

View from the North : New Data from Cerro Narrío and Its Implications for Understanding the Interregional Interactions in the Central Andes

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14. View from the North: New Data from Cerro Narrío and Its Implications for Understanding the Interregional Interactions in the Central Andes

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1. Introduction

This article focuses on the early interactions of southern Ecuador and the far northern part of Peru, which is divided by the modern national border (Figure 14-1). However, in the past, borders between modern countries were irrelevant to the social realities of the region involving them. In this region, the movement of people and goods has existed since prehistoric times, such as the Initial Formative Period (3000–1800 BC) in the Central Andes (Figure 14-2). Their movement can be discussed through the presence of warm-water shells used in rituals, such as spondylus and strombus shells, and the stylistic similarities in material culture as represented by pottery style and religious iconography (Bird and Hyslop 1985; Burger 1992; Grieder et al. 1989; Hocquenghem et al. 1993). Archaeologists have both noticed the importance of the modern border regions and discussed interregional interactions between southern Ecuador and the far northern part of Peru. Stylistic similarities in pottery in the eastern tropical lowlands in the Early Formative Period (1800–1200 BC), especially the Jaén and Bagua regions, have been mentioned (Church 1996; Kaulicke 1975), and this became more evident in the context of the Middle (1200–800 BC) and Late Formative Periods (800–250 BC) (Clasby 2014, 2019; Clasby and Meneses 2013; Church 2021; Olivera Núñez 1999, 2013, 2014; Shady 1987, 1992, 2002; Shady and Rosas 1979; Valdez 2008, 2013, 2021; Yamamoto 2010, 2013, 2021a, 2021b).

Peru and Ecuador, also known as the Central and Northern Andes, respectively, show distinct environmental, cultural, and social differences, as represented by the presence of monumental architecture and diverse ceramic styles. All this suggests that while there was a connection between them, it was not culturally or socially significant with limited impact (Burger 2003). For instance, the absence of related iconography at the archaeological sites in Ecuador made it possible to define the limits of the “Chavín” interaction sphere at the Lambayeque-La Leche Valley on the coast, and Chotano Valley in the highland (Burger 1984, 1992). However, this is not to say that there was no

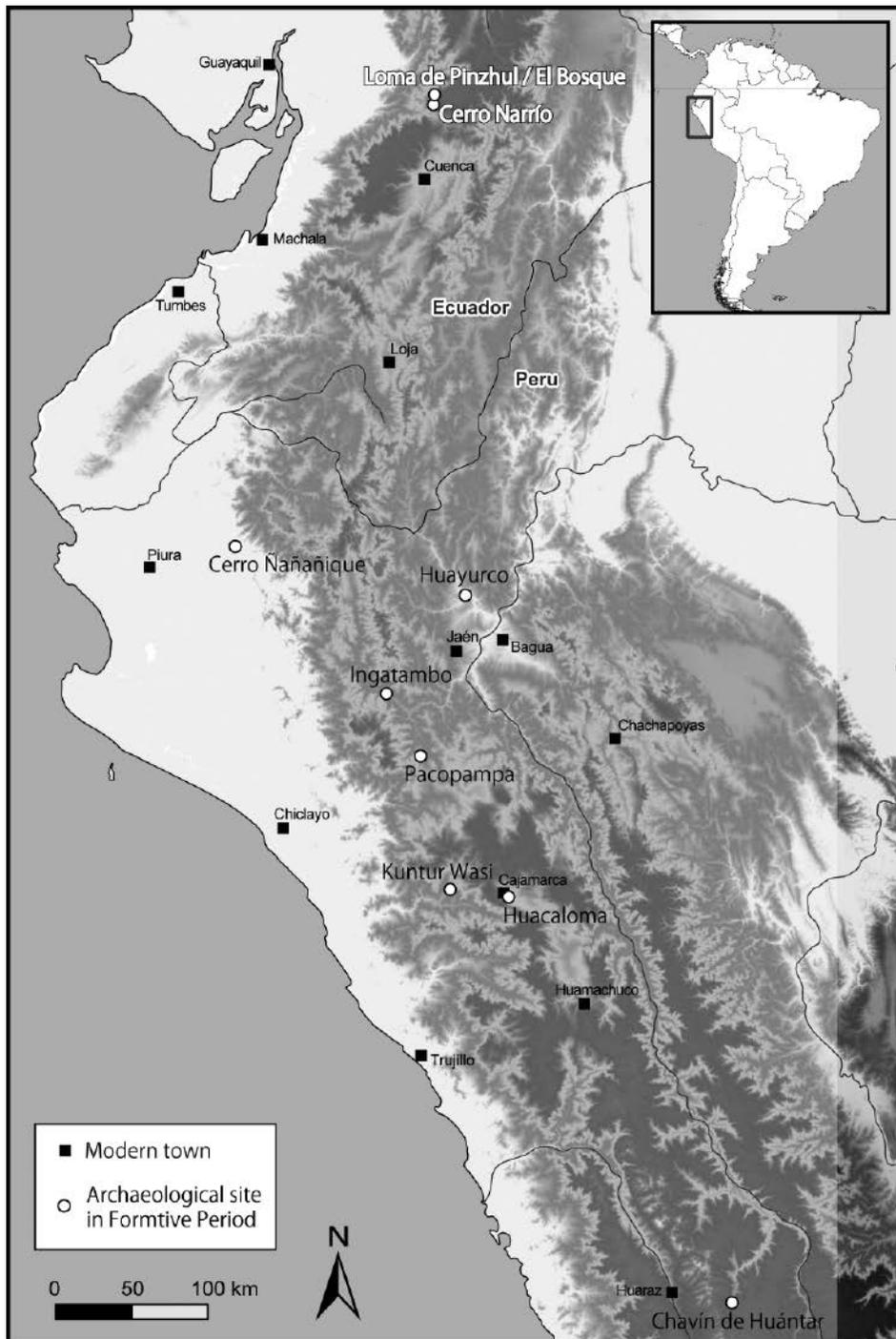


Figure 14-1 Ubication of the archaeological sites mentioned in this volume (Cerro Narrío, Loma de Pinzhul, and El Bosque Archaeological Project)

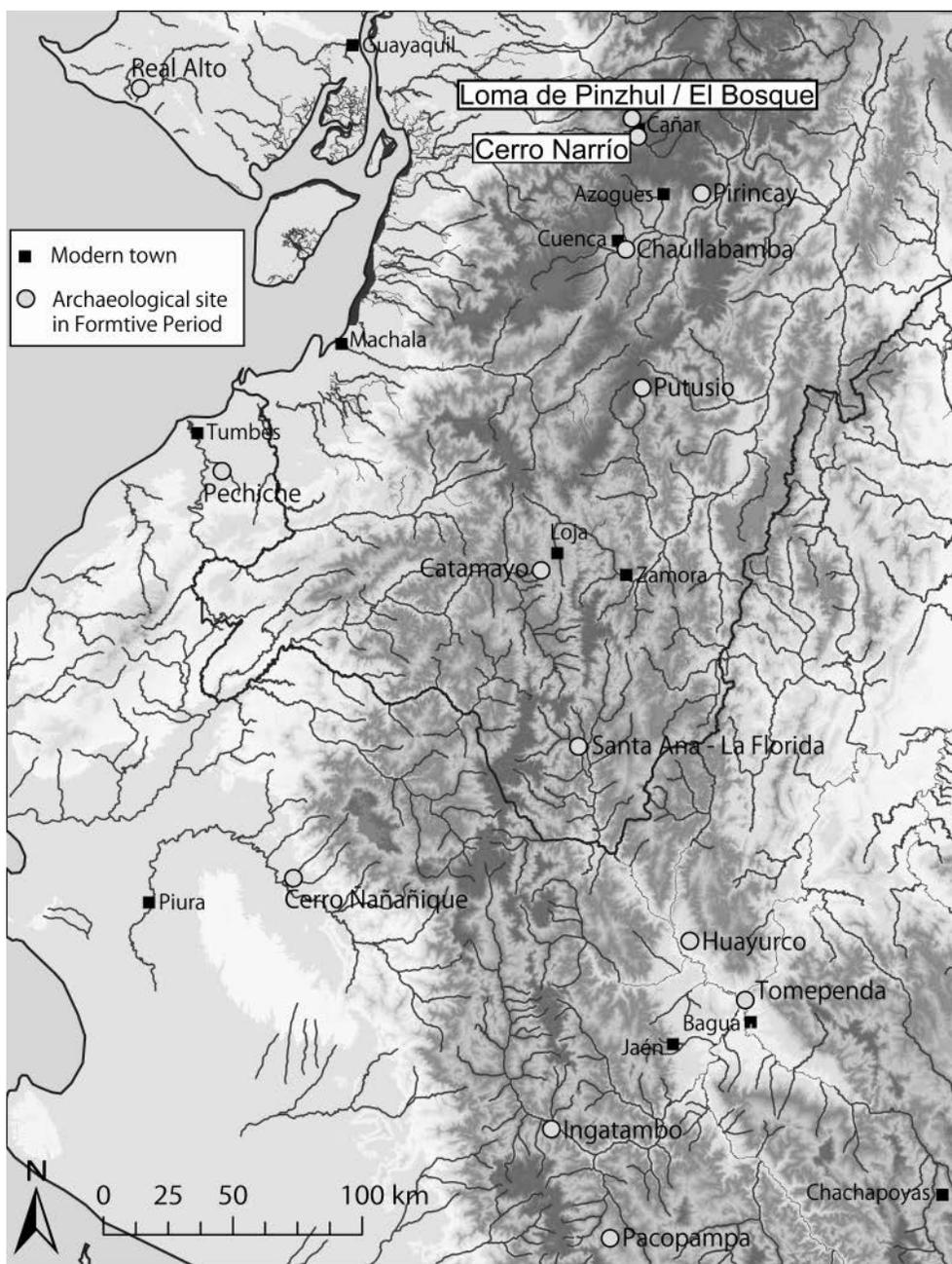


Figure 14-2 Ubication of the archaeological sites in the Frontier (Cerro Nario, Loma de Pinzhul, and El Bosque Archaeological Project)

interaction beyond the limit, as “Chavín” related fragments do occur even in the Ayabaca and Morropón sites in the Piura region in far northern Peru (Matos 1969). Some studies suggest a relationship between the Chorrera culture in Ecuador and the Cupisnique culture in the north coast of Peru (Elera 1993: 240–241). However, taking into account the distribution of the obsidian, it appears that there are two separate cultural areas and different interaction spheres with clear cultural contrasts in northern Peru and southern Ecuador (Bennett 1948; Burger 1984, 1992, 2003; DeBoer 2003).

Far north Peru has been seen as the periphery of the Central Andes and the frontier zone between both interaction spheres existed in the Central and Northern Andes (Burger 1984, 1992, 2003, 2008, 2012; Clasby 2014, 2019; Guffroy 1989, 1992, 2008; Guffroy et al. 1994; Hocquenghem 1991; Lanning 1963). However, the relationship between the two spheres remains unclear. There have been few investigations on the Ecuadorian side. We attempt to clarify the relationship between these interaction spheres in the frontier zone by examining data from excavations in the south highlands of Ecuador, especially Cañar Valley, and comparing them with those from Peru.

2. Far Northern Areas of Peru and the Southern Area of Ecuador as a Frontier of the Andean Formative Period

The far north of Peru and south of Ecuador have been considered ambiguous zones in the Formative Period. In the Central Andes, the area north of Lambayeque in the north coast, Chota in the north highlands, and the area south of Loja (or Cuenca by Guffroy 2008) was called the frontier zone in the Late Formative Period (Burger 1984). This area is also known as the transit zone as it was the nexus of interactions among societies that developed to the north and south of the area, where unique ones among them acted as mediators in the interaction spheres (Clasby 2014, 2019; Clasby and Meneses 2013; Guffroy 1989, 1992, 2008; Guffroy et al. 1994; Kaulicke 1998; Olivera Núñez 1999, 2013, 2014; Shady 1987, 1992, 2002; Shady and Rosas 1979; Valdez 2008, 2013, 2021; Yamamoto 2010, 2013, 2021a, 2021b, 2021c).

Research in this frontier zone, especially the Jaén and Bagua regions and Chinchipe Valley, has revealed a variety of social processes and has suggested the existence of interregional interactions with northern Peru and southern Ecuador (Clasby 2014, 2019; Olivera Núñez 2014; Valdez 2008, 2013, 2021; Yamamoto 2010, 2013, 2021a, 2021b, 2021c). The discussion of interregional relations in the Central Andes, which has been called the “Chavín Phenomenon” or the “Chavín Interaction Sphere,” has recently been divided into the northern and southern interaction spheres to allow for a better understanding of the nature of interregional interactions in the Central Andes (Matsumoto et al. 2018; Yamamoto 2021a, 2021b). These studies show that the northern interaction sphere corresponds to the area that is to the south of the northern frontier and centered on the Chota and Cajamarca regions. Thus, the northern frontier, which is the main subject of this study, can be defined as the area between the Cuenca or Loja region and the Huancabamba Valley (Burger 1984, 2003; Guffroy 2008; Yamamoto 2021a, 2021b). Although it is certainly necessary to consider the geographic range of the frontier, it is

not important to define it. Rather, it is important to clarify the nature of the interactions therein. Whereas the nature of interactions continues to change over time, it is important to evaluate how the interaction spheres at different scales developed around these nodes through coexistence, degrees of overlap, and entanglement (Yamamoto 2021a, 2021b).

We have conducted continuous research in the Huancabamba Valley in far northern Peru, especially at the archaeological site of Inгатambo, which is one of the largest ceremonial centers in the valley, and dates back to the Formative Period. We have shown that interregional interactions played a crucial role in the social development of Inгатambo society, and that radical change took place after interregional interactions became active in the Middle Formative Period (Yamamoto 2013, 2021a, 2021b, 2021c). Interactions between the societies in the far north and north of Peru are closely interlinked. However, whereas the relationship between Inгатambo and the northern interaction sphere has been studied, its relationship with the southern regions of Ecuador remains unclear.

We investigated Cerro Narrío and Loma de Pinzhul in the Cañar Valley of the south highlands of Ecuador in 2019. This area was chosen because previous researchers have reported Cerro Narrío as a possible interaction partner for societies in far northern Peru, especially in the Jaén and Bagua regions (Church 1996; Shady and Rosas 1979). Cerro Narrío is considered to have been at the northern limit of the northern frontier.

We first present data from the Cerro Narrío and Loma de Pinzhul sites in Ecuador's south highlands to understand the dynamics of the interaction and the frontier from a northern perspective. We then examine the nature and character of interregional interactions between northern Peru and southern Ecuador, focusing on the Middle and Late Formative Periods when major social changes took place at the frontier in the Central Andes. This discussion leads to a bottom-up approach to the study of the Formative Period, which will not only define the frontier and specify its range, but also discuss a variety of happenings there. Thus, the paper contributes to recent studies on frontier dynamics as an active subject (Jennings 2006; Van Gijsegheem 2006).

3. Cañar and Cerro Narrío: Its Importance in the Andean Archaeology

While the importance of southern Ecuador in studying the formation of the Andean civilization is clear now, previous investigations of the Formative Period in Ecuador focused mainly on the coast. The situation in the highlands is not as well-known as in the coastal areas. This may be because the population in the highlands was smaller than that on the coast at the time and it was thus difficult to identify the archaeological sites (for example, Raymond and Burger 2003; Zeidler 2008). There are some ambiguities in the chronology that prevent comparative research with northern Peru and thus it is necessary to clarify and establish absolute chronology beyond pottery styles. Various archaeological surveys have been conducted in the Cañar Valley, which has long been considered one of the most important areas in Ecuadorian archaeology. The Cerro Narrío archaeological site is a representative site in the region, partly because of the research carried out by famous archaeologists, including Max Uhle (Uhle 1922), and Donald

Collier and John Murra (Collier and Murra 1943).

Collier and Murra's greatest achievement may be their presentation of a chronology based on the stratigraphic excavations and stylistic seriation of ceramic specimens. However, there are discrepancies in the chronology of the Early and Late Cerro Narrío phases considering the available data, such as excavation data from other sites (for example, Raymond and Burger 2003; Valdez 2008; Zeidler 2008). Some argue that the chronology of the Cerro Narrío site dates back to 4400–1450 BC, based on comparisons of pottery style with coastal sites (Braun 1982), whereas others argue that it dates back to 1300–300 BC, based on comparisons with the Pirincay site in the south highlands (Bruhns 2003). In the 2000s, new excavations were conducted at the Cerro Narrío site to reexamine the chronology. It was reported that the terraces of the site were dated to 780–410 BC (Zarrillo 2012: 122) and 810–760 BC (Zarrillo 2012: 127). However, these dates do not correspond to those of the Chaullabamba site (2000–1200 BC) in the south highlands of Ecuador's Cuenca region, where a strong stylistic similarity in pottery styles can be seen with Cerro Narrío (Grieder et al. 2009). Pottery styles from Cerro Narrío and Chaullabamba bear strong similarities to those identified in the Middle Formative Period (1200–800 BC) sites in northern Peru, especially in the Jaén and Bagua regions. Therefore, to discuss the interregional interactions between the Northern and Central Andes, it is necessary to clarify the chronology of the Cerro Narrío site. Through its site chronology, it will become possible to better organize the ceramic chronology of southern Ecuador to compare it with various sites in northern Peru.

Thus, we began our research on the Cerro Narrío and Loma de Pinzhul sites (Figure 14-3). In Loma de Pinzhul, small-scale emergency excavations were carried out (Bravo and Vargas 2008) and our surface survey in March 2019 at Cerro Narrío revealed similar pottery from the Formative Period. Therefore, we conducted excavations there to supplement the chronology of the Cerro Narrío site.

4. Excavations at Cerro Narrío and Loma de Pinzhul

This section summarizes the results of our research at the Cerro Narrío and Loma de Pinzhul sites. The analysis of archaeological materials including pottery remains incomplete; therefore, we can provide a tentative description, and detailed analyses will be conducted in the future. The samples used for dating were charcoal remains. Measurements were carried out at the Center for High-Sensitivity Accelerator Mass Spectrometry, Yamagata University. Calendar year calibration and age analysis were performed using OxCal 4.3 (Bronk Ramsey 2009). The Southern Hemisphere curve is used for calibration (SHCal13; Hogg et al. 2013). Tables 14-1 and 14-2 summarize the results of the AMS dates of the samples arranged according to the level of each excavation unit. For each site, the start and end dates for each period were analyzed using Bayesian statistics to consider the age range for each period.

4.1 Cerro Narrío

The archaeological site of Cerro Narrío is located at an elevation of 3,175 m above sea

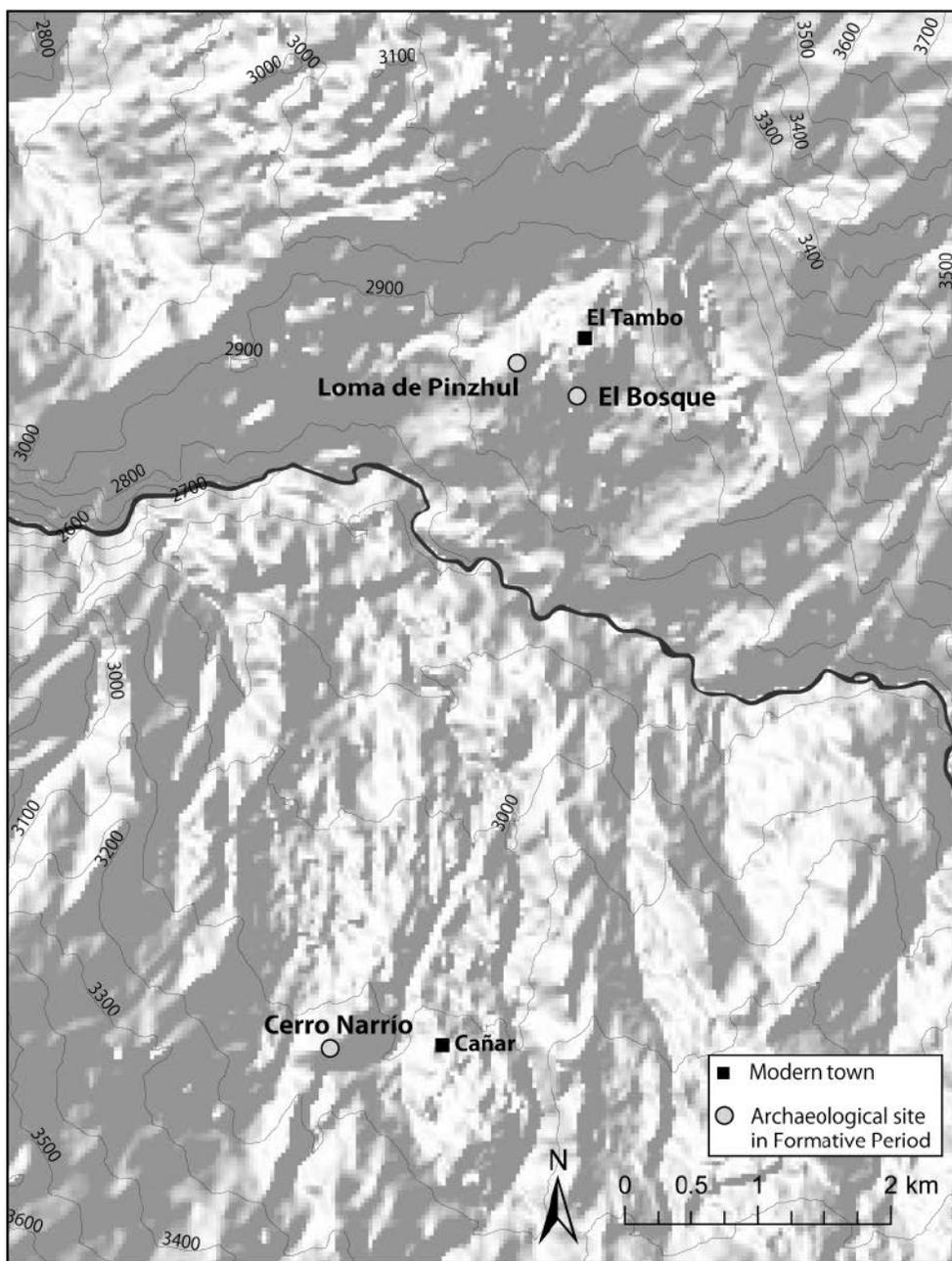


Figure 14-3 Ubication of the archaeological sites of Cerro Narrío and Loma de Pinzhul (Cerro Narrío, Loma de Pinzhul, and El Bosque Archaeological Project)

Table 14-1 Chronology of Cerro Narrío

Phase	Excavation unit	Context	Laboratory number	¹⁴ C age (BP±1σ)	Calibrated age (Modelled)			
					Probability ranges (68.2%)	Probability ranges (95.4%)	Median	A (%)
Phase 2	Boundary end				cal AD 145 - cal AD 310	cal AD 125 - cal AD 585	cal AD 245	
	Top	Trench 1, Unit 5, Layer 6	YU-10496	1917±20	cal AD 80 - cal AD 200	cal AD 70 - cal AD 205	cal AD 130	99.4
		Trench 1, Unit 2, Layer 8	YU-10497	2000±20	40 cal BC - cal AD 70	50 cal BC - cal AD 115	cal AD 40	101.3
		Trench 1, Unit 4, Layer 8	YU-10498	2082±20	70 cal BC - cal AD 20	105 cal BC - cal AD 25	45 cal BC	101.6
	Terrace	Trench 2, Unit 1, Layer 4	YU-10503	1869±22	cal AD 130 - cal AD 215	cal AD 120 - cal AD 235	cal AD 165	100.2
		Trench 2, Unit 1, Layer 8	YU-10502	2096±22	100 cal BC - cal AD 15	140 cal BC - cal AD 20	65 cal BC	99.3
Boundary start				225 cal BC - 50 cal BC	500 cal BC - cal AD 10	135 cal BC		
Phase 1	Boundary end				1355 cal BC - 1215 cal BC	1380 cal BC - 1130 cal BC	1270 cal BC	
	Top	Trench 1, Unit 4, Layer 10	YU-10505	3111±22	1375 cal BC - 1275 cal BC	1400 cal BC - 1255 cal BC	1315 cal BC	107.1
		Trench 1, Unit 4, Layer 12	YU-10508	3130±22	1360 cal BC - 1280 cal BC	1405 cal BC - 1260 cal BC	1320 cal BC	96.8
		Trench 1, Unit 4, Layer 13	YU-10499	3079±22	1375 cal BC - 1260 cal BC	1390 cal BC - 1230 cal BC	1300 cal BC	110.3
		Trench 1, Unit 4, Layer 15	YU-10500	3062±22	1375 cal BC - 1255 cal BC	1390 cal BC - 1220 cal BC	1295 cal BC	96.9
		Trench 1, Unit 5, Layer 15	YU-10501	3099±22	1375 cal BC - 1270 cal BC	1400 cal BC - 1235 cal BC	1310 cal BC	111.7
Boundary start				1410 cal BC - 1290 cal BC	1470 cal BC - 1270 cal BC	1365 cal BC		

* A (%) = Agreement Index

(Cerro Narrío, Loma de Pinzhul, and El Bosque Archaeological Project)

Table 14-2 Chronology of Loma de Pinzhul

Excavation unit	Context	Laboratory number	¹⁴ C age (BP±1σ)	Calibrated age (Modelled)			
				Probability ranges (68.2%)	Probability ranges (95.4%)	Median	A (%)
Top	Boundary end			560 cal BC - 330 cal BC	705 cal BC - 240 cal BC	460 cal BC	
	Trench 1, Unit 2, Layer 6	YU-10512	2452±20	730 cal BC - 445 cal BC	745 cal BC - 400 cal BC	520 cal BC	81.4
	Trench 1, Unit 3, Layer 8	YU-10513	2509±20	715 cal BC - 510 cal BC	760 cal BC - 435 cal BC	590 cal BC	101.8
	Trench 1, Unit 2, Layer 10	YU-10535	2575±21	685 cal BC - 545 cal BC	795 cal BC - 515 cal BC	610 cal BC	84.5
Boundary start			780 cal BC - 570 cal BC	1000 cal BC - 510 cal BC	700 cal BC		
Terrace	Boundary end			15 cal BC - cal AD 100	40 cal BC - cal AD 215	cal AD 55	
	Cateo, Layer 6	YU-10514	2005±20	45 cal BC - cal AD 50	50 cal BC - cal AD 70	1 cal BC	92.4
	Cateo, Layer 10	YU-10531	2043±21	55 cal BC - cal AD 5	60 cal BC - cal AD 40	20 cal BC	104.2
	Cateo, Layer 12	YU-10532	2044±20	55 cal BC - cal AD 5	60 cal BC - cal AD 35	20 cal BC	103.7
	Cateo, Layer 16	YU-10533	2165±21	195 cal BC - 105 cal BC	205 cal BC - 65 cal BC	145 cal BC	100.1
	Cateo, Layer 19	YU-10534	2175±20	200 cal BC - 110 cal BC	210 cal BC - 65 cal BC	155 cal BC	99.9
Boundary start			260 cal BC - 140 cal BC	390 cal BC - 90 cal BC	205 cal BC		

*A (%) = Agreement Index

(Cerro Narrío, Loma de Pinzhul, and El Bosque Archaeological Project)



Figure 14-4 Panoramic view of the Cerro Narrío Site
(Cerro Narrío, Loma de Pinzhul, and El Bosque Archaeological Project)



Figure 14-5 Topographic map of the Cerro Narrío site
(Cerro Narrío, Loma de Pinzhul, and El Bosque Archaeological Project)

level, near the modern city of Cañar (Figure 14-4). The site comprises hilltop occupations and terraces, and trenches of $2\text{ m} \times 10\text{ m}$ and $2\text{ m} \times 6\text{ m}$ were set on the top and northeastern terraces, respectively (Figures 14-5, 14-6, and 14-7). The terrace was excavated in the 2000s by Zarrillo (Zarrillo 2012). Our excavation helped us identify two



Figure 14-6 Excavation at the top of the Cerro Narrío site (Cerro Narrío, Loma de Pinzhul, and El Bosque Archaeological Project)



Figure 14-7 Excavation at the terrace of the Cerro Narrío site (Cerro Narrío, Loma de Pinzhul, and El Bosque Archaeological Project)

phases that corresponded to the Formative Period (Table 14-1). The total number of pottery sherds we recovered during our excavation at Cerro Narrío was 36404 (33371 sherds from the trench on the hilltop and 3033 from the one on the northeastern terrace).

Phase 1, which was located at the lowest level, was identified only at the hilltop mound. Traces of human activity were recognized just above the bedrock, which slopes toward the east, and stone rows identified there could be considered architectural backfill. Layers of ash and burnt clay were found in several places in the trenches, and large amounts of animal bones were unearthed from these layers. The presence of burned clay and ash has also been reported in previous studies (Collier and Murra 1943). Some ceramic sherds were painted red or had decorations by engraving, showing similarities to the specimens from Chaullabamba (Figure 14-8). Phase 2 was found both at the hilltop and northeastern terraces. At the hilltop, stone rows without a clear face and stone walls with a face on the eastern side were identified in association with relatively uniformly leveled surfaces, probably floors. Aside from the accumulation of pottery sherds and animal bones, burnt soil, ash, carbonized plant, and charcoal remains were found. A hearth was built, digging into the Phase 1 layer. Some of the pottery was painted red, whereas other pieces were polished or decorated with engravings, bearing similarities with pottery from Loma de Pinzhul (Figure 14-9). An artifact of spondylus shell, also known as ucuyaya, was recognized as well (Figure 14-10). In the terrace on the northeastern side of the trench (lower part), the topsoil reached the ground level when it was removed, but on the southwestern side (hillside), about 1 m of sedimentation was observed. The accumulation of pottery and a small stone-molded hearth were identified on the southwestern side, and a large amount of burnt soil, ash, carbides, animal bones, and pottery were found around the hearth.

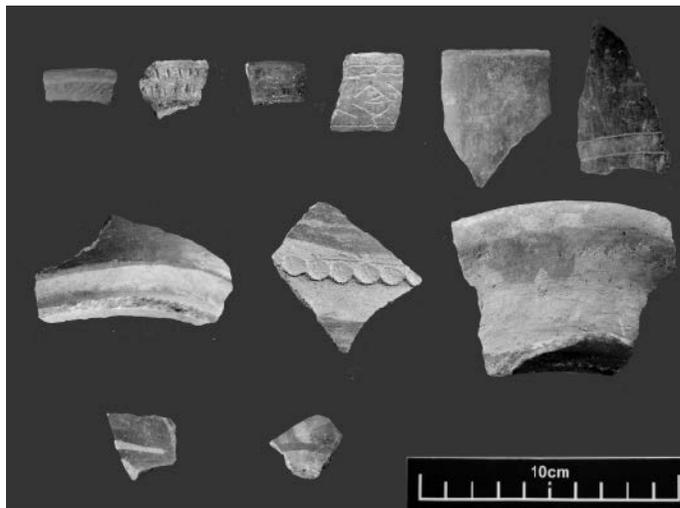


Figure 14-8 Ceramics from Phase 1
(Cerro Narrío, Loma de Pinzhul, and El Bosque Archaeological Project)

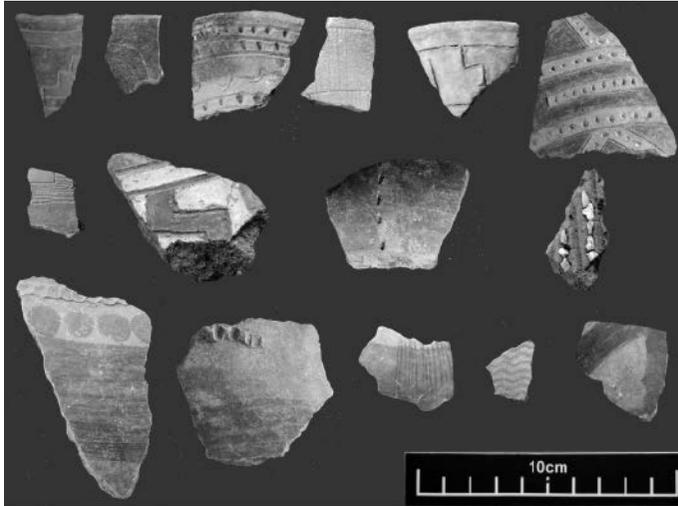


Figure 14-9 Ceramics from Phase 2
(Cerro Narrío, Loma de Pinzhul, and El Bosque Archaeological Project)



Figure 14-10 Ucuyaya from Phase 2
(Cerro Narrío, Loma de Pinzhul, and El Bosque Archaeological Project)

4.2 Loma de Pinzhul

The archaeological site of Loma de Pinzhul is located in the modern city of El Tambo on the opposite side of the Cañar Valley from the Cerro Narrío site (Figure 14-11). Loma de Pinzhul was built on a natural hill located 2,995 m above sea level. The western side of the hill drops sharply almost forming a cliff, but the rest of the hill is covered with artificial terraces (Figure 14-12). A 2 m x 6 m trench was excavated at the hilltop (Figure 14-13), and a 2 m x 2 m test pit was placed on the eastern terrace (Figure 14-14). Following our excavation, one phase of the activity was confirmed in each unit (Table 14-2). The total number of pottery sherds recovered our excavation at Loma de Pinzhul was 14,815 (1,987 sherds from the trench and 12,828 from the test pit).



Figure 14-11 Panoramic view of the Loma de Pinzhul Site (Cerro Narrío, Loma de Pinzhul, and El Bosque Archaeological Project)

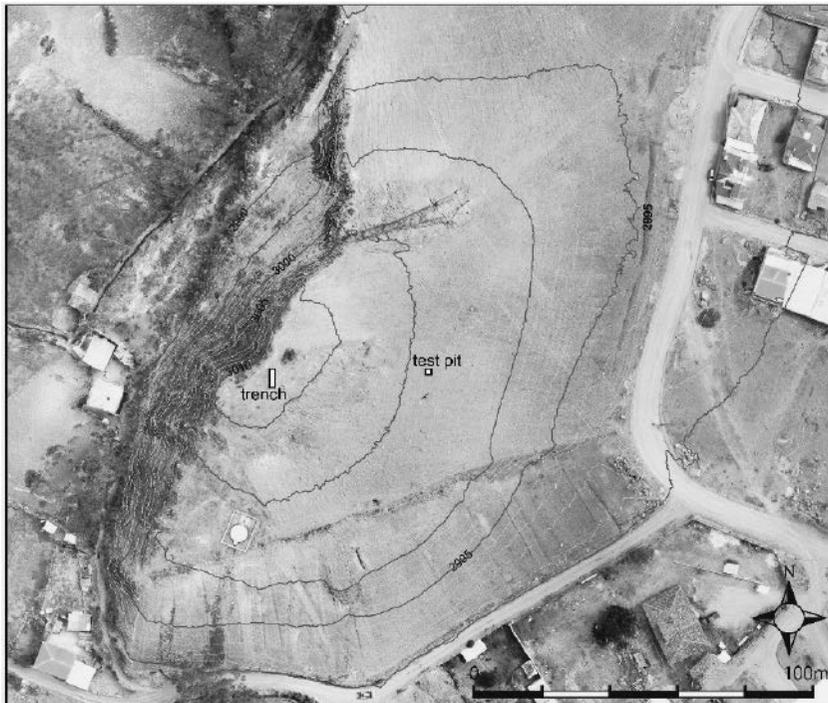


Figure 14-12 Topographic map of the Loma de Pinzhul site (Cerro Narrío, Loma de Pinzhul, and El Bosque Archaeological Project)

Pottery and animal bones were recognized from the trench placed on the hilltop once the topsoil was removed. In the northern side of the trench, the bedrock was exposed after only 0.3 m of excavation. However, on the southern side of the trench, an artificial fill of approximately 1.1 m in thickness was found. The accumulation of burnt soil and ashes in this part was repeatedly observed after digging down about 0.3 m below the ground surface. From the lower layer of burnt soil and ash, a layer that evenly leveled the ground like a floor was identified, but the corresponding structure was not recognized. Below this layer, a floor with postholes was observed. The context below the layer of burnt clay and ash was not disturbed and pottery sherds with red paint and



Figure 14-13 Excavation at the top of the Loma de Pinzhul site (Cerro Narrío, Loma de Pinzhul, and El Bosque Archaeological Project)



Figure 14-14 Excavation at the terrace of the Loma de Pinzhul site (Cerro Narrío, Loma de Pinzhul, and El Bosque Archaeological Project)

engraving were identified (Figure 14-15). Several floor and floor-like surfaces were found in the upper and lower layers, suggesting that the area may have been used continuously. However, as no significant changes were found in the pottery style, it seems reasonable to assume that these data reflect a single phase of human activity. A large number of artifacts, such as pottery sherds, animal bones, and stone tools, were excavated from each layer at the test pit on the terrace. Layers of uniformly leveled floor

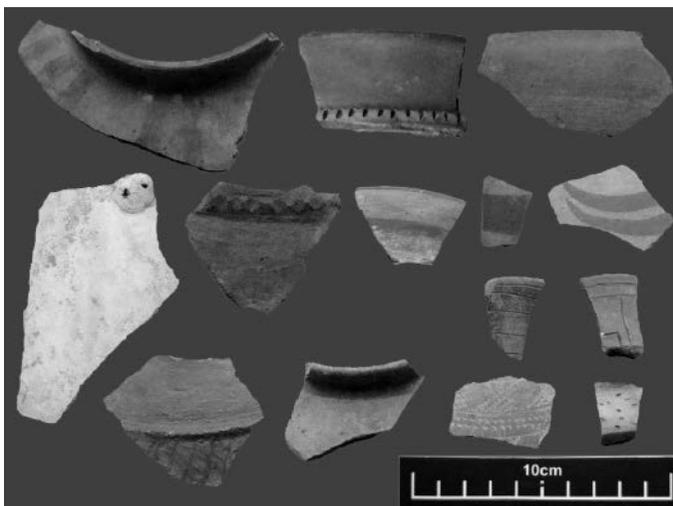


Figure 14-15 Ceramics from the top of the Loma de Pinzhul site (Cerro Narrío, Loma de Pinzhul, and El Bosque Archaeological Project)

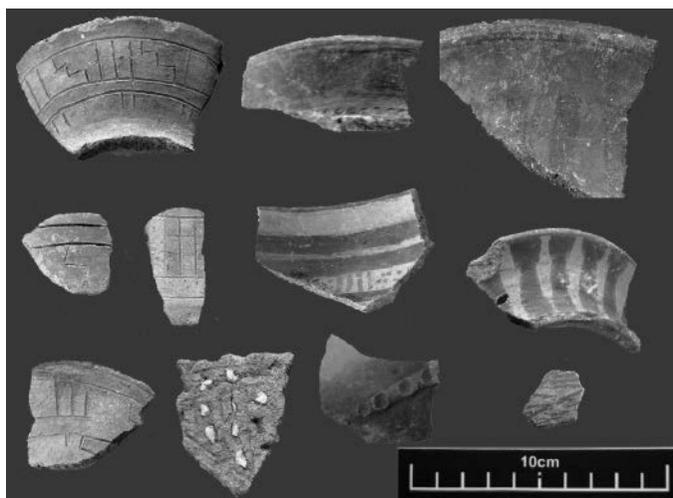


Figure 14-16 Ceramics from the terrace of the Loma de Pinzhul site (Cerro Narrío, Loma de Pinzhul, and El Bosque Archaeological Project)

and accumulation of pottery sherds were repeatedly identified. Some of the pottery sherds were painted red or decorated with engravings, showing a strong similarity with pottery from Cerro Narrío, especially those found in Phase 2 (Figure 14-16). Whereas a coarse stone row was also detected, the full picture of the structure is not clear. Although our excavation reached a level of over 2 m below the topsoil, we did not reach the bedrock. The depositional conditions suggest that the terrace area may have been used more intensively than the top area. It may be possible to assume that terraces began to be used when the activity on the hilltops ceased.

5. Discussion

5.1 Chronological Issues and Some Implications for Interregional Interaction

Based on the excavation data and dating results, the activities at Cerro Narrío and Loma de Pinzhul appear closely linked. For example, Zarrillo's research confirmed activity on the terrace in Cerro Narrío in around 700 BC (Zarrillo 2012: 122), as was confirmed at Loma de Pinzhul by the dates obtained from the hilltop unit. Cerro Narrío and Loma de Pinzhul functioned simultaneously around 150 BC, which corresponds to Phase 2 at Cerro Narrío. The unit placed on the terrace at Loma de Pinzhul produced dates corresponding to this phase. However, Cerro Narrío shows traces of earlier human activities, as indicated by the presence of Phase 1. It is difficult to identify the character or function of these two sites, whether domestic, ceremonial, and/or both. However, considering the results of radiocarbon dating, it can be assumed that both sites are interrelated in the landscape of the Cañar Valley. Further analysis of excavated materials is crucial to clarify the relationship between them.

According to the dates presented in this study, the Cerro Narrío and Loma de Pinzhul sites may not have been occupied in the Middle Formative Period of the Central Andes. This is interesting, given that Cerro Narrío was thought to be the partner of interactions with societies in the Middle Formative Period in far northern Peru, especially those in the Jaén and Bagua regions. Therefore, it may be necessary to reconsider the nature of interregional interactions between these areas.

If these chronological considerations are correct, it is difficult to assume that the Cerro Narrío and Loma de Pinzhul were a node of interregional interactions in the Middle Formative Period despite the fact that active interactions were assumed between the tropical lowlands of far northern Peru and southern Ecuador. The Chaullabamaba site, which is characterized by unique pottery styles that show a high degree of similarity with those of far north Peru, including the Jaén and Bagua regions, appears earlier than the Middle Formative Period of the Central Andes.

What do these data imply? One possibility is that interregional interactions existed between southern Ecuador and the Jaén and Bagua regions in the Early Formative Period, which preceded the Middle Formative Period (Table 14-3). Thus, pottery styles from southern Ecuador were brought to northern Peru during this time. Alternatively, in the Middle Formative Period, it is also possible that the societies in the Jaén and Bagua regions did not interact with those in Cañar and Cuenca, but rather with those in the

Catamayo near the Loja region and others farther south. However, there are traces of human activity around 800 BC in both Cerro Narrío and Loma de Pinzhul. This period corresponds to the Late Formative Period of the Central Andes when the influence of the Central Andes was observed in Ecuador as represented by the Catamayo region where the influence of northern Peru became more pronounced (Guffroy 2004). This coincides with a period of intensified interregional interaction between Peru and Ecuador, given that there were differences and similarities in material styles, etc. (Burger 1984, 2003). The scarcity of excavation data prevents us from evaluating the nature of the interaction. It seems important to accumulate fine-grained archaeological data at the local and regional levels and relate them in the framework for interregional interaction.

5.2 Interregional Interactions in the Frontier: A View from the Peruvian Side

In the Middle Formative Period, human activities were absent at Cerro Narrío and Loma de Pinzhul. However, investigations at Inгатambo in northern Peru suggest that interregional interactions within the frontier or between the frontier and northern Peru intensified in this period (Yamamoto 2021a, 2021b). Given the data on Cerro Narrío and Loma de Pinzhul, there seems to be no direct relationship between societies in the area surrounding Cuenca and the northern part of Peru, as discussed in previous studies in the northern part of Peru (Shady Solís 2002; Shady and Rosas 1979).

The data from Catamayo (Guffroy 2004) suggest that the relationship with the societies of northern Peru, especially with Cerro Ñañañique in Piura, strengthened during this period. Although the pottery style at Cerro Ñañañique has some similarities with that of Inгатambo, the Jaén and Bagua regions, and the north coast of Peru, the site of Catamayo seems to have non-direct and less intensified interactions among these regions. Inгатambo is closely related to the far north coast of Peru and the Jaén and Bagua regions and may have been a node of interaction between these regions and southern Ecuador. This is suggested by the pottery style and the presence of warm-water seashells from the Pomahuaca phase, which corresponds to the Middle Formative Period. Inгатambo transformed as an important node of more intensified interregional interactions from the latter half of the Pomahuaca phase, around 1000 BC. This tendency is strengthened in the next Inгатambo phase of the Late Formative Period. This was probably because of its incorporation into the northern interaction sphere that includes major centers of the Central Andes, such as Pacopampa and Kuntur Wasi. Only one piece of pottery from Inгатambo shows strong similarity to the pottery for southern Ecuador, such as Catamayo, suggesting that even if Inгатambo interacted with southern Ecuadorian societies, the connection was weak. Although there are many warm-water shells, only a small variation of pottery vessels in Inгатambo shows a high degree of similarity with contemporary Ecuadorian pottery.

Data from Huayurco in the Jaén region (Clasby 2014, 2019) suggest that people in the region may have had close ties to societies in southern Ecuador, including Catamayo, during the Late Formative Period although stone bowls found at Huayurco or in the Jaén region have been excavated from the Ofrendas Gallery at Chavín de Huántar. As Burger (1984, 2003) pointed out, even if there was an interaction between southern Ecuador and

Table 14-3 Chronological relationship among the archaeological sites in Southern Ecuador and Northern Peru

Chronology (Peru)	Ecuador										Peru				
	Cerro Nariño	Loma de Pinzhul	Chauillabamba	Catamayo	Far north coast	Eastern lowlands		Ingatambo	Pacopampa	North highlands	North coast				
AD					Garbanzal /Pechiche	Cerro Nañañique	Bagua	Huayureco	Jaén			Kuntur Wasi /Cerro Blanco	North coast		
BC						Chapica	El Salado	Las Juntas		Layzón		Sotera	Huaca Lucia /Purullén /Morro de Eten		
200	Phase 2	Phase 2		Catamayo D	Garbanzal	La Encantada		Tabaloso		EL		Copa			
550					Pechiche	Pancillo	La Peca	Ambato							
800	by previous studies	Phase 1		Catamayo C			Bagua II		Tompenda Cerezal Michimal		Pacopampa II	Kuntur Wasi	Morro de Eten		
Middle (latter half)						Ñañañique	Bagua II					Ídolo			
1000				Catamayo B			Morenila						Huaca Lucia Purullén		
Middle (first half)															
1200					San Juan										
1500	Phase I		Phase IV												
			Phase III												
			Phase II												
			Phase I												
2000									Monte grande						
2500	Initial														

(Cerro Nariño, Loma de Pinzhul, and El Bosque Archaeological Project)

northern Peru, it may have been qualitatively different from the interaction between societies in northern Peru. However, the complex mosaic of interactions during the Middle and Late Formative Periods also suggest that the nature of interactions was quite nested probably because each society in the frontier zone functioned as an independent and autonomous center.

6. Conclusion

Based on data from Cerro Narrío and Loma de Pinzhul, we attempted to provide hypothetical views to consider the complexities of the interactions between southern Ecuador and the far northern part of Peru. Inगतambo, Cerro Ñañañique, Huayurco, and other centers in the Jaén and Bagua regions have all interacted as politically autonomous units that have their own objectives and strategies in the process of interactions. Thus, the nature of their interactions is rather nested through the entanglements with several historically unique circumstances. In the Middle Formative Period, the centers in northern Peru do not show direct evidence of interregional interactions with southern Ecuador that was considered in previous studies, except for the Catamayo site in the frontier.

Here, it is possible that both Cerro Narrío and Loma de Pinzhul began to function from the Late Formative Period, which corresponds to the time of the intensification of interregional interactions in the wide geographic area of the Central Andes. By enriching the data on the Ecuadorian side, it will be possible to clarify the dynamics of interregional interactions from a macro perspective including southern Ecuador and northern Peru, which can relate to the broader theme of the frontier for understanding the dynamics of the overlapping interaction spheres. Further research in southern Ecuador can be useful for this reason.

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