



PROJECT MUSE®

3.1 How real is the Andes–Amazonia divide? An archaeological view from the eastern piedmont

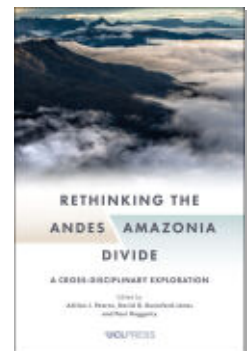
Published by

Pearce, Adrian J., et al.

Rethinking the Andes–Amazonia Divide: A cross-disciplinary exploration.

University College London, 2020.

Project MUSE. <https://muse.jhu.edu/book/81859>.



➔ For additional information about this book

<https://muse.jhu.edu/book/81859>



This work is licensed under a Creative Commons Attribution 4.0 International License.

[136.0.111.243] Project MUSE (2025-01-15 06:54 GMT)

3.1

How real is the Andes–Amazonia divide? An archaeological view from the eastern piedmont

Darryl Wilkinson

Introduction

It is understandable that the contrast between the Andes and Amazonia tends to dominate our large-scale perceptions of South American geography. After all, highland–lowland interactions are a topic of global scholarly interest, and the Andes–Amazonia divide offers one of the most dramatic (if sometimes stereotyped) cases. In this chapter I wish to make three points about this great divide. The first is that the divergences between these two regions are real; from the point of view of archaeology, often quite stark. Yet even if we accept the validity of such contrasts, they can sometimes lead us to overlook the distinctiveness of the spaces in between – that are neither up nor down, so to speak. Thus my second argument is that the piedmont zone of the eastern Andes needs to be considered as a separate place, distinct from either Amazonia or the highlands proper.¹ As a ‘transitional’ ecozone, we can understand the piedmont as exhibiting an admixture of highland and lowland characteristics; but this still captures only a part of the complex reality. Indeed, the piedmont also demonstrates a variety of attributes that are unique to itself – which are, in other words, neither typically Amazonian nor typically Andean. However, this raises the question of what exactly is ‘typical’ with respect to these two regions. My third point, then, is that such transitional areas are not only interesting in their own right, but also provide an ideal vantage point from which to examine the nature of the wider Andes–Amazonia divide. By this I mean that when we stand where these two ‘worlds’ meet, what makes them so distinctive is brought into clearer focus.

In what follows I will discuss these themes in greater detail, drawing primarily on archaeological evidence from my own fieldwork in the Amaybamba Valley (Peru). From the outset I should therefore acknowledge that my arguments largely

reflect my research experiences in one particular piedmont region. Unfortunately, no-one is yet in a position to provide an overall summary of the archaeology of the entire Andean piedmont, because so little work has been carried out there (and even less has been published). In comparison with the Andean highlands and coast, and in some respects even with Amazonia, the piedmont remains largely unknown in archaeological terms (cf. [Chapter 2.5](#)). Yet, as will become clear, many of the issues I raise are by no means unique to somewhere like the Amaybamba Valley and impinge upon the issue of the Andes–Amazonia relationship more generally.

Before proceeding it is also useful to provide a basic definition of the word ‘piedmont’, since there are multiple terms used in South America to describe this region that are almost, but not quite, synonyms (for example, *montaña*, *selva alta*, *jungas*, *ceja de selva*). In the basic etymological sense of the word, the piedmont covers all the foothills of the Andes east of the Cordillera Blanca. But as a coherent cultural zone, I take it to be the mountainous region of the eastern Andes where the *valley floors* range between approximately 2,500 m and 1,000 m in elevation.² Some specialists in the region might find my definition here to be rather restricted. For example, the upper limit of the piedmont is often taken to be the tree-line (around 3,800 m); for some, the lower limit can stretch all the way down to the Amazonian plains at around 300 m (for example, [Lathrap 1970](#)). Whereas most scholars define the piedmont first in terms of its (non-human) ecology, and only consider its ‘cultural’ facets after the fact, my definition instead emphasizes the region’s human ecology. Thus the 1,000 m line is important because below this elevation most of the major west–east running rivers of the Andes become sufficiently deep and wide to be routinely navigable in canoes. This change might not have mattered all that much in terms of plant and animal biogeography, but its significance to the human inhabitants was enormous. The Andes generally lacks navigable rivers, which tends to make waterborne transport impractical, whereas the extensive river systems of Amazonia were the primary highways for moving goods and people of all kinds, especially in bulk quantities. In the piedmont then, anything moving across the Andes–Amazonia frontier had to transfer between these very distinct terrestrial and aquatic networks. Whereas the absence of navigable waterways determines the lower limit of the piedmont, the upper limit (around 2,500 m) reflects the ecological viability of several key domesticated species. Andean camelids generally do not extend below 2,300 m ([Stahl 2008](#)), nor potatoes below 2,000 m ([Hawkes 1990](#)) – while coca and manioc are typically only cultivable up to 2,300 m ([Isendahl 2011](#); [Plowman 1985](#), 12).

So in terms of human ecology, aside from the issue of river navigability, the greatest divergences between Amazonia and the Andes lay in their rather distinct sets of animal and plant domesticates. By the late prehistoric period in particular – roughly the millennium prior to the Spanish conquest in AD 1532 – we can think of the Andean highlands as a zone with an agricultural regime reliant on two staple cultigens: maize and potatoes. The importance of maize lay not only in the calories it provided, but also as the main crop that was used to produce *chicha*

(a fermented maize drink). The significance of state-produced alcoholic beverages in underpinning the labour politics of the later Andean empires (especially the Incas) is difficult to underestimate (Bray 2003; Goldstein 2003; Morris 1979). Effectively, taxes were paid to the prehistoric state in form of labour, which were reciprocated via elite-sponsored feasts during which large quantities of alcohol were consumed. In addition, much of the Andes also exhibited a mixed agro-pastoral economy, particularly in the high plains of the Altiplano to the south where it sometimes even verged on specialized mobile pastoralism (Capriles 2014). The two domesticated animals of greatest importance were the llama and the alpaca, which provided a source of dietary protein – although the secondary products derived from these species were likely even more significant. For instance, woollen textiles were a key means of facilitating human adaptation to the cold climates of the high-altitude regions, while the use of llamas as pack animals was an important development in promoting long-distance exchange networks in the southern highlands (Nielsen 2009). Although not one of the ‘classic’ secondary products described by Sherratt (1981, 1983), we should also bear in mind that in an environment often deficient in wood sources, camelid dung would have been a critical fuel source.

In many respects, Amazonia was quite different. Historically, the most important Amazonian cultigen was manioc, although maize, squashes and plantains were all significant too. But like maize in the highlands, the value of manioc went far beyond its role as a source of bare calories – in the sense that manioc beer has long been the social lubricant *par excellence* of the neotropical lowlands. In Amazonia, the consumption of manioc beer is central to exchange encounters, and indeed to social and ritual occasions of all kinds (for example, Killick 2009; Uzendoski 2004; Walker 2012). Whereas alcohol in the highlands became central to state-controlled practices of labour extraction, in late prehistoric Amazonia, alcohol was more important in furthering long-distance trading relationships between far-flung communities. Moreover, Amazonia lacked any equivalent to the Andean reliance on domesticated animals, with higher levels of consumption of wild fauna, and virtually no exploitation of secondary products (for example, wool). Yet despite its lack of domesticated animals, Amazonia saw considerable human intervention in the agricultural productivity of its landscapes during late prehistory (Erickson 2006; Chapter 3.6). The consequence of centuries of accumulated household organic waste, Amazonian Dark Earths (ADE) are a type of highly fertile anthropogenic soil that was an increasingly prominent feature of farming zones in the lowland tropics during the millennium prior to European colonization (Clement et al. 2015; Chapters 1.1 and 4.4); something for which there is no direct Andean equivalent. Terracing, a rather different phenomenon, was the primary means by which Andeans sought to modify the quality of soils.³

So far, I have admittedly been dealing in broad generalities, which is not to deny that considerable internal variations existed within the Andes and Amazonia. But when working at a sufficiently grand scale of analysis, it is possible to draw valid contrasts between an overarching Amazonian pattern and an Andean pattern.

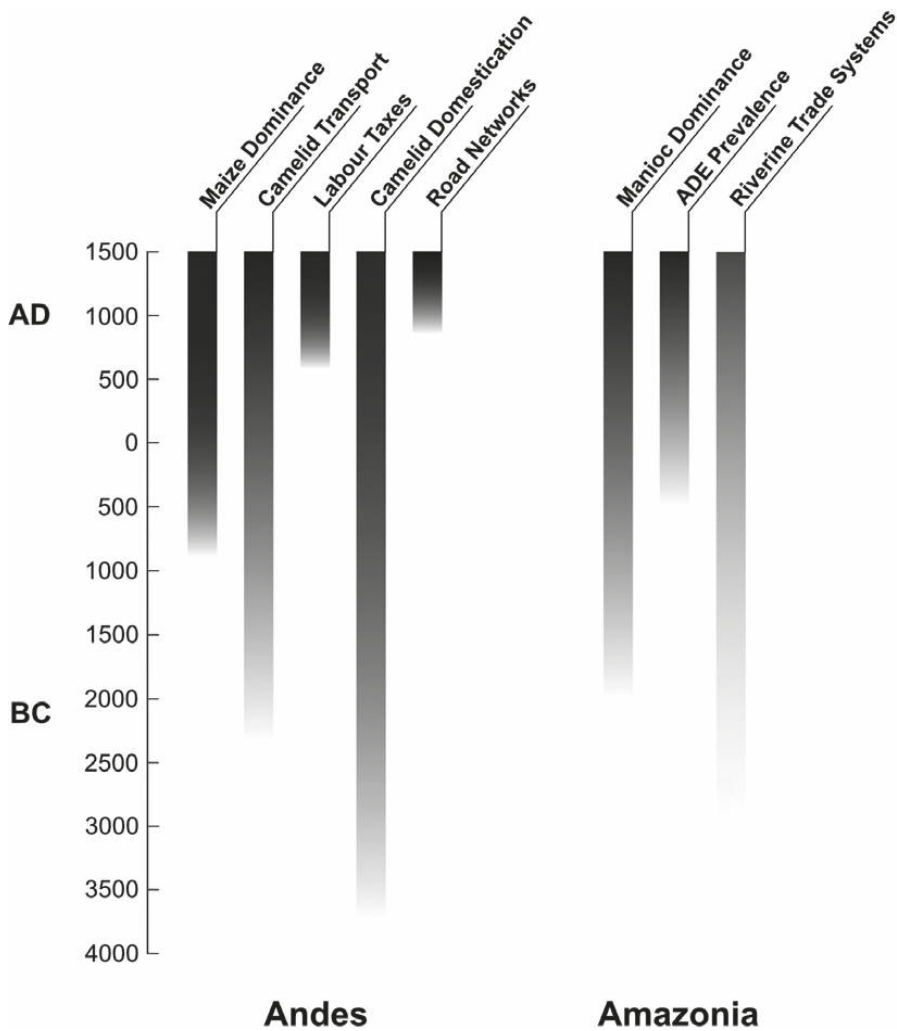


Figure 3.1.1 Chronological chart showing the time-depth of the major archaeological divergences between Amazonia and the Andes prior to c. AD 1500. © Darryl Wilkinson.

These patterns were far from ‘timeless’, however. Indeed, the later the prehistoric period, the greater the extent to which both Amazonia and the Andes show evidence of being integrated into contrasting regional systems with distinctive characteristics – largely a product of the expansion of imperial states in the highlands and of major linguistic-agricultural complexes in the lowlands. In [Figure 3.1.1](#), I have represented the approximate time-depth of the main archaeological factors differentiating Amazonia from the Andes.

It is clear that, although the initial divergence begins with camelid domestication some 6,000 years ago, most of the other factors only come into play much later

in prehistory. For instance, if one were to compare the Andes and Amazonia during the first six millennia following their initial colonization by *Homo sapiens*, these contrasts would be far less pronounced, or in some cases absent altogether. Indeed, for the early Holocene the only significant difference between the regions would have perhaps been altitude-related adaptations. Even then, it is worth noting that the highest Andes (areas above 4,000 m) only became permanently (that is, non-seasonally) occupied by humans following the domestication of camelids (Capriles et al. 2016). Llamas and alpacas were essentially machines for converting wind-swept high-altitude grasslands into food and fuel for human consumption, thereby turning a previously marginal zone into a highly productive one. Thus in terms of human ecology, the Andes–Amazonia divide emerges and becomes increasingly pronounced over time; rather than reflecting any primordial distinction between the two regions (cf. Chapter 1.1).

Migration and disease

Although most archaeological work on prehistoric migrations in South America has focused on earlier agricultural and linguistic expansions, there is evidence that the Late Intermediate Period (c. AD 1000–1450; hereafter the LIP) saw a significant penetration of highland groups down into the upper piedmont. For example, in central Peru there are signs of considerable genetic (Barbieri et al. 2014) and linguistic (Adelaar 2006) interactions between Quechua speakers and piedmont-dwelling Arawaks. The time depth of these interactions is not entirely clear, although they appear to predate the Inca expansion. In southern Peru, the phenomenon of late pre-Inca expansions of highland settlers into the piedmont valleys is also well supported by archaeological evidence, at least in regions where any has been gathered. Consider the area around the Vilcabamba, Amaybamba, upper Urubamba and upper Apurímac valleys, which represents the most intensively surveyed region of the Peruvian piedmont. Throughout this region, comprising some 15,000 km², the absence of pre-LIP archaeological remains is striking – whether measured in terms of sites, or even a lack of isolated scatters of lithic and ceramic artefacts. This contrasts markedly with the situation during the LIP, where we see an explosion of new sites across the landscape after c. AD 1000. Thus far, 178 sites with an LIP date have been identified (see Figure 3.1.2).

All of these take the form of small settlements with rustic stone-built architecture. It therefore appears that during the LIP, this broader landscape was transformed into one occupied by densely packed networks of small agricultural villages. Of course, this does not mean the region was ‘uninhabited’ prior to the LIP, and presumably small numbers of hunter-gatherers would have been present.

If such data are truly representative of other piedmont zones, it suggests that the eastern slopes were only permanently settled during the final centuries of the pre-colonial era. This situation is markedly different from the Andes and Amazonia,

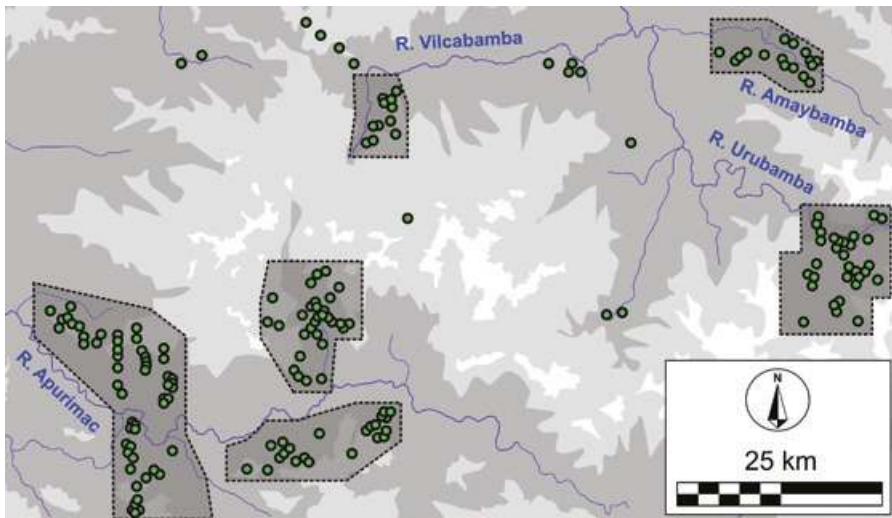


Figure 3.1.2 Map of the Apurimac, Vilcabamba, Amaybamba and Urubamba valleys (south-eastern Peru), showing the locations of known LIP sites. Polygons indicate regions of intensive survey, as opposed to general reconnaissance.

© Darryl Wilkinson, based on Bauer et al. (2015), Drew (1984), Kendall (1984), Lee (2000), Saintenoy (2016), Von Kaupp and Carrasco (2010) and Wilkinson (2013).

which both saw several millennia of agricultural occupation prior to the arrival of Europeans. Although it is true that recent excavations have confirmed the presence of Middle Horizon (that is, Wari) outposts in the piedmont (Fonseca Santa Cruz and Bauer 2013), the evidence for settlement predating AD 1000 is still extraordinarily sparse. To my mind, this relatively sudden appearance of large numbers of LIP villages in the piedmont represents a largely unrecognized, yet highly significant, migration phase in South American prehistory. The fact that the permanent human settlement of the piedmont was so conspicuously late is also one of the region's most distinctive characteristics.

The reasons underlying the downslope migrations of the Late Intermediate Period are unclear, and undoubtedly complex. But one potential stimulus was the long-term population growth in the highlands due to increasingly intensified maize cultivation (Finucane 2009) – perhaps the terminal phase of a farming-language dispersal of Quechua speakers (see Beresford-Jones and Heggarty 2012b). The eastern piedmont was also a prime source of coca leaf, a crop of increasing value to Andean highlanders throughout the late prehistoric and colonial periods. There is ethnohistorical evidence that the highland elites of the LIP established agricultural colonies in the nearby piedmont regions in order to secure regular access to coca (LeVine 1979), a phenomenon that has received archaeological corroboration in Hastorf's (1987) identification of preserved coca

endocarps from two pre-Inca elite contexts in the upper Mantaro Valley dating to AD 1300–1460. This phenomenon, whereby communities establish colonies across multiple ecozones in order to exploit a more diverse range of species, is referred to as a ‘vertical archipelago’; a model originally developed by John Murra (1972) and one of the most influential paradigms for interpreting ancient Andean economic formations.

That said, more ‘political’ factors might have been at play too, in the sense that not all people would have necessarily welcomed the emergence of the great highland empires of late prehistory. Andean dissidents have long sought out the lowlands as a space of refuge from highland authorities; from the neo-Incas led by Manco Inca in the 1500s to Juan Santos Atahualpa’s indigenous rebellion in the mid-1700s. And I doubt that the tradition of highlanders fleeing to the lowlands to evade state power only began in the colonial period. Taxes are seldom popular in any time or place, so the exaction of (often steep) labour levies under the imperial states of late prehistory may have induced some communities to move to lower elevations in search of greater autonomy. Andean archaeologists have devoted considerable effort to assessing the verticality model, on the grounds that it is well attested in the ethnohistorical record. Yet so far as I am aware, the possibility that prehistoric highland populations moved into the lowlands as an *escape strategy* has received virtually no archaeological consideration, despite this being a phenomenon that is equally well documented.

Whatever the causes, one consequence of the LIP migrations into the piedmont was more frequent encounters between Andeans and lowland diseases against which they had little biological resistance. The introduction of new pathogens to human populations with limited immunity was a key aspect of the ‘Columbian Exchange’ that was associated with the European invasions of the Americas (with the waves of new diseases often spreading faster than the colonists themselves). But prior to the colonial era the main location of such pathogenic encounters was the eastern piedmont (albeit on a much smaller scale), since in South America the distribution of many diseases is strongly correlated with altitude. In terms of disease ecology, Amazonian and Andean populations have undergone considerable divergence since our species’ initial colonization of the Americas – a fact brought into sharp relief during late prehistory when highland populations sought to settle the eastern piedmont for the first time.

In this context, the most significant illness of the pre-colonial Americas was Mucocutaneous Leishmaniasis, caused by the protozoan pathogen *Leishmania braziliensis braziliensis* and infecting humans through the bite of a sandfly vector. The sandfly’s habitat is the lowland forests of the neotropics, and the disease is thus endemic to much of Amazonia. The major symptom is the development of skin lesions, which in severe cases can lead to extensive necrosis of the facial tissues, and even death. Early colonial documents clearly show that Quechua-speaking populations in the highlands were aware of Leishmaniasis and associated it with travel in the forested lowlands (Gade 1979), while indigenous lowland populations do not

seem to have suffered from the disease to the same extent, likely the result of having developed greater genetic resistance. Modern epidemiological research corroborates the view that highlanders are much more susceptible to Leishmaniasis than are lowland populations. For example, one study in the Bolivian Amazon concluded that for individuals between the ages of 5 and 20 years, the risk of developing Leishmaniasis was three times greater for highland migrants as compared to native lowlanders. And for highland-born children under 5 years old, the risk was 10 times greater (Alcais et al. 1997).

In the Amaybamba Valley there is archaeological evidence for a significant Late Intermediate Period occupation comprised of highland migrants. The evidence that they were migrants is seen primarily in their material culture, with both houses and ceramics showing strong similarities to those of LIP communities in the adjacent uplands. The mortuary architecture of the Amaybamba also bears a close similarity to that of the northern side of the Vilcanota (Urubamba) Valley in the highlands, with multiple cave burials, and a mixture of rectilinear and circular aboveground sepulchres (Covey 2006). All this is relevant to the current discussion because the Amaybamba LIP communities would thus have been non-natives moving into a low-lying zone where Leishmaniasis was endemic. Looking at the settlement pattern of these communities – as per the data obtained from the archaeological survey – it appears that the Amaybamba LIP groups were aware of this disease threat, and deliberately sought to avoid it (see Figure 3.1.3).

In particular, no LIP settlement in the valley is located below 2,150 m, while the local upper limit for Leishmaniasis is approximately 2,000 m (Gade 2016, 109–11). This would have been somewhat inconvenient for the communities involved, given that there is very little cultivable land in the Amaybamba, with the exception of the valley floor itself.⁴ In other words, by settling the upper slopes, they were creating a significant distance between themselves and the places where they would have had to grow their crops. Most conspicuously, they only settled the valley floor in the upper portions of the drainage where it lay above 2,150 m. They completely avoided the lower stretches of the valley floor, despite these being much wider and thus more amenable to agriculture.

Thus there is a bipartite vertical settlement pattern in the LIP sites of the Amaybamba, consisting of (1) the residential and mortuary zone (2,150–2,700 m) and (2) the primary cultivation zone (1,600–2,100 m). This distinctive settlement pattern might be seen as representing an adaptation specific to the piedmont, a product of the fact that the region was home to populations – of both humans and protozoa – with limited prior exposure to each other. Encounters with unfamiliar pathogens are not unusual when colonizing new regions; but as the last major area of South America to receive permanent agricultural settlement, this situation would have been somewhat unique to the piedmont by late prehistoric times.

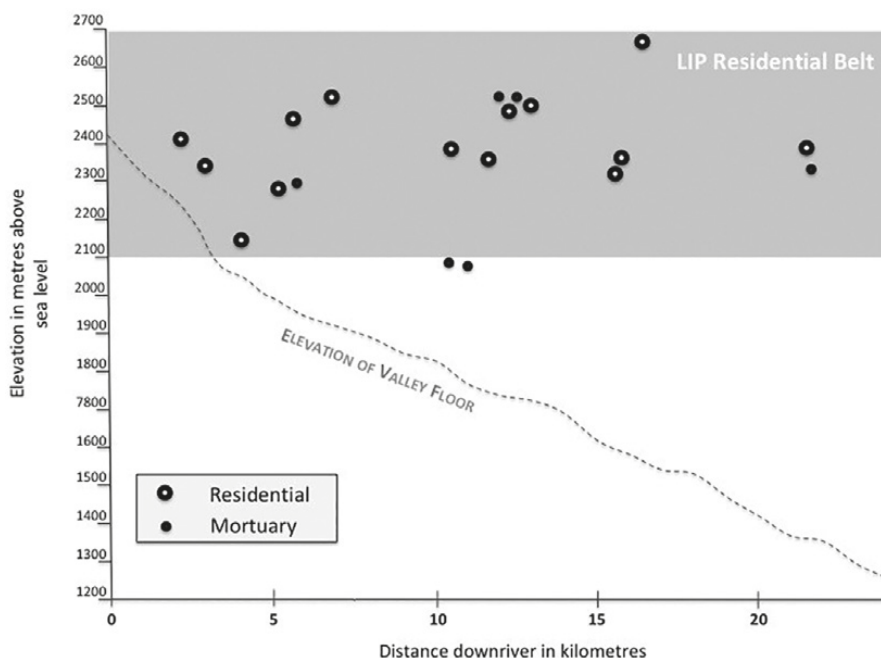


Figure 3.1.3 Diagram showing the elevations of Late Intermediate Period archaeological sites in the Amaybamba Valley, in relation to the valley floor. © Darryl Wilkinson.

Exchange, production and subsistence in the piedmont zone

The Incas' occupation of the Amaybamba dominated the valley floor rather than the surrounding hillsides, making it markedly different to that of the preceding LIP. According to the available documentary evidence, the Incas populated the Amaybamba with 1,000 *mitimaes* (or *mitmaqkuna*) in order to cultivate coca (Rostworowski 1993, 149; cf. other sources in [Chapter 5.1](#)). *Mitimaes* were involuntary colonists, typically sent to a particular region to maximize the production of a specific good. Their relations with the Incas were often more direct, bypassing the system of provincial organization that involved intermediary local elites (called *curacas*). Although the institution served a variety of purposes, many *mitimaes* were involved in the production of goods over which the Incas sought to maintain a theoretical monopoly, such as precious metals. Coca leaf was one such good, hence the dominance of *mitimaes* in the coca fields of the eastern piedmont (D'Altroy and Earle 1985, 196).

All this speaks to a general Inca pattern, not one peculiar to the Amaybamba. In the highlands, the dominant labour system was one based on the *mit'a* (that is, taxes paid in labour, not in kind; similar to the *corvée* system of feudal Europe). In

the piedmont, however, it was predominantly the *mitimaes* who laboured for the state. To be clear, colonies of *mitimaes* were established in the highlands too; the difference being that under the Incas the piedmont increasingly moved towards a labour extraction system based exclusively on *mitimaes*. And again, Amazonia was different from either. Amazonian communities seem to have given substantial tribute to the Incas, but not through institutionalized labour systems. Instead, lowland goods flowed into the highlands either as gifts,⁵ or in many cases (at least according to the Spanish chronicles) as plunder obtained in military adventures (Pärssinen 1992). The particular kinds of valuables that were exchanged across long distances also serve to distinguish the piedmont, Amazonia and the Andes. In Amazonia, the major prestige goods exported to other regions generally took the form of wild animal products, chiefly the feathers of tropical birds. In the highlands, the key goods exported included metals, obsidian and fine ceramics. Yet for the piedmont, the main high-value export had always been coca leaf – a species of domesticated flora rather than a wild animal or mineral product. Although coca is often described as a ‘lowland’ cultigen, it is more precisely understood as a crop of the piedmont (see Plowman 1985). Modern eradication programs targeting the cocaine economy have pushed many coca fields down into areas below 1,000 m, where they are less susceptible to interference from highland-centred governments, but in the past the crop was often grown as high as 2,200 m.

Turning to the means by which such products were actually moved, the river systems of the piedmont are similar to those of the highlands in that they are generally non-navigable. As noted earlier, most of the major highland–lowland river drainages only become safe for canoe traffic below 1,000 m, and even then, only in the dry season, since the waters are less violent. As such, the piedmont lay outside the extensive waterborne exchange networks of prehistoric Amazonia. However, it was much more directly incorporated into the transport networks of the highlands. The terrestrial transport networks of the Andes reached their pre-colonial apogee in the imperial highways (or Qhapaq Ñan) of the Incas; and as a rule this system included the eastern piedmont, but did not reach beyond into the Amazonian plains (see Chacaltana et al. 2017). In this respect the Amaybamba Valley was no exception. The late prehistoric roads of the region speak to the impressive levels of infrastructure investment that the Incas directed towards the piedmont, as well as across the highlands. The main Inca road along the Amaybamba, for instance, had a typical width of between 2 and 2.8 m, and was paved with stone for at least 3.6 km along the valley floor. But the archaeological evidence from the Amaybamba also indicates considerable integration of the piedmont into terrestrial exchange networks *prior* to the imperial era. Excavations at the LIP site of Pistipata, for example, have produced evidence of pre-Inca exchange relations with the sierra in the form of copper-based artefacts and waste from obsidian tool manufacture – excavated from contexts that were radiocarbon dated to AD 1409–47 and AD 1310–1421 (calibrated) respectively. The presence of obsidian is particularly relevant because the nearest known sources are 200 km away (see [Figure 3.1.4](#)).

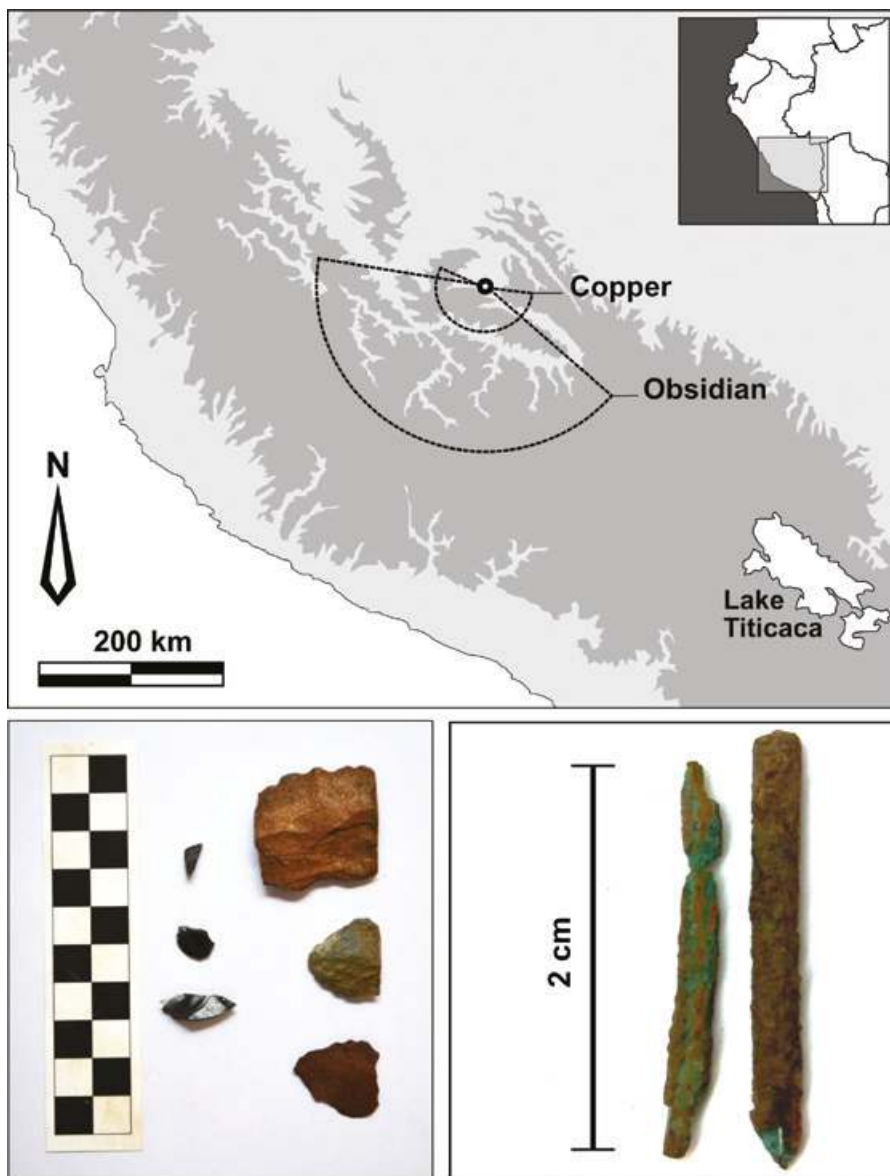


Figure 3.1.4 Map showing the minimum extent of trade networks involving the site of Pistipata with respect to highland copper and obsidian sources. Images of lithic artefacts, including obsidian debitage (bottom left) and copper-based artefacts (bottom right) excavated from Unit 01 at Pistipata. Map and photos © Darryl Wilkinson.

The extension of the Inca highway network into the Amaybamba clearly did not initiate long-distance links between the piedmont and the highlands; it formalized and intensified trade networks already in existence.

With even the basic culture-history of the piedmont still largely unknown, very little research has yet been carried out on late prehistoric subsistence strategies in the region. The floor of the Amaybamba Valley ranges from 2,550 m to 1,100 m, so in theory both maize and manioc would have been viable staples in the region. It is therefore interesting to what extent it might reflect an 'Andean' or 'Amazonian' subsistence pattern. Carbonized maize was excavated from a sub-floor deposit in one of the residential structures at the LIP site of Pistipata, confirming that it was at least present. As for the Inca period, there are legal documents from the mid-1500s that refer to the pre-conquest royal estates of the Amaybamba, indicating that the main crops being grown there were coca leaf and maize (Aparicio Vega 1999). The valley's population effectively collapsed in the aftermath of the Spanish conquest (Wilkinson 2013, 34–7), so this likely reflects the dominant crop regime under the Incas as well. It is worth noting here that the *mitimaes* who cultivated the coca for the Inca State were theoretically self-sufficient once established in their new home, so it would make sense that they had to grow maize for their own sustenance, alongside the coca leaf that they produced for export to the highlands. The archaeological survey of Inca sites in the Amaybamba has also furnished ceramics typically associated with the consumption of fermented maize, including in one instance the remains of a stand for a large *aribalo* of the kind used to hold maize beer during feasts. Before and after the Inca annexation then, the Amaybamba region appears to have been integrated more with the world of maize consumption (in both solid and liquid forms) than the lowland sphere of manioc consumption. Although such distinctions obviously do relate to subsistence matters, I should emphasize that the divide here is as much a cultural one as anything else. Maize is widely cultivated in Amazonia, and manioc is commonly grown in the Andean coastal valleys. But in the Andean highlands, a social occasion without maize beer is something of a contradiction in terms, while the same might be said for manioc beer across much of the forested lowlands. Thus the fact that the Amaybamba was part of the maize-consuming world probably tells us more about the wider social networks in which it participated, rather than any local ecological constraints.

On the topic of subsistence, one final point is worth making with regard to the presence and absence of Andean camelids in the piedmont. Due to the poor preservation of bone in the acidic soils of the eastern Andes, the primary archaeological indicator of camelid exploitation is corral structures. Several sites with corral structures were identified in the survey of the Amaybamba Valley, but all were of Inca (or possibly colonial) cultural affiliation, while none were associated with the earlier LIP occupation (Wilkinson 2013). The eastern piedmont is not a particularly hospitable environment for Andean camelids, since it generally lacks suitable pasturelands (at least without extensive burning of the landscape). Also,

diseases such as Toxoplasmosis (*Toxoplasma gondii*) seem to infect Andean camelids with considerably greater frequency in warmer climates (Chávez-Velásquez et al. 2014). Interestingly, the aforementioned presence of corrals at Inca sites in the Amaybamba appears to have been related not to subsistence or wool production, but to long-distance transport. Instead of being distributed across a range of potential grazing zones, the Inca corrals are largely concentrated in a single site (Qochapata), which appears to have been a centre for loading pack-llamas with coca leaf, to be transported to the highlands following each harvest cycle (Wilkinson 2013, 359–78). There is thus little evidence that the Amaybamba section of the piedmont was ever integrated into the agro-pastoral subsistence systems of the highlands, and instead it seems to have tended towards more exclusively agricultural/horticultural strategies, likely supplemented by fishing. In this respect, it reflects a more typically ‘Amazonian’ pattern, even after it had been incorporated into the Inca Empire.

Conclusions

In sum, there are various respects in which a piedmont region such as the Amaybamba can be seen as exhibiting archaeological patterns that are either typically Amazonian or Andean. Yet in other cases, we can identify characteristics that are unique to the piedmont itself, reflecting neither highland nor lowland norms (cf. Chapter 3.7). Table 3.1.1 presents my (simplified) synopsis of this argument. It remains an open question as to how far the patterns identified here will hold true for other piedmont valleys. That said, many of the elements I have discussed are hardly unique to the Amaybamba. For instance, factors such as highlanders’ lack of immunity to Leishmaniasis, the unsuitability of the piedmont for domesticated camelids, the lack of navigable rivers above 1,000 m and the importance of coca leaf as a crop best suited to intermediate elevations *should* all pertain, in one form or another, across the entire piedmont zone. Whether local conditions produced strategies or outcomes that differ from those seen in the Amaybamba remains to be seen. My arguments are therefore best thought of as a model to be tested through future research in comparable regions, rather than a conclusive account.

As I have also suggested, the piedmont provides a privileged window onto the nature of the Andes–Amazonia divide more generally. Phenomena are often clearest at their boundaries, and in this respect the large-scale patterns that typified the human ecology of prehistoric South America are no exception. It is in the piedmont, where both the Amazonian and Andean worlds meet, that their divergences are made most apparent. A good example of this is seen in the ‘choice’ between manioc or maize in a transitional region like the Amaybamba. On purely ecological grounds both crops were equally viable, but only the latter appears to have been cultivated to any significant degree. The reason for this was that by late prehistory, manioc and maize had become far more than just a basic source of calories.

Table 3.1.1 Table indicating the areas in which the piedmont reflects Amazonian patterns (dark grey), highland Andean patterns (light grey) and piedmont-specific patterns (white).

	Amazonia	Piedmont	Andean highlands
Resource extraction under the Incas	Tribute through gift-giving or plunder	Formal labour extraction (through <i>mitimaes</i>)	Formal labour extraction (through <i>mit'a</i>)
Primary prestige goods for export	Wild faunal products (esp. bird feathers)	Domesticated floral products (esp. coca leaf)	Mineral resources (i.e. metal and lithic materials) and finished ceramics
Pathogenic context	High levels of pathogens, high immunity	High levels of pathogens, low immunity	Low levels of pathogens, low immunity
Transport systems	Riverine transport	Terrestrial transport	Terrestrial transport
Staple crop + alcohol	Manioc, manioc beer	Maize, maize beer	Maize, maize beer
Linguistic affiliation	Amazonian languages	(Highland) Andean languages	(Highland) Andean languages
Subsistence economy	Agricultural	Agricultural	Agro-pastoral

They had also come to underpin two contrasting social networks – a highland one based on terrestrial transport systems and state-controlled labour systems, and a lowland one based on riverine transport systems and far-flung trading diasporas. The fact that the Amaybamba could be part of one of these spheres (but not both) is a testimony to the stark reality of the Andes–Amazonia divide during the final centuries before European contact. If nothing else then, I hope to have offered a convincing case that the piedmont – as the space that both separates the Andes and Amazonia and links them together – is one deserving of considerably more study than it has hitherto received. And not just because it is a place that merits examination in its own right (although it certainly does), but because it was the hinge upon which many of the interregional networks of the late prehistoric and colonial periods turned.