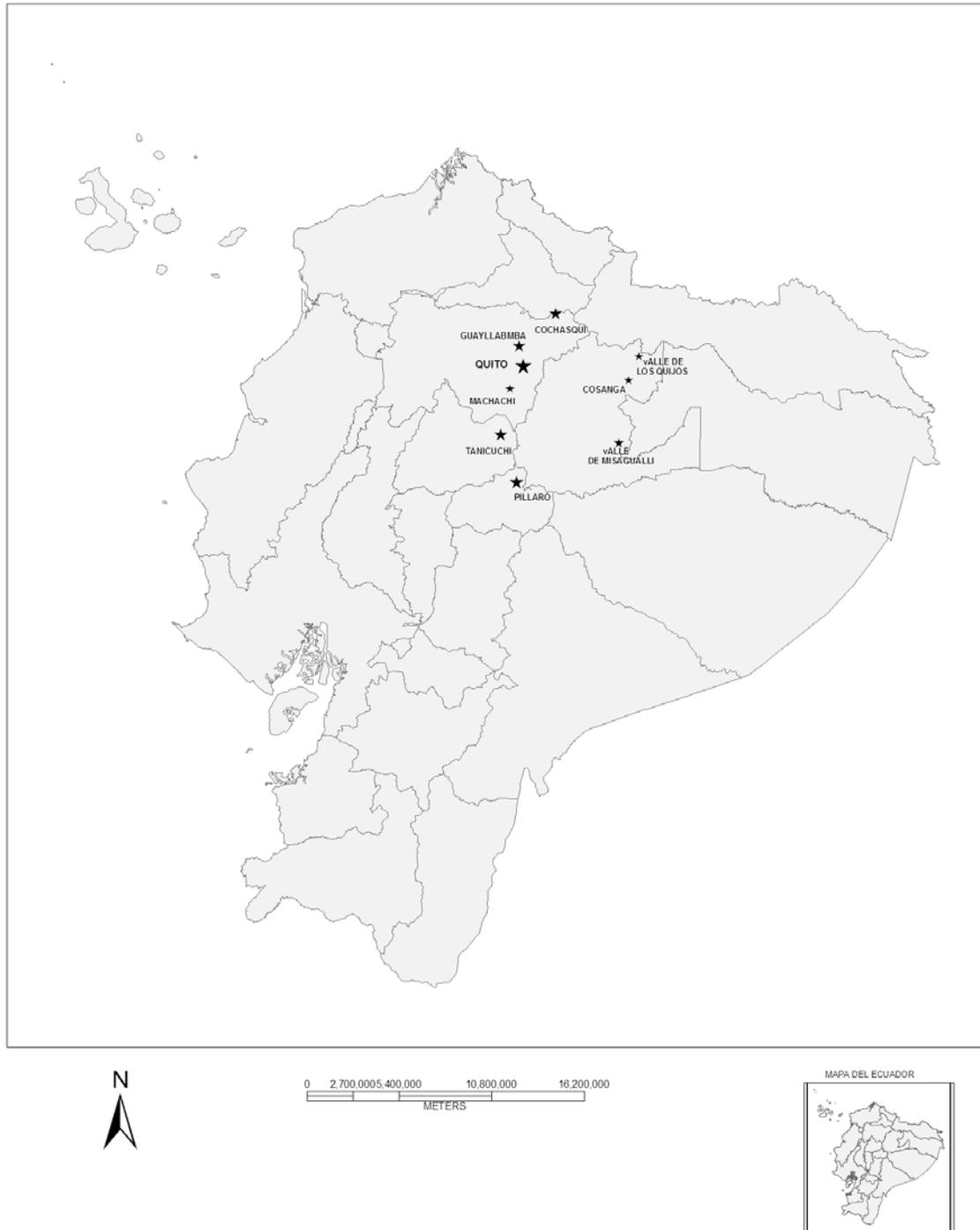


Figure 12. Map Showing Sites Associated with Cosanga Pottery Mentioned in Text.

Cosanga Ware



Figure 13. Cosanga Black and Red (jar), Tanicuchí Sector 3.

Manufacture: coiling

Fired: reducing atmosphere

Color: light brown to light red

Temper: abundant mica component, black unidentified particles, few angular quartz fragments, and occasional red andesitic particles.

Surface finish: most types have smoothed exterior surface, scraped interior. Often slipped.

Texture core: fine

Vessel walls: very thin, between 2 – 4 mm

Vessel forms: neckless jars, bowls, pedestal bowls (or compoteras), and tecomates.

Decoration: punctate, ring stamping, negative paint, Red-on-white painting, red painted bands, white painting bands, anthropomorphic and zoomorphic appliqués, and planorelief designs.

Pigment: red vegetal paint probably by using *achiote*, sometimes brown reddish color, black slip painting and watery white.



Figure 14. Cosanga Wares.

In Tanicuchí, according to Lumbreras's (1990) decoration typology and to Bray's formal description, some diagnostic ceramics seem to belong to the Cosanga Tardío phase. In figure 15, a necked jar (A) with a black and white bands decoration style is a liquid container. According to Bray's forms (1995), a "tall necked jar" would have used for transport, storage, and pouring liquids (1995: 149). A pedestal bowl (Form II-4) for food serving and eating (Bray 1995: 149) has a typical Tardío decoration: knots in the rim as illustrated in Figure 15-B (Lumbreras 1990: 62). Figure 15-C is an unidentified excised Cosanga, and fragment D belongs to Form II-7, a "small globular bodied neckless olla" (Bray 1995:147). Figures 15-E and F are unidentified body fragments of small jar or olla.

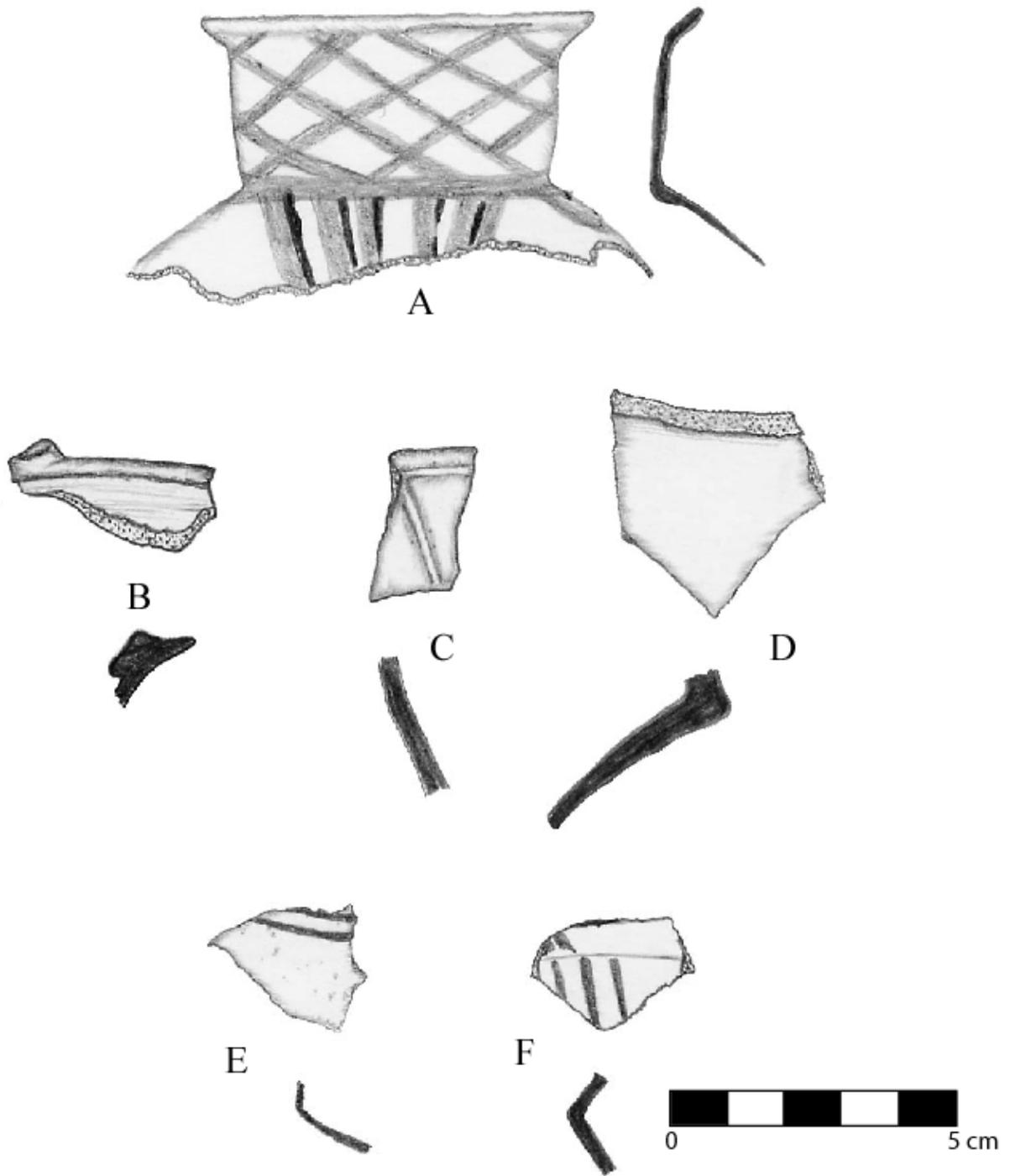


Figure 15. Cosanga Wares.

Tardío Ware

Tardío evokes a general category of ware but no typology exists. Tardío includes different ceramic forms and decoration styles that extend from elemental paints to simple incising and excising motives (Figures 16 and 17). A distinctive characteristic of Tardío ware lies on its red color and on the thickness of the vessels walls. A sort of ordinary, domestic and only lightly decorated ware, called Tardío, dominate the Integration Period occupations along many sites of the central highlands (Figure 16). The lack of detailed finishing and decoration in Tanicuchí Tardío denotes pottery as an archaeological indicator of massive production. Tardío corresponds to the Integration Period (A.D. 800 –1500) and its spatial dispersion encompasses the Quito and Cotopaxi regions.

The Integration Period lacks phase divisions for the central highlands of Ecuador. Ontaneda (2002) conducted a survey of Machachi, a neighbor village of Tanicuchí, through surface collections and presented a formal classification of ceramics (2002:37). However, instead of classifying these as local types of the Machachi region, Ontaneda renamed Tardío as a Quito ware:

The local thick collected in the Machachi zone, [is] basically, the same that was produced in the *Altiplano de Quito* [...]. This would be called Panzaleo, but if we want to give it a generic name to this pottery, we should call it *Chaupicruz*, or maybe Quito (Ontaneda 2002: 44).



Figure 16. Tardío Wares: Tanicuchí Red Reticulated.

However, no radiocarbon dates or special laboratory analyses exist for supporting Ontaneda's classification. Ontaneda's formal classes are framed through a functional analysis of types and major differences between types depended primarily on forms differentiated on the basis of rim shape, inclination, and thickness⁵. Conceived as a nomothetic way of classifying vessel forms, Ontaneda offers an inventory of decoration styles associated with vessel forms. Because the typology is not very useful, I therefore constructed an alternative typology for the Tardío Ware in the Ecuadorian highlands.

The survey results of Tanicuchí indicate a predominant presence of Tardío assemblages in all sectors (Chapter 6). Tanicuchí's ceramics are the same as the

⁵ See Ontaneda's summary of formal classes (characterization column) in pages 64 and 65 (2002).

Tardío pottery of Quito and Machachi (*Panzaleo* ware), and I make use of Ontaneda's formal classification as a comparative source for Tardío materials. Additionally, I introduce a pilot typology for Tanicuchi Red ware. Hence, I propose to move the formal classification into a polythetic typology instead of the current nomothetic formal classification. Following Adams and Adams (1991), the purpose of a typology is to define cultural affiliation and temporal indicators. Preselected attributes like temper, manufacture, color, surface finishing, texture core, vessel walls, vessel forms, and decoration combine in sorting entities into "mutually exclusive categories" (Adams and Adams 1991).

A local ware called Tanicuchí Red appears as the main ceramic component from Tanicuchí. My proposal of two types for the Tanicuchí Integration Period incorporates an undecorated plain red and a red chevron type. I have considered certain attributes of Tardío and these are listed below:

Tardío Ware

Manufacture: coiling

Fired: reducing atmosphere

Color: red to light brown

Temper: mostly sand and volcanic minerals (cf. Andesite)

Texture core: fine to coarse

Surface finish: smoothed, sometimes self-slip appears

Vessel walls: thickness between 10 and 11 mm

Vessel forms: jars, ollas (pots), amphorae, pedestal bowls, and bowls

Decoration: red bands and hatch incising

Pigment: red from vegetal (*achiote*) and mineral pigment (hematite)

Temporal Range:

Mothes and Hall support archaeological criteria that date the beginning of the Integration Period at 800 B.P. (A.D. 1150), based on “Quilotoa’s only Holocene eruptive activity, herein called Quilotoa I” (1998:117). The end of the Integration Period coincides with the Inka arrival to the Ecuadorian south highlands, approximately by A.D. 1500. Ontaneda argues that the Integration Period of the Quito region (named Chaupicruz) corresponds to A.D. 550-1500 (2002:21).

Types: The material evidence from Tanicuchí supports two initial new types: Tanicuchí Red Plain and Tanicuchí Red Chevron. Few examples appear in Figure 17 and their main attributes are described as follows:

Tanicuchí Red Plain

Manufacture: coiling and segmental coiling

Fired: reducing atmosphere and oxidizing atmosphere

Color: red to light red

Temper: volcanic minerals (cf. Andesite)

Texture core: fine to coarse

Surface finish: smoothed, self-slip

Vessel walls: very thick walls between 7 and 11 mm

Vessel forms: jars, ollas with vertical handles, amphorae, and bowls

Decoration: absent, plain red

Pigment: red from vegetal (*achiote*) and mineral pigment (hematite)

Temporal Range: Late Integration Period from A.D. 1140 to 1500

Comparison: Local Panzaleo (Ontaneda 2002:45-49)

Tanicuchí Red Chevron

Manufacture: coiling

Fired: reducing atmosphere

Color: red to light brown

Temper: mostly sand and volcanic minerals (Cf. Andesite)

Texture core: fine to coarse

Surface finish: smoothed, sometimes self-slip appears in external surface

Vessel walls: strongly thick, between 10 – 11 mm

Vessel forms: jars and pots

Decoration: Chevron design incising

Pigment: red from vegetal (*achiote*) or mineral pigment (Hematite)

Temporal Range: Late Integration Period from A.D. 1140 to 1500.

Comparison: Local Panzaleo A1 from particular collection in Rumipamba (Alóag sector), illustrated in Ontaneda (2002: 53, Figure 9s).

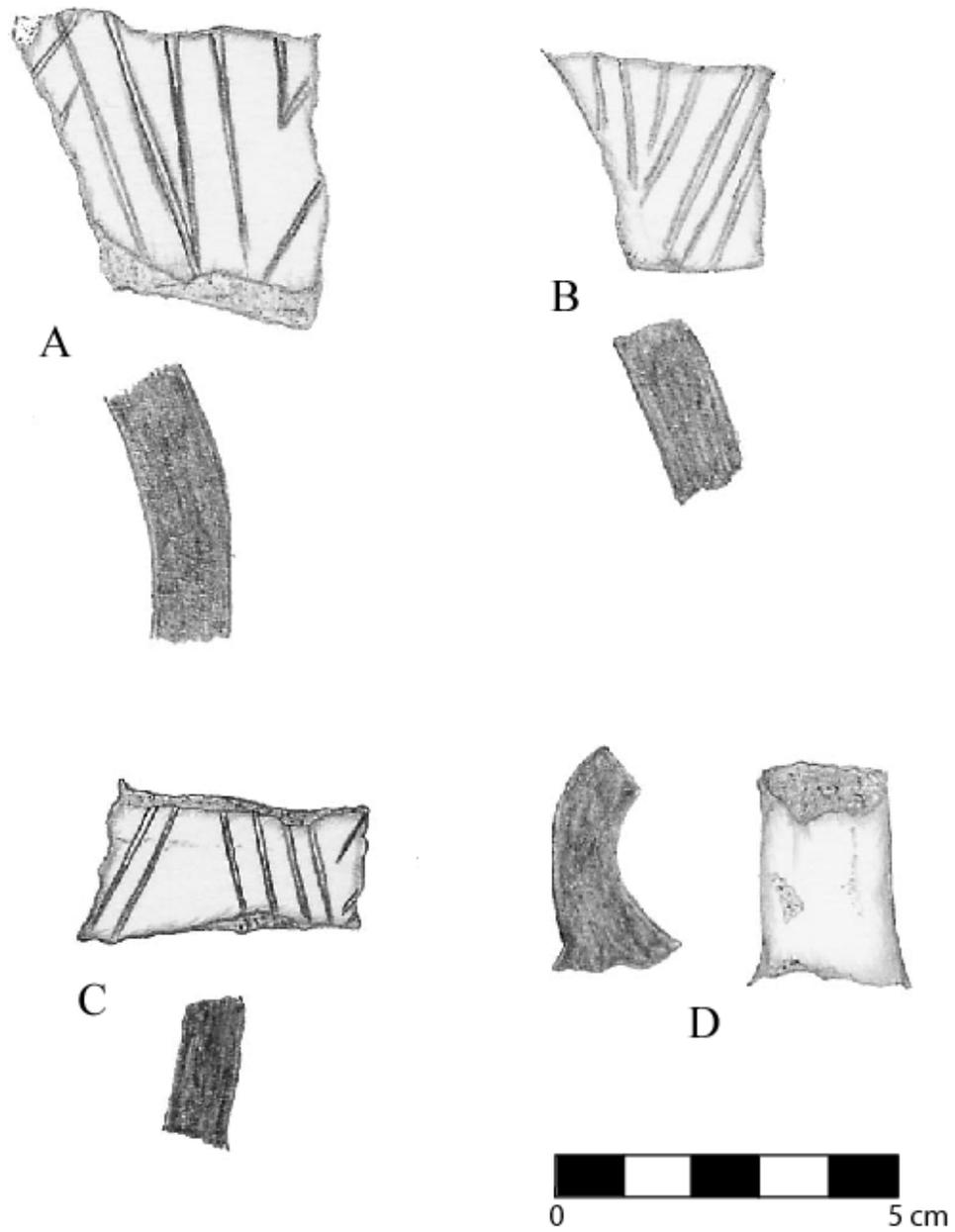


Figure 17. Tardío Wares (Integration Period): Tanicuchí Red Chevron (A, B and, C) and Tanicuchí Red Plain (D).

Inka Ware

Albert Meyers (1998 [1976]:208) conducted a comprehensive analysis of the Inka pottery style in Ecuador. A precise typology indicates the presence of imported Cusco Inka pottery and also a local imitation of Inka style. Meyers posits that pottery examples from Latacunga and Ambato regions, neither belong to Inka Imperial nor to local imitated Inka style, but the shapes of vessels indicate the intent of making ceramics with Inka style (1998:208).



Figure 18. Inka Rim Fragment.

Even though there is abundant Inka architecture, Brown argues that no intact Inka habitation surface exists in San Agustín del Callo but, that does not preclude the possibility that such pottery existed in the area. “After more than 100 square meters of excavation during 3 years, no Inka surface has been discovered. This does not mean

that Inka presence did not exist but possibilities are diminished”⁶ (Brown 2001:71). Despite the abundance of formal Inka architecture, no more than one fragment of “Cuzco Polícromo” type appeared in Brown’s excavation (2001:71).

Brown gives three explanations of Inka absence in the site of San Agustín del Callo. First of all, a history of fires destroyed San Agustín del Callo’s archaeological record (Brown 2001: 71). Second, Brown indicates that the relatively few Inka ceramics makes the identification of types more difficult (2001:71). And finally, the deficiency of Inka pottery supports Brown’s postulate that the site was in the process of construction. “The idea that the site was not finished supports the absence of Inka ceramics, if the Inkas were here for a short period; they did not leave many cultural materials. There is no more direct evidence towards or against this hypothesis (and is valid for this reason) but the idea is attractive”⁷(2001:72).

In Tanicuchí, a unique Inka rim was recovered in Sector 5 (Figure 18). This Inka fragment is from a concave walled bowl, embellished with red and black bands on orange wash or slip. The Inka evidence represents less than one percent of the sample collected in the seven sectors. A similar percentage of Inka sherds were recovered in the San Agustín del Callo excavations (Brown 2001).

⁶ Translated by the author.

⁷ My translation

Inka Ware

Manufacture: coiling

Fired: oxidizing atmosphere

Color: light orange to light brown

Temper: very thin volcanic ash and mica

Texture core: black core, medium

Surface finish: orange wash (slipped), exterior surface smoothed, polished interior

Vessel walls: medium thin

Vessel forms: concave walled bowl (“*cup with direct and concave walls*”), according to Meyers’ classification (1998:94).

Decoration: bychrome paint, horizontal black and red bands

Pigment: mineral

Temporal Range: In Ecuador the Inka time span corresponds to the end of the Late Integration Period from A.D. 1500 to 1534 (Moreno-Yáñez 1997:87). However, in the cultural history of the Central Andes of Ecuador, the Inka presence dominated the politics and economics of the region. Formal Inka architecture remains as material evidence of the Inka presence in the Cotopaxi region. Sites such as San Agustín del Callo probably broke apart due to the civil war, and even more so during to the Spanish conquest. The absence of Inka sherds and the incomplete state of construction of some buildings at San Agustín del Callo do not indicate the absence of Inka occupation, but rather the very beginning of the occupation. Brown suggests that building edification does not mean occupation, and instead most evidence of occupation correspond to the Colonial Period.

Colonial Ware

The colonial ware in the Ecuadorian highlands has two main components: an imported ware and a local production ware. The imported pottery came from Europe, but as Beatriz Rovira (2001: 291) also argues, Panamá Vieja was the principal center of the “mayólica panameña” production and distribution. The majolica panameña is a long distance trade ware easily identified by its red “brick” color, a tin glaze, and its style homogeneity (Rovira 2001:291). It has been reported in many South American sites of Colonial America. Rovira notices that in Ecuador, pottery from Panamá appeared in Cuenca (Azuay province), sites as La Tintina and Real Antiguo in the coastal Santa Elena province (Rovira 2001: 299), Baeza, and Quito (Jamieson 2001: 51).

The local native pottery adopted the glaze finishing from European influence becoming the Colonial ware. Meyers (1998:72) identified an Inka Colonial style that is in the Inka style with individual European elements. Jamieson analyzed the majolicas found in Ecuador and in other Andean sites and argues that the local Andean production replaced the Panamá majolicas (2001:54-56): “the recovery of majolica sherds in association with Inka vessels and a late sixteenth-century coin in the vicinity of Quito suggests an early date for initial majolica production in Quito” (Jamieson 2001:54).

San Agustín del Callo, the often-mentioned neighbor site of Tanicuchí, has evidence of Colonial ware. Brown frequently recovered fine ceramics, native type, and majolica type in the excavation’s assemblage (Brown 2001:76). Brown also indicates that few imported types exist, only “*few sherds of blue porcelain*” (Brown

2001:76). In San Agustín del Callo, majolica ware was common, but especially large amounts of utilitarian glaze finishing (“*vidriado de plomo*”) sherds reflect the presence of large and small vessels (Brown 2001:76). I assume that Brown’s Colonial utilitarian glaze description corresponds to local Colonial style, as Jamieson suggests.



Figure 19. Tanicuchí Colonial Without Glaze.

In Tanicuchí, the survey collection reports Colonial ware in six of the seven sectors. Only Sector 4 shows the absence of Colonial pottery. I distinguish three different Colonial styles of wares. One kind presents medium thin walls, white paint with black and green band designs. The distinguishing characteristic is the absence of glaze. Probably, the erosion of sherds contributed to deterioration of the glaze. A second kind of Colonial ware has painted and glazed surface, polychrome paints

(green, brown, orange) and decorative motifs associated with the non-glaze ware (Figure 19). The last kind corresponds to a piece of Majolica Panameña ware, essentially an example of the type *Panameño Liso* (Figure 20 D). The main attributes found in Colonial ware of Tanicuchí are:

Colonial Ware

Manufacture: coiling and throwing

Fired: oxidizing atmosphere

Color: red to light red

Temper: volcanic ash, mica, and quartz

Core texture: fine to coarse

Surface finish: glaze and non-glaze polished surface

Vessel walls: 5-7 mm

Vessel forms: plates and bowls

Decoration: bychrome and polychrome paints on white (green, black, brown)

Pigment: mineral (“*plomo*” and tin)

Temporal Range: Early Colonial Period (A.D. 1534 – 1570/80).

In summary, Tanicuchí wares consist of Tardío, Cosanga, Inka, and Colonial. Tardío and Cosanga represent the occupation during the Integration Period (A.D. 800-1500) and the Colonial ceramics indicate the presence of Spanish during the second half of sixteenth century. The identification of wares provides a picture of the chronological occupation of Tanicuchí. The present characterization of ceramics provides a frame for pursuing archaeological investigation in the Tanicuchí Valley.

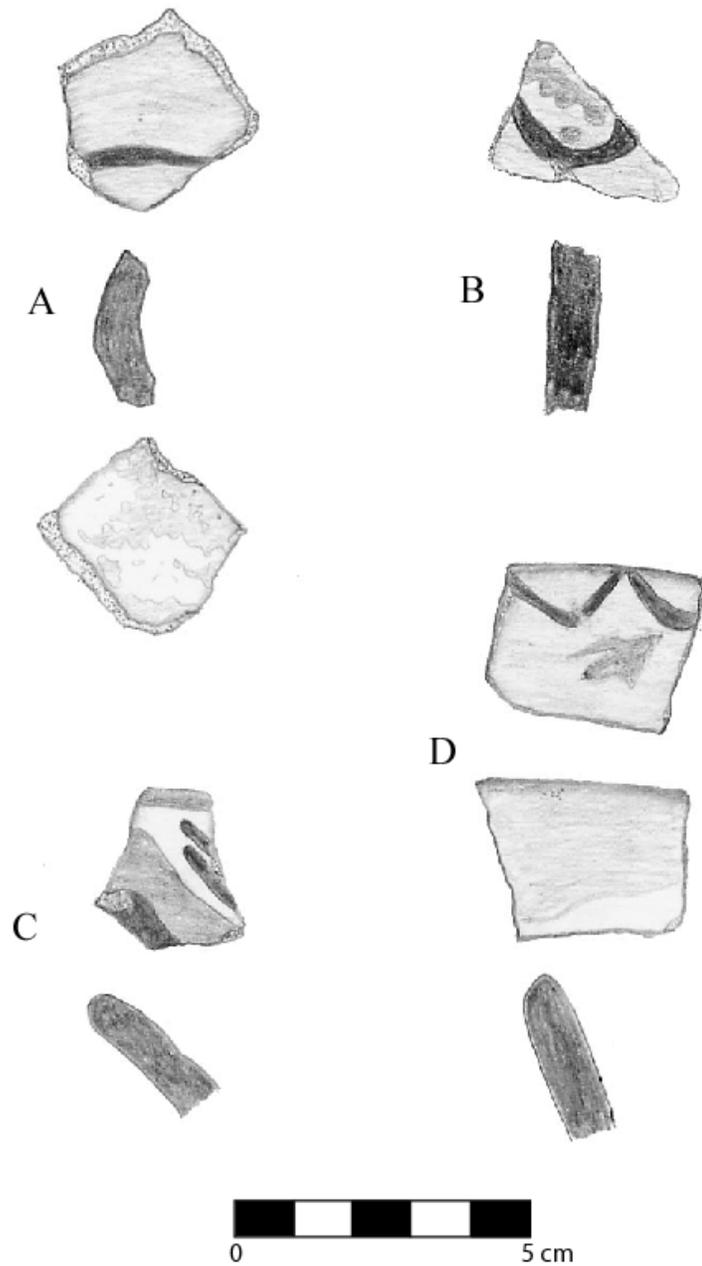


Figure 20. Colonial Ware: Local Non-glaze (A and B), Local Glaze Polychrome (C and D).

CHAPTER 6: THE ARCHAEOLOGICAL SITE OF TANICUCHI

An extensive series of systematic surface collections were carried out at Tanicuchi in order to gather information about site boundaries, intrasite variability, and to estimate the extent and length of Prehispanic occupations. The surface collections also provided data regarding artifact density and clustering. The sampling strategy used in the survey divided the area into seven sectors which provided a representative sample of ceramic artifacts that constitute material evidence that defined site composition and extent.

A total of 4768 surface units were examined; but, not all of them yielded cultural material (Table 2). Table 3 summarizes pottery frequencies by sector for each time period. Raw counts and percentage of total for each ware are listed for comparison purposes. The highest density of material was located in Sector 6, where the percentage of collection units with artifacts is 84. Sector 3 was second highest (73%) and Sectors 1 and 4 were the lowest at 20.23 % and 10.89 % respectively.

Table 3 shows ceramic wares identified by sectors and assigned to occupational phases identified as: Tardío, Cosanga, Inka, Colonial, and Modern. I describe pottery by wares or phase and by its frequency at each of the 7 sectors. The distribution of different wares at Tanicuchí defined site boundaries during each occupational phase. Table 3 is a tabulation form useful for comparing sectors to each other (Drennan 1996:69). It divides the entire set of sherds into sectors and occupational phases at the same time. The first part of the table shows the frequencies, the second part of the table shows percentage column proportions, and

the third part represents the average. Column proportions are percentages for the complete set of sherds considering all sectors together. The averages at the bottom of Table 3 constitute the averages for the entire set of sherds taken together, combining sherds from all occupational periods (Drennan 1996: 72).

Table 2: Sector by Surface Collection Units.

Sector	Size (m ²)	Collection Units Sampled	Collection Units that Yield Materials	Percentage of Collection Units with Material	Collection Units with no Material
1	10,000	257	52	20.23%	205
2	19,200	700	346	49.43%	354
3	8,400	324	237	73.15%	87
4	38,400	404	44	10.89%	360
5	9,600	1555	675	43.41%	880
6	44,000	492	414	84.15%	78
7	17,100	1036	287	27.70%	749
Total	146,700	4768	2055	43.10%	2713

Using the computer software Surfer, the distribution and density of pottery in the sectors is graphically represented. The following sections describe materials grouped by sectors, as well as corresponding interpretations of artifact distribution and results in general.

Table 3: Summary of Pottery Frequencies by sectors.

Occupational Phase	Sector 1	Sector 2	Sector 3	Sector 4	Sector 5	Sector 6	Sector 7	Total
Modern	0	88	357	12	565	78	28	1485
Colonial	25	126	147	0	315	210	49	1019
Inka	0	0	1	0	0	0	0	1
Tardío	145	1096	906	76	1545	3312	924	8910
Cosanga	9	500	339	8	535	48	14	1792
Total	179	1810	1750	96	2960	3648	1015	13207

Occupational Phase	sector 1	sector 2	Sector 3	sector 4	sector 5	sector 6	sector 7	Average
Modern	0.0%	4.9%	20.4%	12.5%	19.1%	2.1%	2.8%	8.8%
Colonial	14.0%	7.0%	8.4%	0.0%	10.6%	5.8%	4.8%	7.2%
Inka	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
Tardío	81.0%	60.6%	51.8%	79.2%	52.2%	90.8%	91.0%	72.4%
Cosanga	5.0%	27.6%	19.4%	8.3%	18.1%	1.3%	1.4%	11.6%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Occupational Phase	sector 1	sector 2	Sector 3	sector 4	sector 5	sector 6	sector 7	Average
Modern	0.0%	5.9%	24.0%	0.8%	38.0%	5.3%	1.9%	100.0%
Colonial	2.5%	12.4%	14.4%	0.0%	30.9%	20.6%	4.8%	100.0%
Inka	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%
Tardío	1.6%	12.3%	10.2%	0.9%	17.3%	37.2%	10.4%	100.0%
Cosanga	0.5%	27.9%	18.9%	0.4%	29.9%	2.7%	0.8%	100.0%
Average	0.9%	11.7%	13.5%	0.4%	23.2%	13.1%	3.6%	100.0%

Sector 1

Sector 1 covers an area of 10,000 m² and is located at an altitude from about 3,011 to 3,015 meters above sea level. It is mainly a sandy area, covered with a thick layer of volcanic ash, possibly from one of the eruptions of nearby Cotopaxi. Given the sandy condition, no agricultural fields are present; but, a few eucalyptus trees and *cabuya* plants serve as modern property markers. No identifiable surface archaeological structures are present in the sector.

Of the 257 collection units in Sector 1, only 52 yielded cultural material (20.23%) (Table 2). The intensity of occupation is thus not very strong in the sector. Assuming that surface materials represent the overall artifact distribution of the sector, it can be said that the sector was not heavily inhabited.

A contour map shows material density and spatial distribution for this sector (Figure 21). A major concentration of ceramics is visible on the south part in addition to small clusters in northeast part. The overall the size of occupation which in this case represents the area with cultural materials, in Sector 1 is 10,000 square meters.

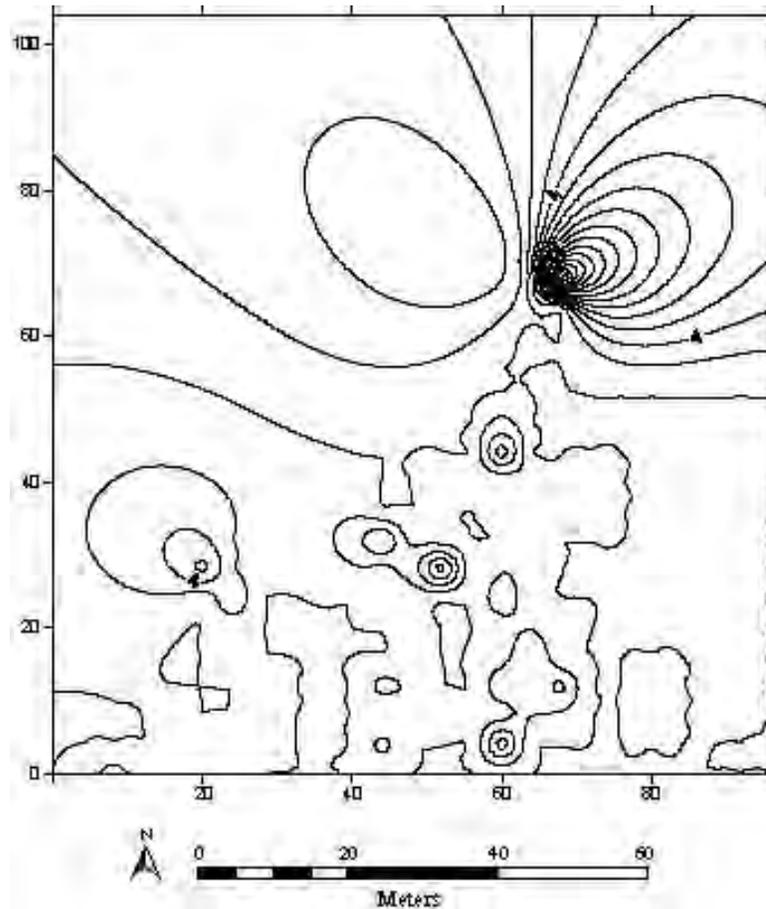


Figure 21. Contour Map Showing Material Density of Sector 1.

Occupation periods represented in Sector 1 include the Tardío Period (80 % of the artifacts) representing an occupation during the Integration Period (A.D. 800 – 1500). Cosanga pottery only represents 5% of the material recovered. As is very frequent in many other highland sites, Cosanga and Tardío sherds are in some instances contemporaneous. Surprisingly enough, there is a very clear absence of Inka pottery and that stands out as the main feature of the local Integration period occupation of Sector 1. Colonial period pottery represents 14% of ceramics, in addition to the total absence of Modern Period pottery (Figure 22).

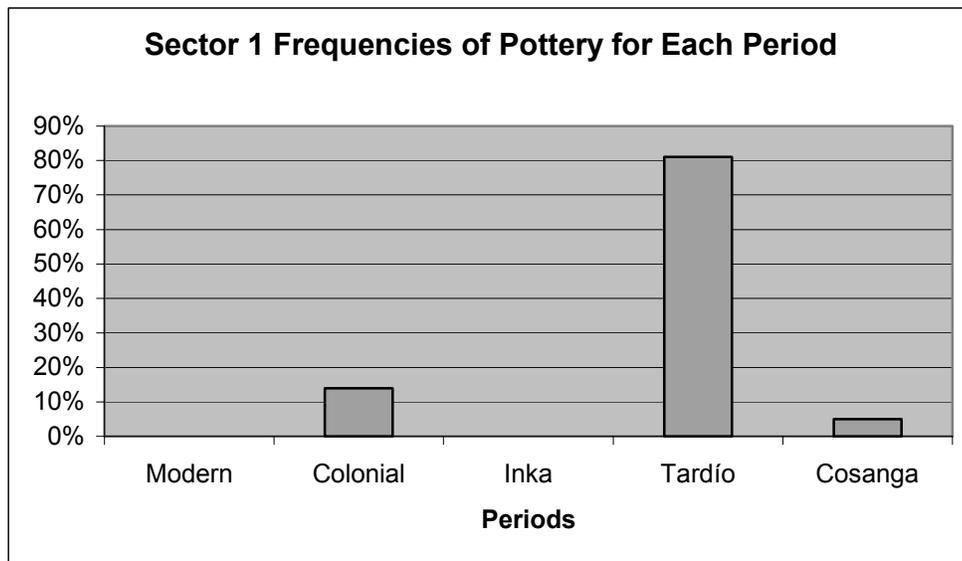


Figure 22. Frequencies of Pottery in Sector 1.

Sector 2

Sector 2 represents an area of 19,200 m² and is located at an average of 3,015 meters above sea level. Like Sector 1, sandy soils and volcanic ash cover the arid landscape. Section 2 contains a few areas of cultivated fields (maize, potatoes, beans,

and different kind of vegetables), as well as *cabuya* plants used by today's Tanicuchi inhabitants. Outstanding surface visibility made it possible to carry out surface collections in a rather easy and straight forward manner. The rather large quantity of artifacts is distributed across the entire sector. However, cultural materials mostly were found in the northern and southern portions of Sector 2 (Figure 23). The boundaries of the occupied area are represented by the aerial distribution of 346 artifacts found through Sector 2.

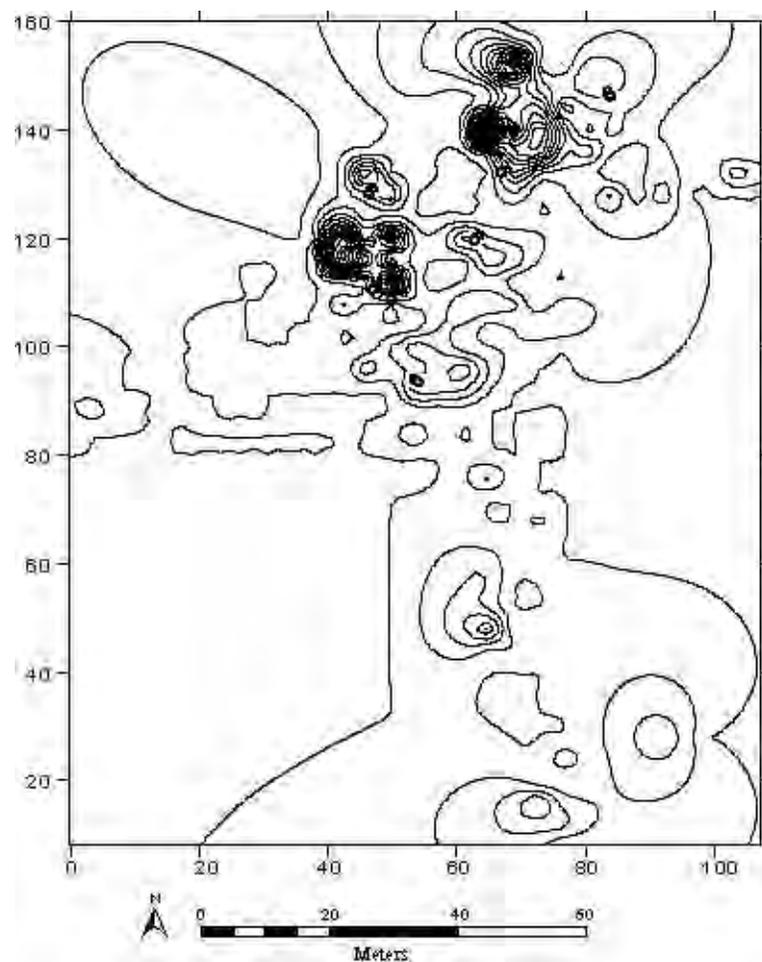


Figure 23. Contour Map Showing Material Density of Sector 2.

A clear absence of Inka pottery contrasts with the high frequency of Tardío sherds which represents 60% of the total sherd counts, suggesting a large occupation during the Integration Period (Figure 24). Cosanga ware ceramics increase in number when compared to Sector 1, and are present in about 30% of the sample. Colonial wares represent only 8% of the sample, and finally, very few modern sherds were collected (Figure 24).

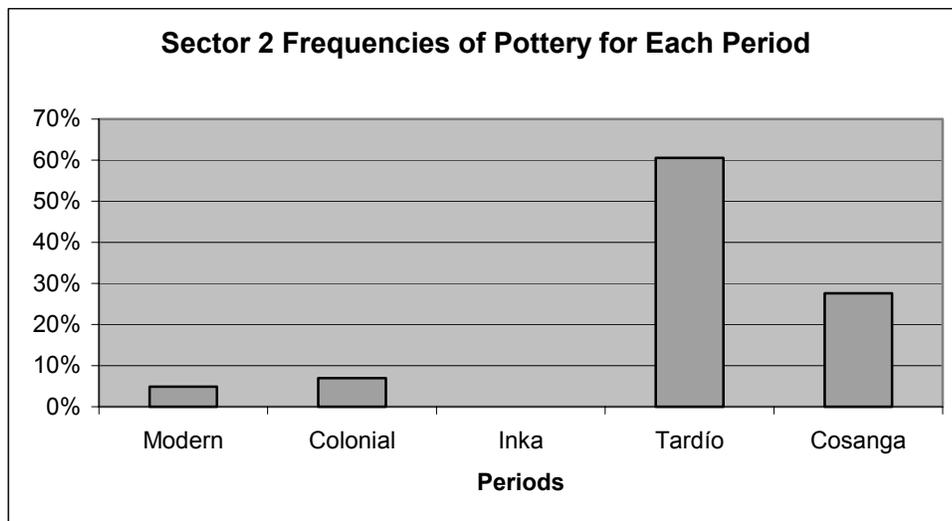


Figure 24. Frequencies of Pottery in Sector 2.

Sector 3

Sector 3 is the smallest sector surveyed (only 7,200 m²) formed by a flat rectangular area located at an elevation between 3,026 and 3,330 meters (Figure 25). Modern anthropogenic activity has drastically transformed the landscape. Several non-native *capuli* and apple trees and domestic gardens are part of the ecological landscape of this sector. Grassland in a sandy and volcanic ash characterizes the soils of Sector 3.

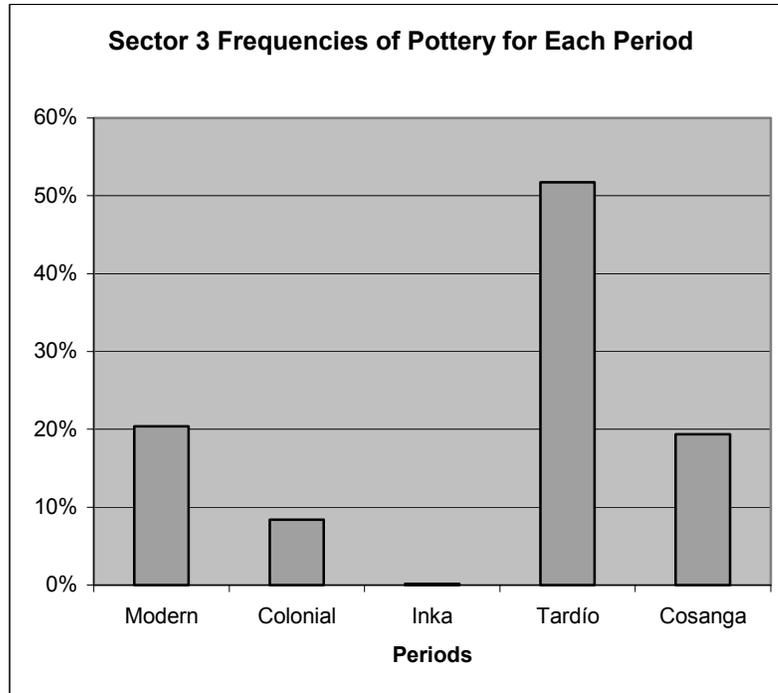


Figure 25. Frequencies of Pottery in Sector 3.

Sector 3, similar to Sectors 1 and 2, contains a heavy presence of Tardío pottery. Fifty two percent of the total sample of sherds obtained from this sector belongs to the Tardío occupation (Figure 25). Cosanga is popular in this sector where its presence is about 19%, while Colonial represents 8% and Modern 20%. No Inka pottery was recovered in the sector. Cultural material clusters around the middle of the sector where more than 3 concentrations can be observed Figure 26. In the northern part, there is also a cluster, although it is smaller than the ones located at the center. It is interesting to note that modern ceramics (Figures 26 and 27) are the second most frequent just behind Tardío pottery. In general terms, cultural materials are concentrated in small areas but represent a long-term occupation.

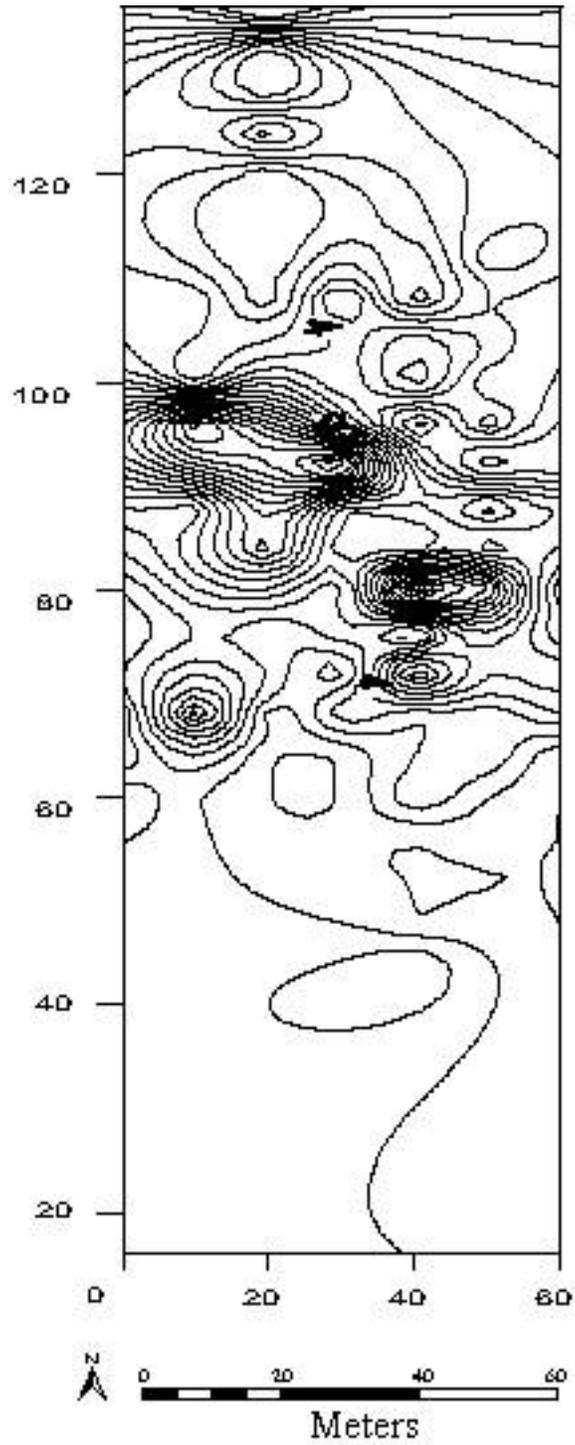


Figure 26. Contour Map Showing Material Density of Sector 3.



Figure 27. Horse Effigy Fragment and Body Part as Examples of Modern Wares.

Sector 4

Sector 4 has an area of 38,400 m² at an elevation between 3,011 and 3,014 meters. A layer of sand and volcanic ash covers the sector's surface. Besides a few fields of potatoes and beans, *cabuya* plants and eucalyptus trees form part of the household's gardens of today's inhabitants. As in sectors 1, 2, and 3, there is an absence of prehistoric structures and features visible at surface. Only 44 of 404 surface collection tests recovered archaeological materials (Table 2). Similar to the other sectors, Tardío sherds are predominant (79%), Modern (12%), and Cosanga (8%). Inka and Colonial pottery are absent (Figure 28). Ceramic fragments and few lithics appear in the western side of Sector 4 (Figure 29).

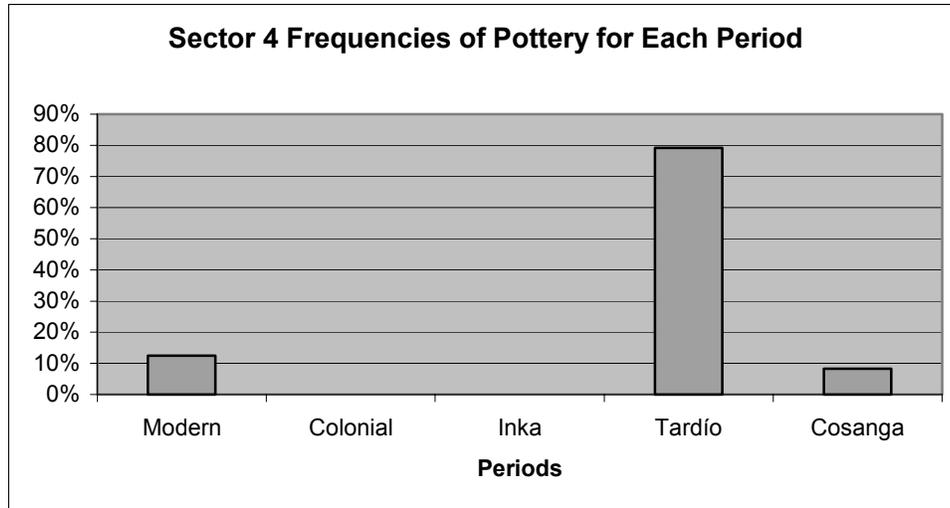


Figure 28. Frequencies of Pottery in Sector 4.

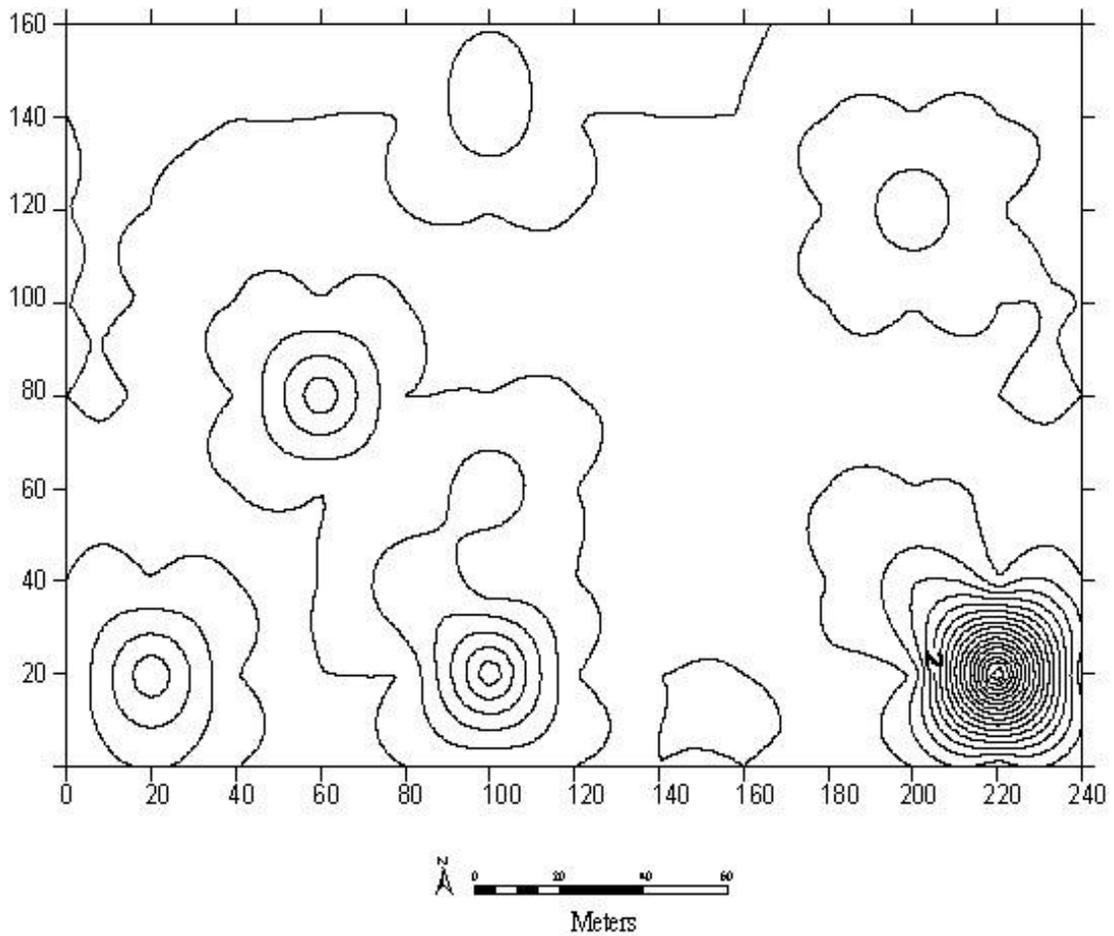


Figure 29. Contour Map Showing Material Density of Sector 4.

There are four main clusters of material within the sectors. The largest concentration is located near the southeast corner (Figure 29). The other three are found clustered toward the southwest area of the sector. The presence of Tardío and Cosanga wares demonstrates that the sector was occupied during the Integration Period.

Sector 5

Sector 5 is 9,600 m² in extent with an elevation that reaches 3,011 meters. Local vegetation is similar to the other section which is characterized by the arid landscape influenced by the Cotopaxi volcano. A few cultivated crops grow in the sandy and ashy soils. Cultural material concentrates in this sector. Figure 31 shows the diversity of ceramic wares that is present. Tardío is the most common pottery (52%), followed by Modern (19%), Cosanga (11%), and Colonial (10%) (Figure 30). In addition, an exceptional Inka rim was collected in Sector 5.

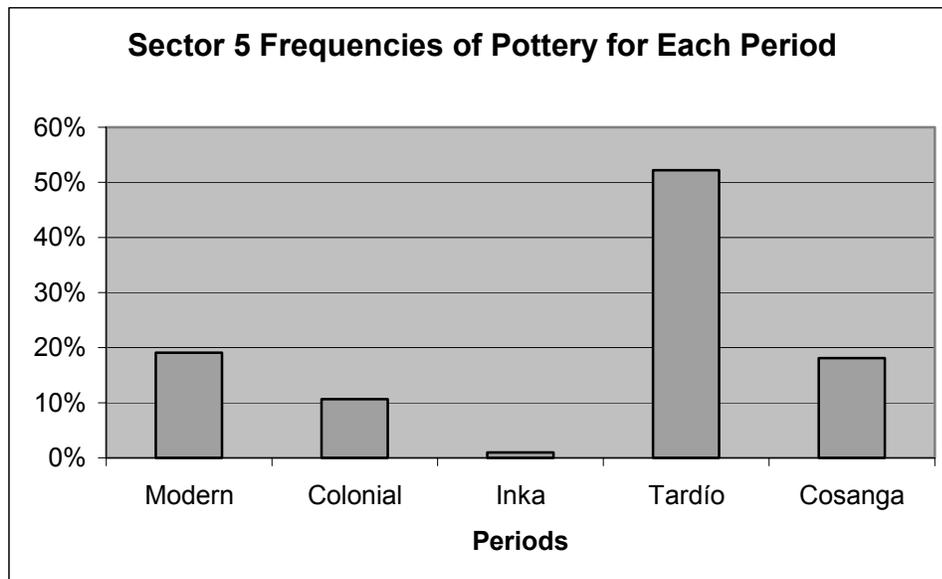


Figure 30. Frequencies of Pottery in Sector 5.

As shown in the contour map, cultural material is found dispersed throughout the entire sector's surface, but 3 main clusters were observed (Figure 31). They are located toward the northern part of the sector.

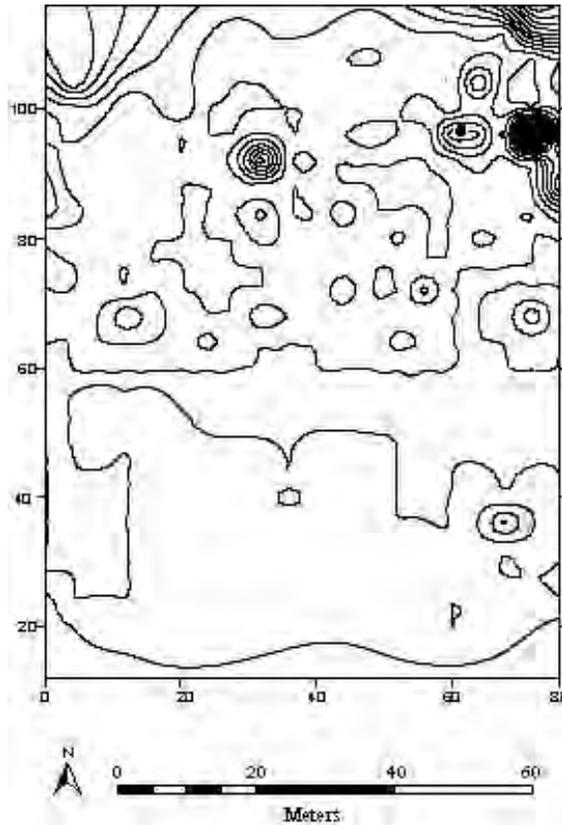


Figure 31. Contour Map Showing Material Distribution of Sector 5.

Sector 6

The area of Sector 6 is 44,000 m² and at an elevation average of 3,012 meters (Figure 32). Its setting constitutes mainly grassland with sandy and ashy soils. Conspicuous material remains appeared in the northwestern part (Figure 33) with high frequencies of Tardío artifacts dominating the site pottery assemblage (Figure 32 and Table 2). Colonial and Modern pottery experiences a drastic decrease in this

sector. Finally, Inka pottery is not present, and an extremely small presence of Cosanga (1%) suggests that the occupation occurred before the Inka conquest (Figure 33).

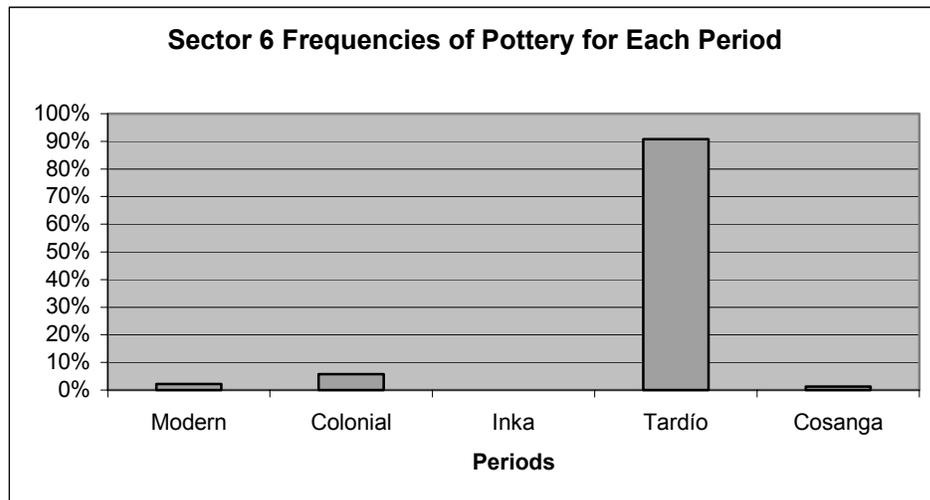


Figure 32. Frequencies of Pottery in Sector 6.

As it can be observed in the contour drawing, there is a main cluster found towards the southern part of Sector 6 where the occupation residues concentrate archaeological materials (Figure 33).

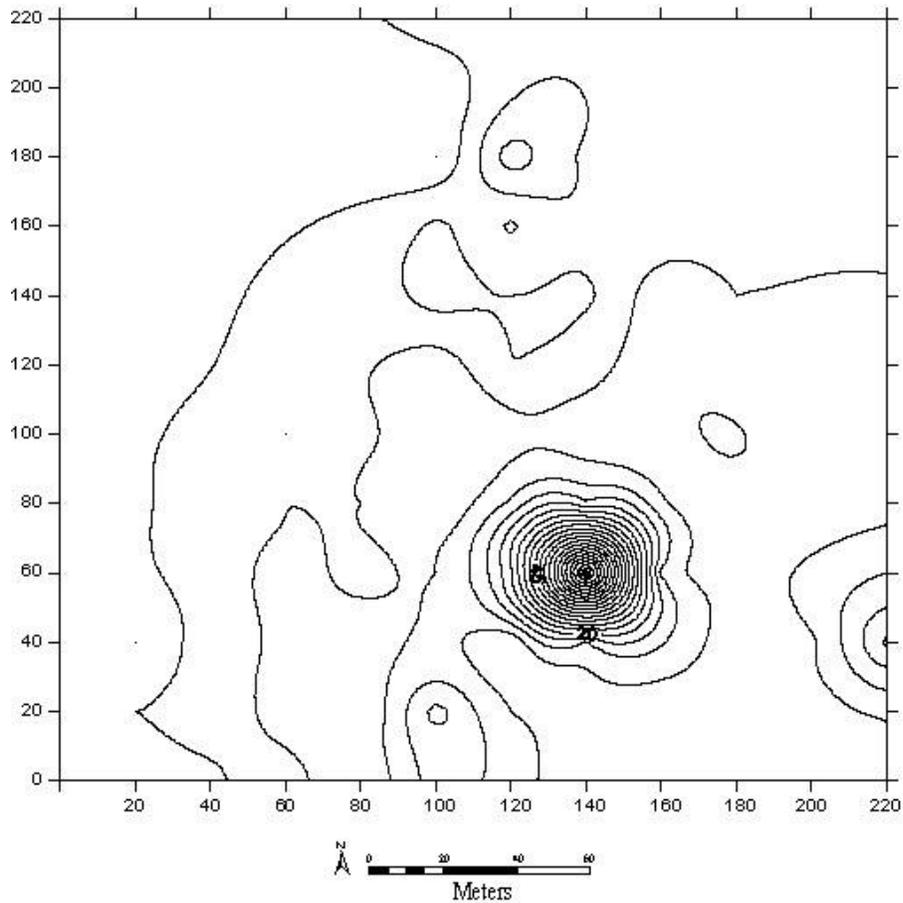


Figure 33. Contour Map Showing Material Density of Sector 6.

Sector 7

The size of Sector 7 is 17,100 m² and the elevation ranges from 2,981 to 2,997 meters above sea level. Non agricultural sandy soils characterize this sector. *Cabuya* and *Chilca* plants and a few eucalyptus trees grow within this sector. Tardío artifacts represent the major component of the pottery assemblage. Cosanga is scarce (2%), as is Colonial (3%), and Modern (2%) (Figure 34). High densities of artifacts occur in western portion of the sector (Figure 35). The area of ceramic distribution covers 17,600 m² and extends to the boundaries of Sector 7.

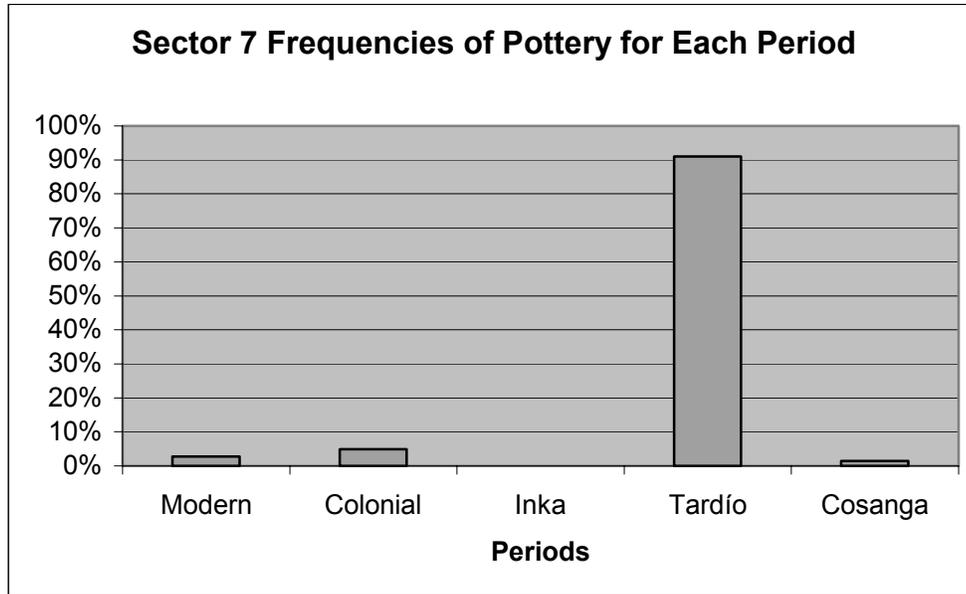


Figure 34. Frequencies of Pottery in Sector 7.

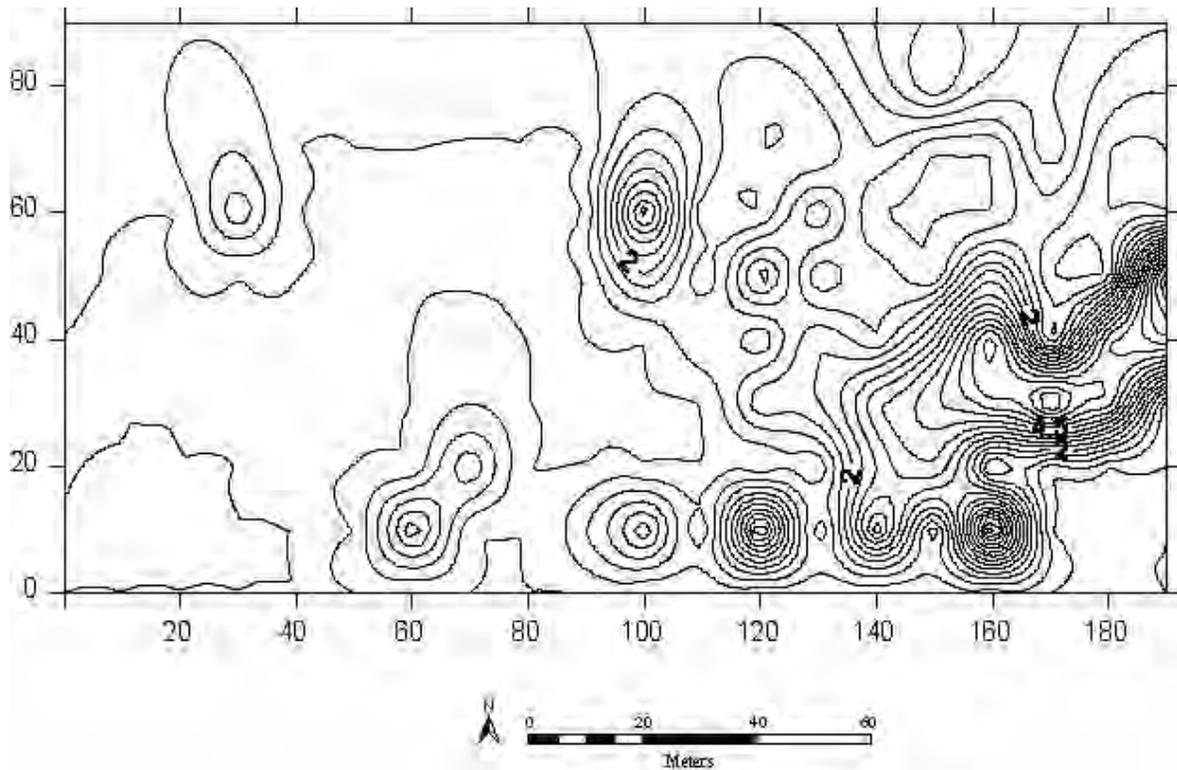


Figure 35. Contour Map Showing Material Density of Sector 7.

As it can be observed in the contour map, there are at least 7 clusters of cultural material. These clusters are concentrated toward the southeast part of the sector. More than at any other sector, cultural material is distributed more evenly over Sector 7's surface.

Survey Results

Prior the carrying out my field research and analyzing the data, I hypothesized that Tanicuchí was an Inka settlement between San Agustín de Callo and Latacunga. This site was thought to be located in a close proximity to the CapacÑan, the Inka principal road. I also initially considered Tanicuchí as multi-component site. Even though the survey methodology is not free of bias, some preliminary conclusions can be drawn. In general, all sectors contained Cosanga, Tardío, and Colonial pottery which support the multicomponent nature of Tanicuchi. The main surprise was the consistent lack of Inka material at all sectors surveyed.

I performed a chi-square test to statistically demonstrate the differences in time and affiliation of each sector. I excluded Sector 4 because only few artifacts were obtained (Figure 36). The result of the chi-square analysis concludes that the sectors showed significant differences among the four ceramic wares (Table 4). Performing a chi-square test (Table 4) demonstrated an intrasite significant difference that led me to treat each sector independently in further analysis and interpretations.

Table 4: Chi Square Results for Tanicuchí Pottery.

	Chi Square Results				
	Cosanga	Tardío	Colonial	Modern	Total
Sector 1	9	145	25	0	179
Sector 2	500	1096	126	88	1810
Sector 3	339	906	147	357	1749
Sector 5	535	1545	315	565	2960
Sector 6	48	3312	210	78	3648
Sector 7	14	924	49	28	1015
Total	1445	7928	872	1116	11361

Degrees of freedom: 15

Chi-square= 2327.71622362813

P is less than or equal to 0.001.

The distribution is significant.

In order to understand the historical trajectory of the site, I looked at individual sectors and clusters of material remains. First of all, Sector 1 represents a small sample of material corresponding to the Integration and the following Colonial period. Cosanga presence in the sector is very small. Thus the area seems to have been occupied during the Pre-Inka and Colonial times. Simply, little can be said about this sector but it maintains relationships with the other sectors because of its similar ceramic affiliation.

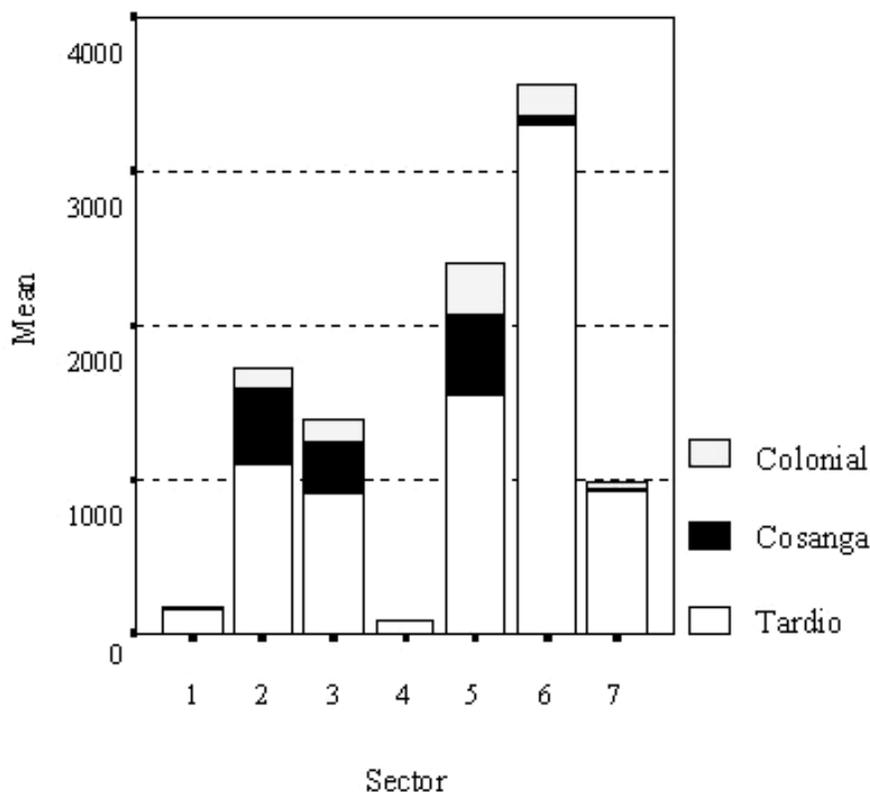


Figure 36. Summary of Tanicuchí Wares.

Sectors 2, 3, and 5 illustrate a common pattern in which artifact densities and percentages are observed for the Cosanga, Tardío, and Colonial wares (Figure 36) suggesting an intense occupation during the Integration Period. I believe that Sectors 2 and 3 illustrate different temporal occupations in which Cosanga and Tardío were found mixed in the surface perhaps indicating human interactions and possible long distance trade connections in which people inhabiting settlements located at different ecological niches trade various products prior to the Inka arrival. Furthermore, Colonial and Cosanga probably were coeval as well (Bray 2003). Tardío sherds

become ubiquitous as Colonial and Cosanga components densities increase in Sector 5. Sector 6 has the larger counts of materials at any given time and presents ceramics of all the periods represented in the surface collection (Figure 36 and 37). It contains conspicuous Integration period occupation. The Cosanga component is very small and may be explained as a consequence of the Inka arrival to the region (Figure 36).

Although, Inka ceramics are rare at Tanicuchi, the presence of the Inka in the larger Cotopaxi region is undoubted (Brown 2001; Fresco 2004). Changes in the presence of Cosanga in the area might have been the product of Inka ruling at the more regional level. The control of trade goods, routes of transportation, and the construction of military outposts may have constrained Cosanga traders to move up and down the Andes during the times of Inka rule. As a consequence, the presence of Cosanga artifacts could have temporally diminished and reappeared later, with the Spanish occupation. This sector requires extensive excavations to better understand site structure, size, and function. Results from excavations would provide data with contextual associations that could allow understanding household organization of the local Tanicuchí residents.

Data from Sector 7 shows the existence of Integration period deposits (Figure 36). There are very few Cosanga sherds and Colonial materials. Variation in the frequencies of Cosanga might indicate the presence of the Inka state in the area. Both, Sectors 6 and 7 may have been occupied at the same time. The evidence also suggests an Inka presence, although very ephemeral. It is very likely that local Inka rulers did allow local populations living in small towns and hamlets to use their own

pottery, and thus perhaps the absence of Inka pottery does not in itself indicate that the area was not under Inka rule.

The better known information about the Inka conquest of the northern Andes derives from Early Spanish chroniclers (Cieza de León 1962) and the writings of Guamán Poma de Ayala (1980) and Garcilaso de la Vega (1985). Current notions of Inka organization led to portray them as a powerful state with a well defined expansionist policy integrating provincial places into their control. More ideological than material changes occurred during Inka conquest in the northern Andes. As a result of this, unfinished buildings such as San Agustín de Callo (Brown 2001) or Huasipampa de Mollepungo (Odaira 1997) in the southern province of Azuay were abandoned by the Inkas while they confronted the Spanish invasion. Thus, it is not surprising to find Inka sites without many Inka sherds. According to ethnohistoric documents, the Inka occupied towns instead of small villages (Salomon 1978). Material and written evidence of Inka presence in Latacunga, San Agustín de Callo, and Tanicuchí exist (Almeida 1995; Brown 2001; Fresco 2005; Salomon 1978). I suggest that Tanicuchí functioned as a small dispersed settlement instead of a nucleated village community where no Inka elite resided. During the survey, I never located walls, plazas, roads, or other architectural features. The lack of Inka architectures indicates that Tanicuchí was not a *tambo* (inn) but could have been a *mitmakuna* community as Newson indicates (1995:130). Common replaced peoples (*mitmakuna*) and local elites could have lived at Tanicuchí during the ephemeral Inka ruling of the area.

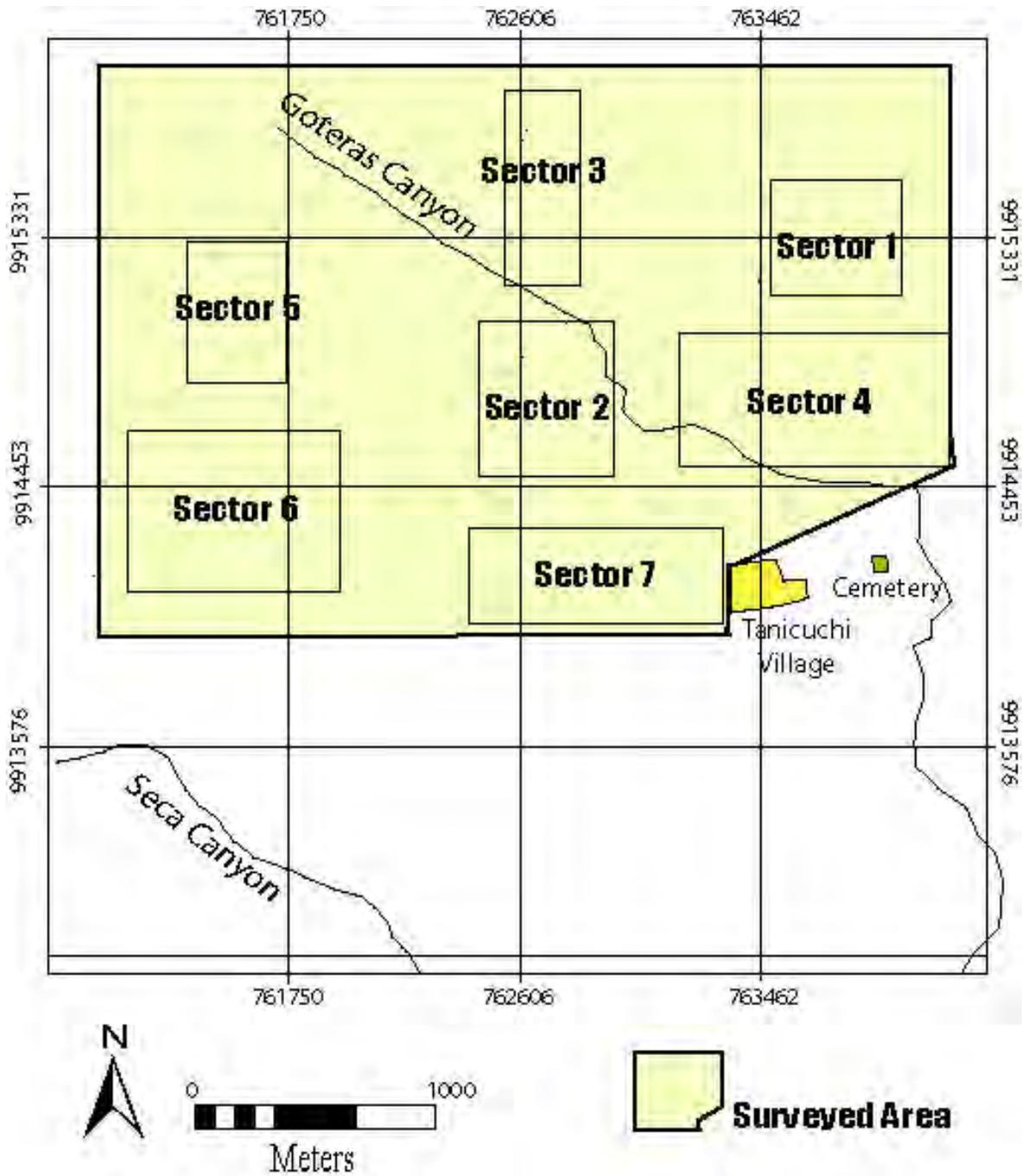


Figure 37. Sector Location at Tanicuchi Archaeological Survey.

Summary

The collection and analysis of ceramic artifacts indicates that Tanicuchí primarily was occupied during the Integration Period (A.D. 800 – 1500). Contrary to what I expected, Inka pottery was not ubiquitous in the area. Survey results provide data suggesting that there was minimal Inka occupation in Tanicuchí (Figure 36). In addition, survey does not report Inka architectural features. The coexistence of Tardío and Colonial shreds perhaps indicates that Inka presence was minimal at Tanicuchí, or that the Inkas practiced a sort of *laissez faire* policy that that may result on the lack of Inka cultural material. In the Guayllabamba region, Bray (2003) obtained similar results although she found Inka architecture such as a military fortress (known locally as *Pukara*) which at least attests to the need of military control in the northern region.

At Tanicuchí, as well as at other Integration Period sites, Tardío ceramics represent the most important local pottery of the highlands. Tardío ceramics always appear in association with Cosanga (as a minor component) perhaps from Quijos Valley (Delgado 1998; Porras 1975). Tardío and Cosanga, generally, co-vary in the archaeological record and reveal trade connections between Amazonia and the highlands. Various archaeological reconnaissances within the neighboring regions such as San Agustín de Callo (Brown 2001), Machachi (Ontaneda 2002), and Guayllabamba Valley (Bray 2003) demonstrate that during Integration period, population's mobility was intense. Unrestricted control of trade relationships used the local road system providing local communities with a wide range of products such as salt, coca, meat, medicinal plants, etc. Conversely, the absence of Cosanga materials

at Inka sites demonstrates that the state controlled trade networks and population movements (Bray 2003).

The sectors defined at Tanicuchi may correspond to household clusters of individual units that formed the whole Tanicuchí settlement. Tanicuchí remained as a dispersed settlement instead of a hamlet or nucleated village suggesting that the residential population lived in dispersed households during the Integration and Inka Periods. Colonial rule enforced changes on settlement patterns over the Latacunga territory. The present Tanicuchí village is probably a product of forced concentration of households around the Catholic Church and the central plaza.

CHAPTER 7: CONCLUSION

The archaeological survey of Tanicuchí furnishes data about site structure, natural conditions, cultural affiliation, and pottery assemblages. Furthermore, it provides evidence of successive civilizations replacing one another in the same location over seven centuries. At Tanicuchí, the range of occupation includes three periods: Integration (A.D. 800 – 1500), Inka (A.D. 1500 – 1534), and the Early Colonial (A.D. 1534 – 1580).

The boundaries of ancient Tanicuchí apparently correspond to the habitation of the current village. Domestic pottery, such as ordinary jars, pots, and bowls, as well as the irregular incidence of the Cosanga pottery, identifies Tanicuchí as a typical community during the Integration Period. The absence of monumental architecture implies that Tanicuchí was a lower order settlement.

Prior to the Integration Period, the Tanicuchí area does not appear to have been inhabited. In Tanicuchí, Cosanga plays an essential role determining the temporal affiliation of the ceramics. Relative dating based on Cosanga ceramics found at Tanicuchí suggests that initial occupation of Tanicuchí was no earlier than the Integration Period.

At the beginning of Tanicuchí occupation, during the Integration Period, highland communities inhabited the site that apparently functioned as a domestic settlement. Tardío and Cosanga pottery dominate the ceramic assemblage. After the Inka arrival, Tanicuchí remained spatially unchanged and native inhabitants continued living there. Local Tanicuchí residents continued using their own pottery style

(Tardío) but the Cosanga ceramics began to diminish. The archaeological survey at Tanicuchí indicates a lack of conspicuous Inka material such as monumental architecture and Inka style pottery. Following the Inka, The Spanish conquest of the region resulted in high frequencies of Colonial pottery. At Tanicuchí, as well as other Colonial sites in the highlands, Cosanga sherd frequency increases, suggesting that the Spanish had less control over trade and roads than did the Inkas.

Tardío and Cosanga ceramic remains are indicators of the Integration Period occupation demonstrating the continuous relationships between Quijos Valley and the Central Andes. Cosanga pottery constitutes a recurrent trade marker that consistently forms part of the archaeological record of northern and central highland pottery assemblages. Cosanga does not always relate to ritual or status but remains good evidence of imported items consumed by highlanders (A.D. 800 - 1500). Social alliances such as marriage legitimated networks that continued in to Colonial times, as written sources inform: “Don San Sancho Hacho⁸’s sister was married to the “cacique principal de Hatunquijos” (Oberem 1993:24).

The Inka expansion in the greater north Andean area did in fact produce a series of transformations to the local landscape as the Inkas made some optimal choices in the conquest campaign. For instance, Saquisilí, south of Tanicuchí, became a strategic place that attracted Inkas in their strategy of conquest. In Ecuador, the *Inkañan* route has been well studied by current archaeologists (Fresco 2004). Due to its proximity as a market place and a point of contact between the peoples of different ecozones, the *Inkañan* crosses Saquisilí. Additionally, Saquisilí was a pass on the route to the Coast and to the Amazonian lowlands such as the Quijos and

⁸ Don Sancho Hacho was a major chief of Latacunga (Oberem 1993)

Pastaza Valleys (Fresco 2004:23). The *Inkañan* connected Saquisilí to Sigchos and Angamarca (Fresco 2004:23; Salomon 1981), and through the Cutuchi Canyon, connecting to the Napo and Pastaza regions (Amazon).

The late Inka advent to the Latacunga region implies consequent changes in Saquisilí. Its attractive location became a willing place to settle *mitmakuna* populations along the *Inkañan* from Latacunga to San Agustín de Callo (Newson 1995; Oberem 1993). The Inka conquest changed the landscape, appropriated spaces and replaced entire villages to mark the boundaries of subjugated territories “to assure the recent conquest of territory, the Inkas established *mitimaes* [*mitmakuna*] in the zone and transformed Latacunga into one of the administrative centers of current Ecuador area” (Oberem 1993:21). The Inkas settled in Latacunga and probably would have lived at El Callo if given. Brown argues that the tambo Mulaló, also known as San Agustín de Callo, was left unfinished and with few Inka pottery remains (2001:171). *Mitmakuna* settlements should contain Inka pottery remains. Therefore, the absence of Inka sherds at Tanicuchí leads me to propose that it was a local settlement. Although chroniclers’ accounts state that a Peruvian *mitmak* was later moved from Tanicuchí to Saquisilí under the Spanish rule (Newson 1995:130), I doubt that Tanicuchí served as a *mitmakuna* residence.

Chronicles support the Inka presence in the area, but in Tanicuchí no monumental Inka features were found during the 2002 systematic survey. The arrival of the Spanish curtailed Inka activities in Latacunga, and I propose that it is reflected in Tanicuchí’s archaeological record. The lack of Inka pottery in Tanicuchí also suggests that the Inkas lived in the urban centers such as Tomebamba and Ingapirca in

southern Ecuador (Azuay Province), or in the ethnohistoric town, Latacunga (Bray 2003; Cieza de Leon 1962; Fresco 2004).

In contrast, the Spanish arrival marked the adoption of Colonial style pottery manufacture that proves the change of political order at Tanicuchí. The Colonial pottery is found in all sectors of Tanicuchi but with different percentages. Tanicuchí residents probably included Spanish priests and villagers that induced the adoption of the Spanish style of pottery glaze is an identifying characteristic of Latacunga today (Rovira 2001).

I expected that the Tanicuchí reconnaissance would provide evidence of Inka political dominance between A.D. 1500 and 1533, but instead I found that the gap of Inka traces diverges with the overlapping Colonial presence. The scarce Inka material found in Sector 5's surface assemblage proves the brief passage of the Inka across the region and the medium presence of Colonial sherds documents the Spanish arrival. The arrival of foreign political and economic systems during the Inka times did not have a strong effect on the local communities in terms of density and acculturation.

The Archaeological Survey of Tanicuchí represents a starting place for understanding the origins of cultural and ethnic mixture in the Northern Andean landscape of central Ecuador. As in the past, a mixture of diverse ethnic identities characterizes Ecuador today. The Cotopaxi region includes a variety of White, Indio, Mestizo, and Black populations. Since Prehispanic times, Latacunga and its adjacent areas, such as Tanicuchí, have seen the trade of products and movements of peoples from different ecological zones. The cultural history of Tanicuchí is testament to the advent of ethnic diversity even before the arrival of Spanish. The identification of

archaeological communities contributes to a better understanding of the present dichotomies among lands, ethnic groups, old and new feasts, and identities in Ecuador. Archaeological documentation provides a basis to reject slavery and subjugation, and to recognize ethnic diversity as a multicultural identity within Ecuadorians.

References Cited

- Almeida, Eduardo
1995 *Monumentos Arqueológicos del Ecuador*. Editora Luz de América, Quito.
- Betanzos, Juan de
1987 *Suma y Narración de los Incas*. Ediciones Atlas, Madrid.
- Bray, Tamara
1995 The Panzaleo Puzzle: Non-Local Pottery in Northern Highland Ecuador. *Journal of Field Archaeology* 22: 137–156.
- Bray, Tamara
2003 *Los Efectos del Imperialismo Incaico en la Frontera Norte*. Marka & Abya-Yala, Quito.
- Brown, David
2001 *Informe Preliminar de las Investigaciones Arqueológicas en la Hacienda San Agustín de Callo, Provincia de Cotopaxi, Fase III*. Report presented to the INPC, Quito.
- Brumfiel, Elizabeth and Timothy Earle
1987 Specialization, exchange and complex societies: An introduction. In *Specialization, Exchange and Complex Societies*, edited by Elizabeth Brumfiel and Timothy Earle, pp.1–9. Cambridge University Press, Cambridge.
- Bauer, Brian
1992 *The Development of the Inca State*. University of Texas Press, Austin.
- Cieza de León, Pedro
1962 *La Crónica del Perú*. Austral Collection 507, Espasa- Calpe, Madrid.
- Conrad, G. and Arthur Demarest
1984 *Religion and Empire*. Cambridge University Press, Cambridge.
- Covey, Alan R.
2000 Inka administration of the Far South coast of Peru. *Latin American Antiquity* 11(2): 119–138.
- Costin, C. and Timothy Earle
1989 Status distinction and legitimization of power as reflected in changing patterns of consumption in Late Pre-Hispanic Peru. *American Antiquity* 54: 691-714.

- D'Altroy, T. and Timothy Earle
 1985 Staple Finance, Wealth Finance, and Storage in the Inka Political Economy.
Current Anthropology 26:187–206.
- De Boer, Warren R.
 1996 *Traces Behind the Esmeraldas Shore: Prehistory of the Santiago-Cayapas Region, Ecuador*. The University of Alabama Press, Alabama.
- Delgado, Florencio G.
 1999 *Proyecto de Desarrollo del Campo Villano: Prospección, Rescate y Monitoreo Arqueológico*. Entrix/Arco Oriente. Report presented to INPC, Quito.
- Delgado, Florencio G.
 2002 *Intensive Agriculture and Political Economy of the Yaguachi Chiefdom of Lower Guayas Basin, Coastal Ecuador*. Unpublished Ph.D. dissertation, Department of Anthropology, University of Pittsburgh, Pittsburgh.
- Dillehay, Thomas and Patricia Netherly
 1998 *La Frontera del Estado Inca*. Fundación Alexander Von Humboldt & Abya Yala, Quito.
- Drennan, Robert
 1996 *Statistics For Archaeologists: A Commonsense Approach*. Plenum Press, New York & London.
- Earle, Timothy
 1991 Introduction. In *Chiefdoms, Power, Economy and Ideology*, edited by Timothy Earle, pp. 1–15. Cambridge University Press, Cambridge.
- Gracilazo de la Vega, Inca
 1985 *Comentarios reales de los Incas*. Fundación Biblioteca Ayacucho, Caracas.
- Guamán Poma de Ayala, Felipe
 1980 *El Primer Nueva Corónica y Buen Gobierno*. Siglo XXI Editores, México.
- Grosboll, Sue
 1993 And He Said in the Time of the Ynga, They Paid tributed and Served the Ynga. In *Provincial Inka: Archaeological and Ethnohistorical Assessment of the Impact of the Inka State*, edited by Michael Malpass, pp. 44-76. University Press of Iowa, Iowa.
- INEC (Instituto Nacional de Estadísticas y Censos)
 2001 *Provincia del Cotopaxi: Difusión de Resultados Definitivos del VI Censo de Población y Vivienda 2001*, julio 2002, INEC, Quito.

INFOPLAN.

2000 *ODEPLAN / INFOPLAN*. Comunicación Multimedia, Quito

Jijón y Caamaño, Jacinto

1997 [1952] *Antropología Prehispánica del Ecuador*. Museo Jacinto Jijón y Caamaño, Quito.

Lumbreras, Luis

1990 *Cronología Arqueológica de Cochasquí*. Ilustre Consejo Provincial de Pichincha, Quito

Lumbreras, Luis

1981 *Arqueología de la América Andina*. Editorial Milla Batres, Lima.

Malpass, M.A.

1993 Provincial Inca Archaeology and Ethnohistory: An Introduction. In *Provincial Inca: Archaeological and Ethnohistorical Assessment of the Impact of the Inca State*, edited by Michael Malpass, pp. 1-12. University of Iowa Press, Iowa.

Moreno Yáñez, Segundo

1997 Formaciones Políticas Tribales. En *Nueva Historia del Ecuador*, Volumen II, edited by Enrique Ayala Mora, pp.11-59. Corporación Editora Nacional & Abya-Yala, Quito.

Moseley, Michael

2001 [1993] *The Incas and their Ancestors: The Archaeology of Perú*. Thames & Hudson, London.

Mothes, Patricia, and Minard Hall

1991 El paisaje Interandino y su Formación por Eventos Volcánicos de Gran Magnitud. In *El Paisaje Volcánico de la Sierra Ecuatoriana: Geomorfología, Fenómenos Volcánicos y Recursos Asociados*, edited by Patricia Mothes, pp.3-37. Corporación Editora Nacional & Colegios de Geógrafos del Ecuador.

Murra, John

1975 El Control Vertical de un Máximo de Pisos Ecológicos en la Economía de las Sociedades Andinas. In *Formaciones Económicas y Políticas del Mundo Andino*, pp. 59–115. Instituto de Estudios Peruanos, Lima.

Newson, Linda A.

1995 *Life and Death in Early Colonial Ecuador*. University of Oklahoma Press. Norman & London.

- Niles, Susan
1992 Architecture and the Sacred Landscape. In *Ancient Americas*, pp. 347–357. The Art Institute of Chicago, Chicago.
- Oberem, Udo
1993 *Sancho Hacho: Un cacique mayor del siglo XVI*. Abya-Yala & Cedeco, Cayambe.
- Odaira, Shuichi
1997 Mirador de Moyepungo, Un Sitio Incaico en el Sur de la Provincia del Azuay. In *Fronteras de Investigación* 1 (1): 72–77, edited by Patricia Netherly. Fundación Alexander Von Humbolt, Quito.
- Ontaneda, Santiago
2002 El Cacicazgo Panzaleo como Parte del Area Circumquiteña. Ediciones del Banco Central del Ecuador, Quito.
- Orton, Olive, Paul Tyers, and Alan Vince
1993 *Pottery in Archaeology*. Cambridge Manuals in Archaeology. Cambridge University Press, Cambridge.
- Patterson, Thomas C.
1991 *The Inca Empire: The Formation and Disintegration of a Pre-Capitalistic State*. Berg, New York, Oxford.
- Ponce Leiva, P (Editor)
1994 *Relaciones Histórico-Geográficas de la Audiencia de Quito, Siglo XVI-XIX*. Marka & Abya-Yala, Quito
- Porras, Pedro
1975 *Fase Cosanga*. Pontificia Universidad Católica del Ecuador, Quito.
- Pourrut, Pierre
1986 *Los Climas del Ecuador: Fundamentos Explicativos*. Centro Ecuatoriano de Investigacion Geográfica. Documento de Investigación 4, Quito.
- Ramírez, Susan E.
1996 *The World Upside Down: Cross-cultural and Conflict in Sixteenth Century, Peru*. Stanford University Press, Stanford.
- Rowe, John H.
1997 Las Tierras Reales de los Incas. In *Arqueología, Antropología e Historia en los Andes: Homenaje a María Rostworowski*, edited by Varón Gabai and J. Flores. IEP & Banco Central de Reserva del Perú, Lima.

- Rostworowski de Diez Canseco, María
1999 *History of the Inca Realm*. Translated by Harry B. Iceland. Cambridge University Press, Cambridge
- Salomon, Frank
1980 *Los señores étnicos de Quito en la Época de los Inkas*. Instituto Otavaleño de Antropología (IOA), Otavalo.
- Schiffer, Michael
1996 *Formation Process of the Archaeological Record*. University of Utah Press, Salt Lake City.
- Silverman, Helaine
2004 *Andean Archaeology*. Blackwell, Oxford.
- Shimada, Izumi
1994 Producción Cerámica en el Imperio Inca: Una Visión Global y Nuevos Datos. In *Tecnología y Organización de la Cerámica Prehispánica en Los Andes*. Pontificia Universidad Católica del Perú, Fondo Editorial, Lima.
- Sinopoli, Carla
1991 *Approaches to Archaeological Ceramics*. Plenum Press, New York.
- Verneau R. and Paul Rivet
1912 *Ethnographie Ancienne de l'Équateur, Arc de Méridien Equatorial en Amérique du Sud, Sous le Contrôle Scientifique de l'Académie des Sciences*, 1899-1912 (6). Gauthier-Villars, Paris.
- Zúñiga, Neptalí
1980 *Significación de Latacunga en la Historia del Ecuador y América*. IGM, Quito.