Nature and Culture in Prehistoric Amazonia

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Abstract

This thesis investigates the socio-cultural and linguistic development of pre-Columbian Amazonia, with a particular focus on the period between 500 BC and AD 1500. In assembling and analyzing data from archaeology, linguistics, ethnohistory, ethnography, and geography in a Geographical Information System (G.I.S.), it synthesizes large amounts of empirical data from several fields to facilitate long-term, macro-scale reconstructions of pre-Columbian socio-cultural processes in the region. These reconstructions focus on identifying the socio-economic and socio-cultural mechanisms underlying processes of cultural and linguistic expansion and subsequent patterns of ethno-linguistic diversity. The thesis thus addresses long-standing debates on the role of migration, ecology, subsistence strategies, trade, language, and ethnicity in such processes, and offers new explanations of the distribution of language families and ethno-linguistic groups in Amazonia.

The thesis focuses on one of the major linguistic expansions in pre-Columbian South America, that of the Arawak language family. It identifies some of the cultural mechanisms in the interaction between Arawak- and non-Arawak-speaking societies, emphasizing the role of regional integration through long-distance travel and trade. The ambition is to transcend notions of bounded and essentialized ethnic identities that have characterized earlier attempts to account for the spatial distribution of indigenous languages and varieties of material culture. Emphasis is rather on the various factors that have conditioned active processes of ethnic identity construction, and on the methodological possibilities of identifying such conditions and processes at specific points in time and space.

Key words: Amazonia, archaeology, linguistics, anthropology, geography, ethnohistory, Arawak, GIS, ethnogenesis, terra preta, pre-Columbian, ethnicity, regional exchange system, material culture.

Acknowledgements

This dissertation is the product of ten years of university studies conducted between 2001 and 2011. In trying to summarize my own experiences during this decade in order to complete this final section of the dissertation, I realize that much has changed during this time period, both locally (in my life) and globally (in the world). In the process of applying to my first course at the university, "The Forest as a Cultural Landscape", during Spring 2001, I was frequently travelling by aircraft between northern and southern Sweden and had no problem of keeping my shoes on when entering the plane or carrying large amounts of liquid with me onboard. Although long-distance travelling certainly has changed a lot since 2001, I can still enjoy opening the same books when I travel today as I did ten years ago. Indeed some things change while other remains constant.

My work on the thesis has been conducted within the project "The Prehistory of Amazonian Languages: Cultural and Ecological Processes Underlying Linguistic Differentiation", a subproject of the EUROCORES programme "Origin of Man, Language, and Languages" (OMLL). The subproject was co-sponsored by the Swedish Research Council. My thanks go to these funding agencies for providing me with the economic opportunity to conduct this work.

One thing that has remained constant since 2005, when I first started to engage with Amazonian studies, has been the support from Alf Hornborg, professor of Human Ecology, project manager for the above mentioned research project, and the supervisor of both my Master and PhD thesis. Providing the links to the theoretical and empirical knowledge that has served as the basis for this work, Alf has remained an invaluable part of this thesis, while at the same time always supporting my own exploration of the Amazonian material in order to complete the investigation. This book is as much your baby as it is mine, and I'm happy to share the custody of it.

I would like to extend my thanks to all Amazonian field researchers whose data I have used as the empirical basis of my thesis, without their material this work would not have been possible, thank you.

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5 ("The Orinoco-Guiana area") was read by Neil Whitehead. Finally, Jonathan Hill read and commented on chapter 6 ("The northwest Amazon"). You have all provided valuable comments and insights on the regional chapters covering the territories of your own expertise, thank you! However, as is custom in these contexts, I assure readers that I am solely responsible for any errors or mistakes that might occur in this book.

Many other academic colleagues have also influenced the thesis work and I will here go to the utmost effort to thank all of them. At the Human Ecology Division many people have provided significant input, both as teachers and colleagues. Per Johansson provided comments on my first draft of a project plan and acted as an inspiration for my engagement with transdisciplinary studies during the first part of my thesis work, thank you Per. Thomas Malm, another constant factor at the division, has provided steady support of my work, broadening my experiences with teaching assignments as well as personal stories about tiny details of the world that very few people know very much about. Thank you Thomas, and congratulations on your newly received professorship. Also at the Human Ecology Division, Sabina Andrén has been a constant little working bee that has provided me with a more nuanced view on the relationship between work and private life, as well as many other insightful comments on the world and our being in it. Rest now in your World Wide Flower (WWF), you deserve it. Another encouraging woman at Human Ecology is Pernille Gooch, who has not only provided constant support, but also inspiration for alternative lifestyles, thank you Pernille, you also deserve to rest now. Other researchers in Human Ecology that I have had the opportunity to meet at the division include Ragnheiður Bogadóttir, Carina Borgström Hansson, John Brolin, Kenneth Hermele, Nabi Jha, Ebba Lisberg Jensen, Carl Nordlund, Andreas Malm, Michael Moon, Carl Nordlund, Pernilla Ouis, and Susan Paulson (whose husband Paul also provided significant input during a crucial football game in Helsingborg during autumn 2010), thank you all for our encounters – long or short.

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At the Centre for Languages and Literature, I have had the opportunity to cooperate with Gerd Carling, Arthur Holmer, Alf Hornborg, and Junichi Toyota in the project "Historical Language Change and Cultural Identity: A Case in Amazonia", carried out within the framework of the Centre for Cognitive Semiotics (CCS) headed by Göran Sonesson and Jordan Zlatev. Also at the Centre for Languages and Literature is Niclas Burenhult, who (as mentioned above) provided comments on the linguistic sections of the texts and who has invited me to explore the realms of language and landscape beyond Amazonia in the future, thank you!

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During 2006 and 2007 I spent two periods gathering material at the Insituto Venezolano de Investigaciones Científicas (IVIC) in Caracas, Venezuela. At IVIC, Rafael Gassón, Dieter Heinen, Juan Carlos Rey, and Alberta Zucchi were invaluable resources in terms of acquiring material, and the importance of their own publications is also reflected in the thesis. The research in Venezuela was sponsored by Hallenbladska fonden, managed by Smålands museum, Växjö, and by Uno Otterstedts fond at the Faculties of Humanities and Theology, Lund University.

In 2008 and 2009 I spent six months at the Department of Anthropology at the University of Florida, USA. At UF, Michael Heckenberger acted as my thesis consultant and provided important input into the thesis work, as well as providing access to research material at the University of Florida. Michael also provided comments on the final version of the thesis, particularly on chapters 3 and 4, thanks Mike!

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Having spent almost two pages on my academic colleagues, it is now time to move into the area of my non-academic encounters of relevance for this publication. First of all I would like to thank David Carlsson, Ola Gustafsson, Vidar Holje, and Martin Jakobsson for providing an enduring alternative to my office and academic environment by engaging me in social activities ranging from twister tournaments and volleyball matches to exploring the world of Japanese cooking. Ola Gustafsson also prepared figures 2.2.3, 3.2.3, 4.2.3, 5.2.3, and 6.2.3, while awaiting the birth of his first-born daughter. A special thanks to Julia Tilesch, Eira, and the stork for cooperating so well during this process, so that the figures could be ready two days before the birth of Eira!

Having spent the bulk of my thesis-writing years at Parentesen A2, I would also like to extend my thanks to the past and present inhabitants of this interesting and diverse place to live in. Apart from the information I have gathered in this environment that is of direct relevance to the thesis, I have also learnt a lot about the cultivation of a diverse array of plants and the lives of many fascinating animals, including crayfish and horses. These are truly remarkable creatures. Thank you all for sharing parts of my five years in this building.

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As a PhD student, you engage with peculiar topics that tend to grow stranger and more obsolete as the years of study go by. This process may tend to distance the PhD student from everyday friends and family, turning the young investigator into a strange little scientist with increasingly obscure interests. With myself as a prime example of this process, I would like to thank my family for accepting this development so casually, although I must constantly be causing you trouble in situations where you are asked to inform your friends about what it is that Love really does. The only thing I can really say to comfort you is this: there are people dealing with much stranger things than the areal distribution of the nose flutes of Amazonian Indians; ask Ola, for example: he did lens suspension in fish eyes! Thank you Yvonne, Geir, Björn, and Mill for your patience.

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Love Eriksen

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1. Introduction

1.1 The problem: Rethinking previous research on prehistoric Amazonia

The point of departure for this study is the question: what do archaeological and linguistic distribution patterns tell us about the past in Amazonia? Even though anthropological[1] research in Amazonia may have progressed at a relatively slow pace compared to that of much of the rest of the world, it has been evident for a long time that pre-Columbian Amazonia hosted language families and archaeological cultures that persisted during considerable time periods and encompassed vast geographical areas. Filippo Salvatore Gilij had identified the Arawak language family already in 1782 (Facundes 2002:80), and archaeological excavations at the end of the 1800s had identified the remains of some of the major ceramic traditions in Amazonia (see references in Meggers and Evans 1957). Both these phenomena are the products of large-scale archaeological cultures spread across Amazonia. Rather than merely suffering from a lack of empirical material to work with, Amazonian research has thus struggled with how to interpret the complex distribution patterns of archaeological and linguistic data.[2]

To provide a complete review of anthropological research in Amazonia since time of contact[3] lies beyond the scope of the present study, but it should be useful to begin with a brief overview of the most important paradigm shifts in Amazonian anthropological research since

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[1] The concept of "anthropology" is here used to refer to the so called four-field approach common in U.S. anthropology, encompassing cultural anthropology as well as archaeology, linguistics, and biological anthropology.

[2] This is not to deny that there is a great need for additional archaeological field research in Amazonia. On the contrary, new excavations, conducted according to the latest standards in archaeological investigation, are absolutely necessary in order to fill the many gaps in the archaeological record of Amazonian prehistory. However, there is also a great need of systematic organization and interpretation of the material currently available, which is the task that the present study is devoted to.

[3] The notion of "time of contact", used repeatedly in this study, is a relative term referring to the point in time when indigenous societies began to be affected by European-introduced diseases, slavery, and warfare. Given the uneven pace of the European penetration of the South American continent, the "time of contact" varies somewhat between different parts of the region. Given the speed at which European microbes spread through the indigenous exchange systems of the region, the time of contact generally refers to the sixteenth century.

the early 1900s. In his important study *Die Aruaken* (1917), Max Schmidt viewed the spread of the "Arawak cultures" (a concept including language as well as material and non-material culture) as taking place not through migrations, but through cultural flows (*Kulturströmungen*). The cultural flows were thought by Schmidt (1917 (1):6)[4] to "constantly gush over a population that was already present and that interacted reciprocally with the preceding cultures". Schmidt's view was non-essentialist, viewing the spread of culture, language, and artefacts as a cultural package not necessarily connected to any biological population. He had developed his theoretical framework in relation to the so called *Kulturkreistheorie* (culture area approach), which sought to explain cultural complexes as phenomena originating in a particular geographical area at a particular point in time and thereafter diffused across large areas. To proponents of the *Kulturkreis* school such as Gräbner and Wilhelm Schmidt (qtd. in Schmidt 1917 (introduction):2), the history of any cultural feature could be reconstructed and traced back to its point of origin, and most cultural features were therefore reducible to relatively few points of invention. Schmidt (1917 (7):1f) turned against this view, arguing instead that cultures are always renegotiated in the meetings between different ethnic groups, and that biological populations, languages, and cultures must be distinguished from each other, rather than viewed as spreading as cohesive units through processes of migration.

Schmidt's scholarly background was in ethnographical research, but his long-term perspective on cultural development necessarily meant that his conclusions also had the potential to significantly influence the field of archaeology. One year after Schmidt's (1917) publication of *Die Aruaken*, Erland Nordenskiöld started publishing his ten-volume series *Comparative Ethnographical Studies* (1918-1938), including both archaeological and ethnographical studies and being heavily influenced by the culture-historical approach then dominating archaeological theory (Trigger 1989:148-206). According to the culture-historical approach, "archaeological cultures" are closely associated with the concept of ethnic identity, but also linked to particular biological populations that are seen as bearers of different cultures (ibid., 150). Since archaeological cultures were seen as linked to specific populations, migration was viewed as an important mechanism in the spread of cultural features to new areas.

Nordenskiöld viewed archaeological cultures as having spread throughout South America by diffusion via migration. He did not apply the perspective of Max Schmidt, but his main contribution was his extensive comparative studies of material culture in South America. Nordenskiöld set out to make broad comparisons of material culture throughout the South

[4] The bibliographical references to Schmidt (1917) refer to an English translation of Schmidt's thesis. In this version, each chapter has received separate page numbering, so that e.g. (1):6 refer to chapter 1, page 6.

American continent by gathering material on field trips lasting for years. Apart from the series *Comparative Ethnographical Studies* (1918-1938), Nordenskiöld also published the comparative archaeological volume *Ars Americana 1: L'Archéologie du Bassin de L'Amazone* (1930), a study synthesizing his work on archaeological material from Amazonia. Being the head of the Ethnographic Museum in Gothenburg, Sweden, Nordenskiöld worked closely together with other Amazonian researchers relevant to the present study such as Curt Nimuendajú (2004),[5] who delivered archaeological and ethnographical material to the museum, Sigvard Linné (1928), Sven Lovén (1924), and Karl Gustav Izikowitz (1935).

Nordenskiöld was originally intended as the editor of the *Handbook of South American Indians*, but his passing in 1932 prevented him from participating in the editorship of the influential seven-volume series (Steward 1946-50).[6] Nevertheless, Nordenskiöld's work significantly influenced the structure of the handbook, and its fifth volume, *The Comparative Ethnology of South American Indians* (Steward 1949b),[7] was written partly in the spirit of Nordenskiöld's (1918-1938) work. Julian Steward writes in the introduction to the fifth volume:

> *"The present articles differ from Nordenskiöld's, however, first, in attempting a somewhat systematic classification of the subject matter whereas his deal largely with isolated elements, and, second, in incorporating new data" (Steward 1949a:xxii).*

The "systematic classification" undertaken under Steward's editorship was, however, not the only point that distinguished Nordenskiöld's perspective from Steward's. In volume three of the handbook, *The Tropical Forest Tribes*, Steward (1948c:883-899) had introduced the notion of "culture areas", building on the new theoretical framework of cultural ecology that would prove to be highly influential, particularly in Amazonian anthropology, during Steward's career (see also Steward and Faron 1959). Steward's cultural ecology attempted to explain the social and economic organization of native Americans as adaptations to the local ecology on which these societies based their subsistence, thereby reducing complex cultural phenomena to environmental variables. This view of Amazonian cultural development has

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[5] Nordenskiöld dedicated his 1930 publication of *Ars Americana* to Nimuendajú two years before his own death in 1932. Nimuendajú, born in Germany but having spent his entire adult life among South American Indians, visited the Ethnographic Museum in 1934 on his only trip back to Europe, two years after Nordenskiöld's death. Nimuendajú himself passed away among the Tucuna Indians in 1945, and his remains remained among them until he was finally buried in São Paolo in 1981 (Stenborg 2004:i; Neves 2004:4). Much of Nimuendajú's work was published posthumously, e.g. his contributions to the *Handbook of South American Indians* (Steward 1946-1950).

[6] The seventh and last volume, *The index*, was published in 1959.

[7] Interestingly, in the 1963 reprint of the handbook, the word "ethnology" has been replaced by "anthropology" in the title on the front cover of the fifth volume, while the inside of the book still retains the original title.

become known as "the standard model" (Viveiros de Castro 1996:180). Steward gained his most influential support from archaeologist Betty Meggers (1971), who had also been a contributor to the handbook (Meggers 1948), and who interpreted the material from her and her husband Clifford Evans' excavations on Marajó Island as the remains of an advanced Andean culture that had migrated east along the Amazon and whose culture had degenerated in the tropical climate of Amazonia (Meggers and Evans 1957).

The cultural ecology of Meggers and Steward was criticized by e.g. Donald Lathrap (1970, 1973), who questioned its environmental determinism and instead claimed that complex societies could arise in the tropical lowlands and indeed had done so throughout much of the prehistoric sequence. Although Lathrap and others (cf. Lévi-Strauss 1952; Carneiro 1961; Balée 1993; Moran 1993; Roosevelt 1994) continued to criticize the standard model, it was not until the end of the 1990s that the empirical material collected by researchers studying indigenous Amazonian cultures began to significantly influence the theoretical debate on Amazonian cultural complexity. Archaeological projects such as the Central Amazon Project (CAP) (Heckenberger et al. 1999, 2001), Terra Preta Nova (Lehmann et al. 2003; Glaser and Woods 2004; Woods et al. 2009), and research in the field of historical ecology (Balée and Erickson 2006) produced evidence for large-scale societies that were not as much molded by the natural environment as having themselves molded their surrounding ecology to suit their needs according to subsistence demands and other cultural criteria. Thus, after more than 60 years of debate, Amazonian scholars can now finally devote themselves to other scientific problems than the standard model, which is a much appreciated advance.

1.2 Introducing the Arawak language family

This study particularly focuses on the speakers of Arawak[8] languages and their interaction with neighboring groups. The Arawak language family consists of about 40 living languages and

[8] A number of studies, linguistic as well as anthropological, that have focused on the Arawak language family and on Arawak-speaking populations in South America have used the term "Arawakan" instead of "Arawak" to designate this grouping. This is unfortunate and has created much confusion, particularly among scholars outside linguistics, because originally, the term Arawakan was used to refer to a larger genetic group of languages, including e.g. Araua, Candoshi, Guahibo, and Harakmbet, once thought to belong to the Arawak family (see e.g. Kaufman 1990; Campbell 1997:178) Kaufman (1990) labels this group Macro-Arawakan. In some studies (e.g. Campbell 1997) the term Maipurean is used to designate the Arawak language family proper, while Arawakan or Macro-Arawakan is used to refer to the larger, contested grouping. Although many of the ethno-linguistic groups included in the Arawakan or Macro-Arawakan grouping share a number of sociocultural traits with their Arawak-speaking neighbors, it is now widely recognized that any similarities between these languages and those of the Arawak family are due to areal influences through language contact via socio-cultural interaction and exchange, and that there is no genetic relationship between these languages and those of the Arawak family. Thus, following scholars like Rodrigues (1986, qtd. in Aikhenvald 1999:73),

20-30 more or less documented languages that have become extinct since time of contact (Campbell 1997; Aikhenvald 1999).[9] It has long been recognized that the ethno-linguistic groups speaking Arawak languages not only have related languages, but that they also tend to share a cultural pattern, including material as well as non-material features (cf. Schmidt 1917; Izikowitz 1935). The cultural features associated with Arawaks include a complex set of religious ceremonies closely associated with a strong focus on descent and ancestry, which is particularly manifest during initiation and burial ceremonies, and a set of ritual wind instruments, often described as the "sacred flutes" complex, widespread among Arawak-speaking groups across Amazonia. Also associated with the ceremonial complex is the manufacture of elaborate ceramics, often by the women, which represent one of the most important categories of artefacts found among the archaeological remains of Arawaks. Furthermore, the Arawak-speaking groups of Amazonia used different forms of high-intensity landscape management systems, making their subsistence practices highly efficient in the most varied environments of Amazonia. Among such landscape management systems known to have been constructed by Arawaks are raised fields and agricultural mounds in areas of flooded savannas, including the Llanos de Mojos, Marajó Island, the Guiana Littoral, and the llanos of Venezuela and Colombia. Arawak-speaking groups are also known to have generated anthropogenic *terra preta*[10] soils in various localities in Amazonia. Apart from these subsistence strategies, Arawaks also utilized elaborate systems of fish-traps (Hill 2007:16; Erickson 2006). Another characteristic feature of Arawak societies is the tendency to situate their communities in the local and regional landscapes through elaborate systems of place-naming, associating different locations with historical and mythical events. These locations, called "topograms" by Santos-Granero (1998), are grouped together into "topographs", forming elaborate historical

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Aikhenvald (1999:73-75), Facundes (2002:81), Epps (2009:585), and Michael (n.d.:3f), this study has abandoned the use of Arawakan for Arawak, which is the term widely recognized among linguistic scholars to encompass the languages in the Arawak language family. Also, to use the term Arawakan as plural when discussing more than one of the languages belonging to the Arawak family is uncalled for, since the term Arawak encompasses both the singular and plural forms of the term.

[9] The decimation of native Amazonian populations as a consequence of European-introduced diseases, warfare, and slavery is a factor of great relevance to all studies on indigenous South Americans. With estimated levels of decimation ranging between 90 and 95% of the native populations during the sixteenth and seventeenth centuries, this drastic population reduction enormously affected the structure and composition of indigenous societies. This major demographic event also affected western views of native Amazonia, contributing to the establishment of the so-called "standard model" of cultural ecology proposed by Julian Steward and Betty Meggers (see above).

[10] *Terra preta*, *terras pretas do índio*, and Amazonian Dark Earths (ADE) are different terms used to designate the dark, fertile soils, rich in carbon and pottery fragments, that occur at pre-Columbian sites throughout Amazonia and the Caribbean. For a detailed description of these soils, see section 4.2.2 (Smith 1980: Lehmann et al. 2003; Glaser and Woods 2004; Woods et al. 2009).

narratives. This form of "topographic writing" (ibid.) is often associated with the various high-intensity landscape management systems used by Arawaks, intertwining landscape, history, myth, subsistence, and travel routes.

1.3 Aims and theoretical points of departure

1.3.1 Aims

The primary aim of the thesis is to add to our current knowledge of pre-Columbian cultural development in Amazonia. In particular, it seeks to investigate the socio-cultural and socio-economic mechanisms underlying specific patterns of ethno-linguistic diversity. These mechanisms are illuminated through synthesis of data from various academic disciplines such as archaeology, linguistics, history, and ecology. This synthesis organizes large amounts of empirical data concerning cultural development in Amazonia, which may be useful for other Amazonian scholars, students, or interested laymen.

The thesis seeks a greater understanding of the widespread distribution of the Arawak language family. It investigates the cultural mechanisms by which this linguistic family has spread across the continent, involving subsistence strategies and socio-economic adaptations as well as socio-cultural and linguistic interaction with neighboring groups, thus also implicating the prehistory of several other Amazonian language groupings.

1.3.2 Theoretical points of departure

The primary theoretical inspiration for the present study comes from the renewed interest in comparative trans-disciplinary studies of Amazonian ethno-linguistic groups signaled by the publication of *Comparative Arawakan Histories: Rethinking Language Family and Culture Area* (Hill and Santos-Granero 2002). Moreover, the study applies a perspective emphasizing regional exchange and ethnogenesis as key mechanisms underlying ethno-linguistic interaction in Amazonia (Hornborg 2005).[11]

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[11] The emphasis on ethnogenesis and regional exchange as the basis for ethno-linguistic interaction advocated by Hornborg (2005:600ff) differs substantially from previous migrationist theories of cultural and linguistic diffusion in Amazonia (Meggers and Evans 1957; Lathrap 1970; Brochado 1984; Oliver 1989), in which population pressure and migration have been viewed as the key mechanisms behind the expansion of the Arawak language family. Although migrations have been an important strategy for expansion and escape in particular cases in prehistory and through the colonial era, when it was intensified through millenarian movements (for a recent account of migration in Amazonia, see Alexiades 2009), its use as a standard model for explaining ethno-linguistic dispersals in Amazonia does not agree with the predominant kinds of socio-cultural contact mechanisms identified in the present study, particularly for the Arawak language family. Given the wealth of evidence suggesting that the contacts between Arawak- and non-Arawak-speakers were primarily through exchange mechanisms such as trade, intermarriage, and an elaborate ceremonial interaction involving

Hornborg (2005) argues that both language and material culture can be viewed as markers of ethnic identities, and that processes of cultural development, resulting in transformations of material culture and language, should therefore be viewed as renegotiations of ethnic identities among neighboring ethno-linguistic groups through ethnogenesis. Following Hornborg (2005), Heckenberger (2008) has broadened the scope of seeking to identify prehistoric identities in the archaeological material of Amazonia, viewing archaeological cultures as markers of "macro-identities". Pan-Amazonian ceramic traditions such as Barrancoid and the Amazonian Polychrome tradition are viewed by Heckenberger (2008:943) as *macro-historical* identities, while archaeological periods are labeled *macro-temporal* identities (ibid., 948), thereby signaling the importance of identity as a factor behind cultural change as reflected in the archaeological material.

This thesis also draws on the theoretical advances in Hornborg and Hill (2011a), a study in which the concept of ethnicity is applied in a broad, cross-disciplinary investigation of pre-Columbian Amazonian societies. Hornborg and Hill (2011b:8) employ the concept of socio-ecological niche as an important factor in the process of generating cultural distinctness, such as differences in language and material culture, among indigenous groups. The concept of socio-ecological niche was first evoked by Norwegian anthropologist Fredrik Barth (1969), and can be defined as the incorporation of resources and products available in a particular habitat into the ethnic identity of the group inhabiting this niche.[12] This incorporation results in specialized production and trade in particular products derived from the socio-ecological niche inhabited by a given population, and is therefore a combination partly generated by the

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songs, chants, and place-names – always with the Arawak language as a crucial component – there are very few indications that migration was a primary mechanism in the expansion of the Arawak language family. A final indication of the predominance of socio-cultural interaction over migration is the large number of language shifts documented in Amazonia, in many cases involving Arawak languages.

[12] It is important to point out that the use of the concept of socio-ecological niche as a factor underlying the generation of ethnic identities lies far from the perspective of ecological determinism (advocated most strongly in the context of Amazonian studies by Betty Meggers [1971]). In the writings of Barth, ecological niches in no manner determine the content of a particular ethnic identity; it simply forms the basic raw material from which various different identities could be created. In terms of ceramic manufacture, for instance, the ecological niche might reside in the clay available to the potter, but whether the potter chooses to manufacture pottery of the Amazonian Polychrome or the Zoned-Hachured tradition is decided by other cultural relations. In the same manner the ecological niche of the lower Amazon has generated such diverse societies as the littoral collectors and fishers of the archaic Mina culture, the complex ceramic-producing cultures of Marajoara and Santarém, the colonial port of Belém exporting Amazonian products to Portugal, and finally the modern city of Belém, from which various eco-tourism companies depart on their routes into the surrounding landscapes. These societies are all examples of how various ethnic identities have been created in relation to different socio-ecological niches stemming from a single natural habitat.

natural habitat (the ecological niche) and, perhaps most importantly, partly negotiated in the meeting with other groups inhabiting other socio-ecological niches, interested in obtaining these products through exchange. Barth (1969:9) is careful to point out that cultures have not evolved in isolation from each other, but that it is in the meeting between people from different socio-ecological contexts that cultural and ethnic distinctions are generated. Contrary to the belief that cultural exchange would contribute to dissolving cultural boundaries, Barth (ibid., 10) points out that it is in the process of exchange that ethnic identities are expressed and renegotiated, always in relation to neighboring identities and to contrasts between socio-ecological niches.

The interaction between groups with different ethnic identities, deriving from different ecological niches, continuously renegotiates the ethnic identities of the different groups through the process of ethnogenesis. Although not a term utilized by Barth (1969), the use of the concept by Hill (1996b) and Hornborg (2005) lies very close to his description of cultural meetings and the role of such meetings in the creation of ethnic identities (Barth 1969:10). Given the multifaceted nature of socio-ecological niches and their intrinsic role in ethnogenetic processes, ethnogenesis thus involves such diverse aspects as ecology, economy, language, and politics (Hornborg 2005:593).

Following Barth's line of argument, Hornborg (2005:589) reaches the conclusion that it is the regional and interregional exchange that has generated the complex distribution of ethno-linguistic identities in Amazonia, and that the study of the socio-ecological niches inhabited by Arawak-speaking societies of Amazonia should increase our understanding of pre-Columbian cultural development. Although not utilizing the term socio-ecological niche, Santos-Granero (2002:42ff) distinguishes five features that are characteristic of Arawak-speaking groups throughout Amazonia and that define their "ethos":

- suppression of endo-warfare,
- a tendency to establish socio-political alliances with linguistically related groups,
- a focus on descent and consanguinity as the basis of social life,
- the use of ancestry and inherited rank as the foundation for political leadership, and
- an elaborate set of ritual ceremonies that characterizes personal, social, as well as political life.

While some of these features can be found among non-Arawak-speaking groups in Amazonia, what characterizes the Arawak ethos is that *all* features are present, composing a unified cultural pattern that is unique to Arawaks.

Partly drawing on previous studies of the material aspects of Arawak cultures (e.g. Schmidt 1917; Izikowitz 1935; Heckenberger 2002; Hornborg 2005), and partly on the conclusions derived from the present study, several other Arawak features can be added to Santos-Granero's list:

- the use of various types of high-intensity landscape management strategies as the basis of subsistence (Hill 2011),
- a tendency to situate their communities in the local and regional landscapes through the use of such techniques as "topographic writing", extensive systems of place-naming, and rock art (Santos-Granero 1998),
- an elaborate set of rituals including a repertoire of sacred musical instruments and extensive sequences of chanting, often performed as part of place-naming rituals (Hill 2007),
- a proclivity to establish settlements along major rivers and to establish trade and other social relations through river transportation (Hornborg 2005).

Together with the five aspects listed as characteristic of the Arawak ethos, these four points form a cultural package here labeled the Arawak matrix. Originally referred to as the "Arawakan Matrix"[13] (Santos-Granero 2002), the set of cultural features recurrently associated with Arawak-speakers seems to form a package that unites Arawak-speakers across Amazonia. Conventionally, a cultural matrix like the one identified by Santos-Granero for the Arawaks is associated with aspects of non-material culture that "constitutes simultaneously the background, framework, and source of information that informs the sociocultural practices of the members of a given language family (Santos-Granero 2002:42)." Given the strong connections between Arawak sociocultural practices such as "topographic writing" (Santos-Granero 1998) and their subsistence strategies and travels, it is reasonable to extend the concept of an Arawak matrix to include material culture, as suggested by the four last points above. By integrating language with material and non-material culture into a cohesive pattern shared by Arawaks across Amazonia, this study aims at a multifaceted understanding of the emergence, composition, and historical destiny of the Arawak matrix in space and time.

A second concept organizing this study is the "Arawak regional exchange system" (Hornborg 2005), denoting an extensive system of exchange that appears to have encompassed large parts of Amazonia and adjacent regions. This system is hypothesized as the network of arteries through which the Arawak matrix diffused in pre-contact times. The formation, geographical extent, timing, and composition of the Arawak regional exchange system has been reconstructed through a G.I.S. methodology, using data from all the scientific fields engaged in this study. The Arawak regional exchange system is posited as having coincided with the

[13] Santos-Granero's (2002) use of the term "Arawakan" is consistent with the rest of the volume that his chapter appears in (Hill and Santos-Granero 2002), but given the problems associated with the term "Arawakan" described above, the term used hereafter in this study is "Arawak matrix".

area of influence of the Arawak matrix and Arawak languages. It is not to be understood as a demarcated area that precisely maps the boundaries of a region inhabited only by Arawak-speaking groups, exhibiting all the aspects of the Arawak matrix, but rather as an area with fluid boundaries through which cultural influences could flow back and forth, sometimes absorbed by the Arawak matrix and sometimes diffused from it.

In summary, the theoretical points of departure of the present study rest on the set of theoretical concepts presented above. The *Arawak matrix* is a cultural repertoire including material and non-material culture as well as language. It appears to have spread through the *Arawak regional exchange system*, through which regional and inter-regional exchange distributed cultural influences from the Antilles to Argentina.

1.4 Methodology and material: Constructing the database

1.4.1 Methodology

The methodology of the present study has been chosen in order to accomplish the task of integrating anthropological theories of ethnicity, ethnogenesis, and inter-ethnic relations with data from disciplines such as archaeology, ethnography, history, linguistics, geography, and ecology. The empirical material contains great diversity, given its origin in different academic disciplines, deriving from such diverse methodologies as archaeological excavations, paleobotanical studies, participatory observation, interviews, field walks, aerial photography and satellite images, archival studies, and comparative linguistics. In order to handle these extensive and diverse sets of empirical data, the methodology of G.I.S. (Geographical Information Systems) has been chosen as the main tool of the present investigation. A G.I.S. database allows its users to collect, store, manipulate, analyze, and present spatial data in a digital format. Further, the data assembled in this investigation is also organized temporally, allowing us to deal with the time-space characteristics of the data set, and thus to illuminate long-term cultural development.

A Geographical Information System consists of database a in which different types of data are stored in a table format. The data are linked to spatial positions, allowing users to investigate the spatial distribution of particular elements of the data set, or, conversely, to investigate the attributes of a particular geographical area. The G.I.S. can be used to investigate the spatial distribution of e.g. specific artefacts, religious ceremonies, ecological niches, trade routes, language families, etc., or conversely, the presence of such features in a given area. Such analyses can then be used to draw conclusions on the cultural and linguistic development of pre-Columbian Amazonia. The different data sets (archaeology, ecology, ethnohistory, linguistics, etc.) are stored as separate layers that can be superimposed on each other, allowing the user to search for spatial correlations between different layers. Any number of layers can be selected and displayed at the same time, according to the theme of a particular investigation.

The combination of geographical methods and studies of cultural development is not a new idea in Amazonian ethnography. Nordenskiöld applied such a perspective in his ten-volume series *Comparative Ethnographical Studies* (1918-1938), which investigates the spatial distribution of a number of cultural features and plots these patterns onto paper maps (see also Nordenskiöld 1930). Other researchers utilizing a geographical method relevant to the present study include Schmidt (1917) on the Arawak languages, Nimuendajú's (1926, 2004) comparative ethnographic studies, and Izikowitz's (1935) study on the musical instruments of native South America. As mentioned, Nordenskiöld's comparative ethnography was also a source of inspiration for the monumental *Handbook of South American Indians* (Steward 1946-50; see Denevan 2009 for a summary of Nordenskiöld's work).

After 1950, however, the so-called quantitative revolution in the social sciences marked the end of the cultural-historical perspective. Between the early 1950s and late 1970s, much of the research in archaeology and ethnography took advantage of new quantitative methods such as C^{14} datings and studies of carrying capacities and catchment areas, generating a perspective inclining toward ecological determinism and leaving little room for the comparative ethnology of the Nordenskiöld tradition. In archaeology, the quantitative turn developed into so- called "processual archaeology", whose proponents emphasized the rigorous use of scientific methods inspired by natural science (cf. Binford 1962, 1965), thus turning their backs on the cultural-historical perspective that had investigated long-term cultural processes through comparative work (Trigger 1989).

The quantitative revolution was actually also responsible for the development of G.I.S. methodologies and their application in social science, following the introduction of more manageable computer technologies during the 1970s. G.I.S. found widespread use in geography from the 1980s. During the 1980s and 1990s, a reaction against what was increasingly being viewed as the ecological determinism of quantitatively oriented anthropologists and geographers stimulated the growth of culturalist and "post-modernist" perspectives, representing yet another paradigm shift in the social sciences.

These trends in anthropology and geography now make it possible for researchers to integrate theories and methods from separate scientific paradigms in collaborative projects where researchers from different disciplines study a specific Amazonian issue from different perspectives. Examples of such cross-disciplinary research are the publications of the Terra Preta Nova project (Lehmann et al. 2003; Glaser and Woods 2004; Woods et al. 2009) and research on the historical ecology of Amazonia (Balée and Erickson 2006). Drawing on such cross-disciplinary research projects, the present study seeks to integrate theories, methods, and empirical material from various scientific fields and perspectives with the aim of creating a more comprehensive overview of pre-Columbian cultural development in Amazonia.

Perhaps the most important innovation in this thesis is the application of a rigorous scientific methodology such as G.I.S. to a profoundly humanistic inquiry into the construction of ethnic identities over time. The theoretical framework generating the research questions pursued here is generally restricted to a category of researchers very unlikely to use such a methodology. Needless to say, I hope that the combination will be perceived as successful and perhaps even inspire similar projects elsewhere.

1.4.2 Material

Much of the work underlying this thesis has consisted of gathering material on Amazonian cultural development and adapting it to a G.I.S. database by scanning, digitizing, and entering textual data into table format. The work began by digitizing Curt Nimuendajú's (1987) *Mapa etno-histórico do Brasil e regiões adjacentes*, containing information on the ethno-linguistic identities of approximately 1500 native Amazonian groups and the dates of their encounters with Europeans (Eriksen 2005). The map was scanned and digitized, and the data reorganized into a table containing for each ethnic group information on group name, language affiliation, dates of encounter, information on whether or not the group was extinct by the year 1944 (the year of the original publication of the map), and x and y coordinates for the group's geographical position. The map contains 2092 points with such information (the high number resulting from the fact that some of the ethnic groups were present at several places).

Since the position of ethno-linguistic groups was represented by points, the true spatial extent of these populations was not displayed in the digital version. Nor did Nimuendajú's (1987) map provide a complete cover of the South American continent, or even Amazonia, as it focused mainly on Brazil. To overcome the problem of accurately locating the ethno-linguistic groups of *Mapa etno-histórico* and to provide full coverage of the continent, all ethno-linguistic maps from the *Handbook of South American Indians* (Cooper 1946:15; Métraux 1946:198; Lowie 1946:382; Rowe 1946:184; Márquez Miranda 1946:638; Murra 1946:787; Kroeber 1946:890; Nimuendajú 1948b:284; Métraux 1948b:382; Steward 1948a:508; Gillin 1948:800; Métraux and Kirchhoff 1948:350; Rouse 1948a:498) were scanned and digitized into polygons, providing a complete coverage of the continent consisting of 2658 polygons representing more than 2000 different ethnic groups.[14]

In the process of creating a complete polygon coverage of the distribution of indigenous ethno-linguistic groups in South America at the time of contact, all information on the linguistic affiliation of the groups was also updated according to current consensus in the field of linguistics. In cases where no consensus has been established, footnotes have been added to the table to summarize the different points of view on the matter in question. In order to

[14] At this point, the Lesser and Greater Antilles were also included in the data set.

acquire linguistic affiliations for some groups listed as unknown in the original maps, several additional sources were consulted. Loukotka's (1968) ethno-linguistic map was scanned and superimposed on the maps in order to facilitate the identification of some of the unknown groups, and Landar's (1977) catalogue of South American Indian tribes and their linguistic affiliations was also consulted in cases were no affiliation was listed in the original publication. Furthermore, the linguistic affiliations of the groups were reviewed and updated in accordance with standard authorities such as Dixon and Aikhenvald (1999a) for Amazonia and Adelaar with Muysken (2004) for the Andean area. Campbell (1997) has also provided an up-to-date coverage of the whole continent. Finally, the spelling of language names was standardized according to the terminology of the 15th web version of *Ethnologue: Languages of the World* (Gordon 2005).[15] The ethno-linguistic data set serves as basis for two recurrent sections in each regional chapter: the linguistic and ethnohistorical sections.

Another important source of material for this study is the archaeological database containing for each archaeological site information on site name, ceramic traditions and phases, tempering agents, C^{14} datings,[16] the occurrence of *terra preta*, and other relevant information. Bibliographical references for all information are also stored in the database. The archaeological data have been digitized from archaeological reports, maps, and other types of publications. The archaeological database permits investigations of the distribution of particular ceramic styles and other types of artefacts in time and space, as well as investigations of particular time periods or geographical areas, and it provides a catalogue of information and bibliographical references for Amazonian archaeology in general. The archaeological database provides the basis for all archaeologically oriented sections in the regional chapters, and for

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[15] The reason why Gordon's (2005) terminology was chosen as the standard for the present investigation is the convenience of using this database through the web version available online (www.ethnologue.com). It has not been used as a primary tool for determining the language affiliation of the ethno-linguistic groups of the study, but merely as a tool for standardizing names and spelling. During 2009, a new version of Ethnologue (Lewis 2009) was published. Any changes of spelling in the new (16th) version are not reflected in the database compiled for the present study.

[16] Since the introduction of the C^{14} method in the 1940s, it has been discovered that the amount of carbon isotope 14 being received by living things on Earth is not constant, but has varied significantly through time. This means that the dates received from the C^{14} laboratories does not always match calendar dates, e.g. a C^{14} date of 2500 BP (the year BP – Before Present – has been oriented to 1950 in order to avoid future confusion of C^{14} datings) does not match the calendric date of 550 BC. To overcome this problem, calibration curves have been developed, using dendrochonological (tree-ring) datings in order to calibrate the C^{14} years. All C^{14} datings in the archaeological database used in the present study have been calibrated using the calibration program CALIB v. 5.0.1. (Stuiver et al. 2005). All datings in the text that are represented as years BP are the original C^{14} years, while all dates represented as calendar years (written as BC or AD) are calibrated datings. In the figures depicting the chronologies of the archaeology of the Amazon Basin, C^{14} and calendar years are displayed on separate sides of the figure.

information on the archaeological sites in all figures where such sites occur. Much of the archaeological remains in Amazonia unearthed by archaeologists consist of ceramic material classified on the basis of e.g. stylistic attributes, vessel shapes, tempering agents, etc. The different pottery styles are ordered into *ceramic phases*, i.e. a type of pottery having certain attributes in common, which are grouped together into *ceramic traditions* (sometimes also referred to as series, styles, or horizons). In areas of great ceramic diversity, a third and intermediate level, the subtradition, is sometimes also recognized. Examples of subtraditions mentioned in the present study are Guarita and Saracá of the middle and lower Amazon region. Guarita and Saracá each consists of several different phases, all included in the wider Amazonian Polychrome tradition. Other important ceramic traditions in Amazonia are the Saladoid and Barrancoid series and the Incised Punctated tradition. These traditions have acquired vast geographical distribution due to their importance as components of major cultural expansions in pre-Columbian Amazonia, and their respective geographical extensions therefore form important objects of study for the present investigation.

A third data set of great importance for this study is the layer consisting of line segments depicting significant trade routes of native Amazonians. This layer consists of more than 130 different trade routes, drawing primarily on two kinds of sources: 1) maps depicting indigenous trade routes in Amazonia derived from various scientific publications, and 2) trade routes reconstructed and digitized based on information in written format. The former kind of sources have been included in the database by scanning and digitizing paper maps, while the line segments deriving from the latter have been drawn based on the information available, e.g. observations stating that a particular river was used as a trade routes by one or more indigenous group.[17] The trade route data set consists of information on the names of the groups involved in the trade, their linguistic affiliations, the dates of the exchange, and the different trade items exchanged along a particular route. If a number of different artefacts and/or several different ethno-linguistic groups were involved in the exchange along a particular route, these are all listed in the data set. By organizing the data according to e.g. linguistic affiliation, it is possible to investigate the spatial distribution of trade routes associated with a particular language family, or to investigate the routes used to transport different categories of items.

A layer of great importance for the study of ceremonial exchange in native Amazonia is the data set pertaining to the geographical distribution of indigenous musical instruments. This data set has been derived from the information available in Karl Gustav Izikowitz's (1935) study *Musical and other Sound Instruments of the South American Indians – A Comparative*

[17] In cases where native Amazonians traded with the Europeans during the early colonial period, such trade routes have also been included, given their importance at this early time.

Ethnographical Study. Dedicating his study to his teacher Erland Nordenskiöld, Izikowitz carefully gathered all information available on the construction, use, and distribution of musical instruments among native South Americans. Unfortunately, Izikowitz's study does not contain a single map of the areal distribution of the instruments, but his carefully compiled tables of information on the names of ethno-linguistic groups possessing the specific instruments have allowed me to integrate his data with the rest of the ethno-linguistic data set, thereby providing each type of instrument with geographical coordinates. Once this was accomplished, it became possible to investigate the spatial distribution of particular instruments, as well as the presence of certain instruments among given ethno-linguistic groups or language families. This data set has provided valuable information for investigating the so-called sacred flutes complex, a ceremonial complex spread across Amazonia primarily by Arawak-speaking groups (Hill and Chaumeil 2011b; see also Beaudet 1997).

All the above described data sets have been created by digitizing material published during the centuries since European colonization of the New World. This rather time-consuming way of assembling G.I.S. data is balanced by the relative ease with which much of the data on physical geography have been acquired.[18] Data on political boundaries, hydrology, ecology, geology, and topography have been downloaded from publically available on-line databases such as the Digital Chart of the World (until recently available on www.maproom.psu.edu/dcw) or its predecessor Natural Earth (www.naturalearthdata.com). The physical geography data sets have multiple uses in the present study, ranging from the use of river systems and elevation models for the determination of trade routes to the use of ecological zones to assess the presence of natural resources, crops, or particular ethno-linguistic groups whose subsistence strategies were focused on a particular natural habitat. Also, the data from physical geography always serve as background data on maps depicting various cultural features.

[18] The work of constructing the historical G.I.S. data sets has been in progress for more than six years at the time of this publication.

Regional studies

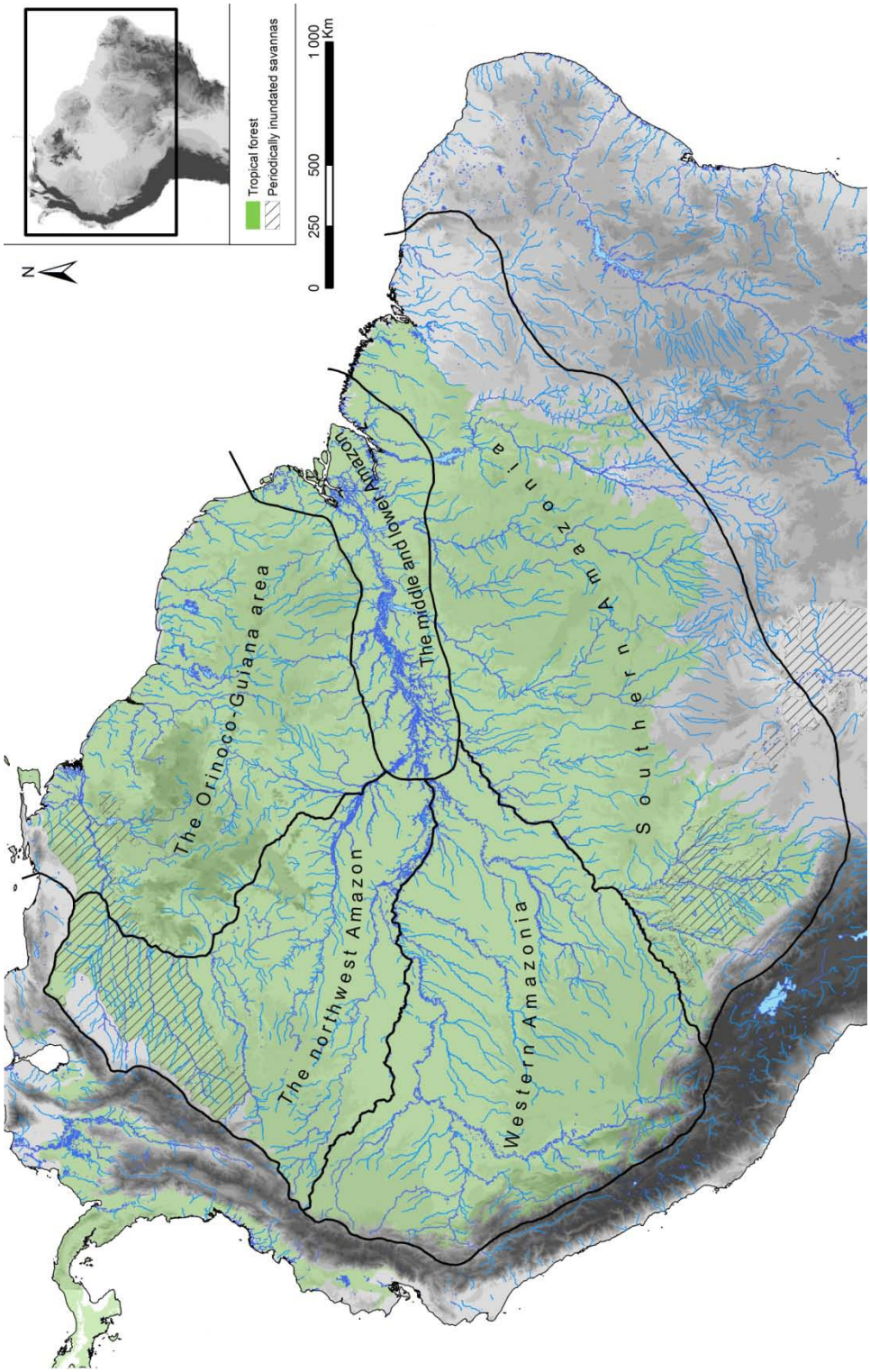

Figure 1. The regional divisions of the Amazon Basin.

2. Western Amazonia

2.1 Physical geography

Western Amazonia is here geographically defined as the area east of the peaks of the Andean mountain range, limited in the north by the Putumayo and Amazon Rivers. The southeastern border, between western Amazonia and southern Amazonia, coincides with the Madeira and Madre de Díos Rivers (fig. 2.1.1).

Ecologically, this geographical area is dominated by lowland tropical rainforest. The most conspicuous interruptions of this flat and forested landscape are the many river basins, and the most important features for the indigenous populations have probably been the *várzea*, nutrient-rich sediments set off by the white-water rivers draining from the Andes. Since all major rivers in western Amazonia, such as Putumayo, Napo, Pastaza, Marañon, Huallaga, Ucayali, Jurua, Purús, and Madre de Díos, do originate in the Andes, the *várzea* areas along these rivers are extensive. In the west, the Andean mountain chain rises from the lowland rainforest, through the cloud forests of the mountain slopes to the treeless mountain plateau, offering a spectrum of environments that have constituted socio-ecological niches for indigenous groups in the area, and whose products have been important items in the trade networks established along the Andean slopes since archaic times.

The trade networks of the Andes presupposed trekking through steep river valleys and mountain passes, allowing transport of goods through breaks in the mountain chain, but in the lowlands, the most important geographical feature for human transportation has without doubt been the easily navigated river systems. Thanks to the flat topography, most river routes run uninterrupted through the lowlands, facilitating travel by canoes and rafts. This extraordinary flatness of the landscape is still taken advantage of when ocean-going ships sail all the way to the city of Iquitos, just upstream from the mouth of the Napo River. During snow-melting in the Andes, the rivers of the lowlands rise by several meters, depositing the nutrient-rich sediments of the *várzea* and making riverine navigation even easier.

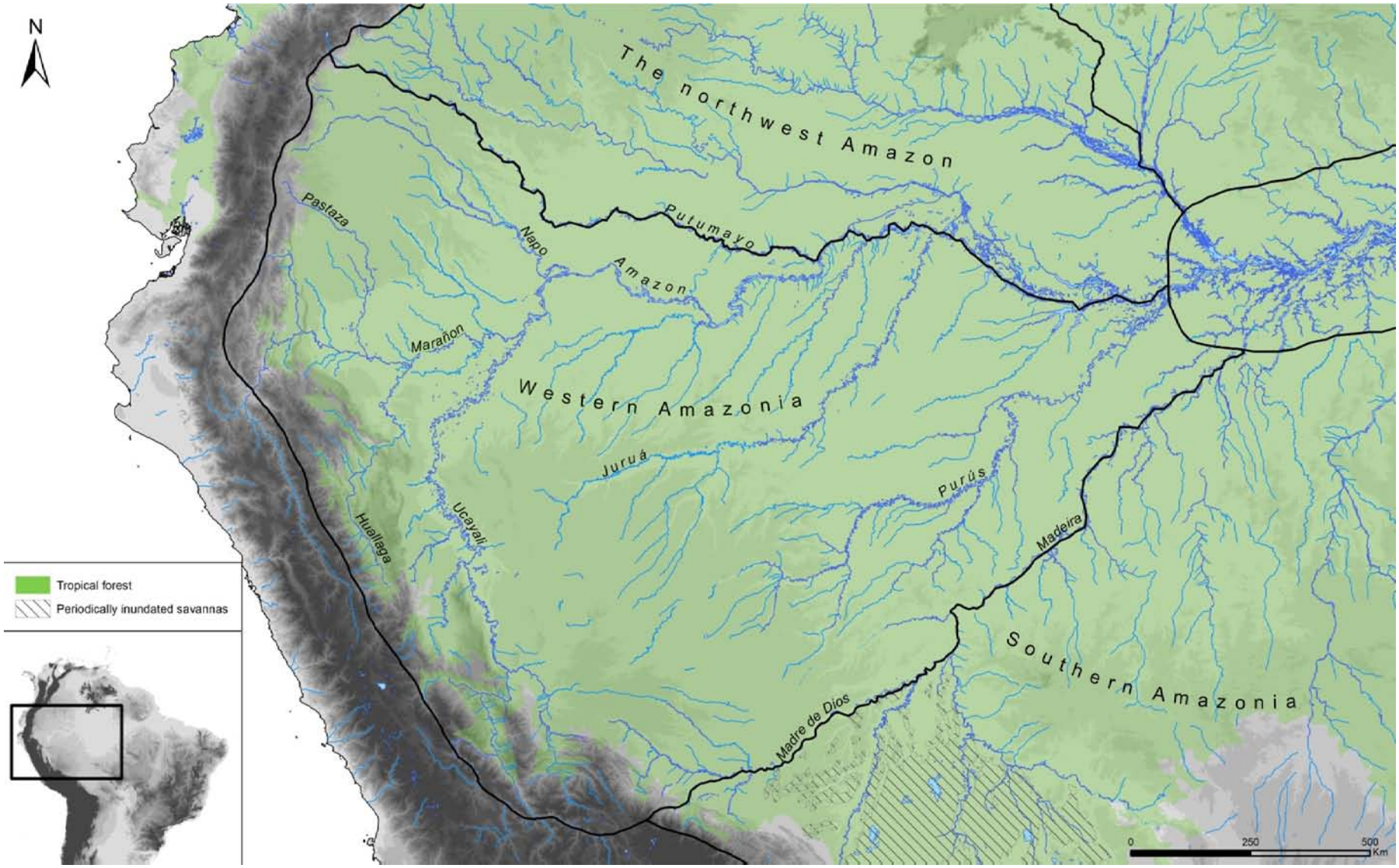

Figure 2.2.1. The physical geography of western Amazonia.

2.2 Archaeology

As late as 1982, Brochado and Lathrap (1982:3) claimed that the upper Amazon was the best known archaeological area in Amazonia. Since then, however, large-scale archaeological investigations have been lacking in western Amazonia in general, and today the area is one of the least explored in Amazonia in terms of modern archaeological projects. Given this situation, scholars studying cultural development in western Amazonia are often forced to interpolate the results from geographically restricted localities in order to make general claims about the development in the region. Fortunately, there are a number of well-studied localities even in western Amazonia, providing investigators with an empirical framework as a point of departure for their attempts to account for prehistoric developments in the area.

One such locality is the site of Lake Ayauchi in the Ecuadorian Amazon, where maize cultivation has been dated around 5300 BP (Piperno and Pearsall 1998:258). Further north in the Ecuadorian Amazon a sediment core from the Maxus project indicated human disturbance in the pollen record already at 8400 cal BP[19] (Athens and Ward 1999:298f). The earliest layers at these two sites correlate well in time with similar remains of early human occupations from the northwest Amazon at sites such as Peña Roja, Abeja, Guayabero, and Maporita (see figs. 2.2.1, 6.2.1). Athens and Ward (1999:299) interpret the early disturbance in the pollen record as traces of incipient horticultural activities, which supports Oliver's (2008:208) proposal that early horticulture was established across Amazonia between 8000 and 5000 BP. This is also in line with the conclusions drawn by Piperno and Pearsall (1998:312), who date the establishment of this subsistence strategy between 7000 and 4500 BP. The cores from the Lake Ayauchi and Maxus sites are also contemporary with sites in southern Amazonia such as Abrigo do Sol and Gruta do Gavião, and with the Itapipoca phase excavated by Miller (1992a, 1992b) along the Jamari River, but unfortunately the lack of palynological studies at these sites has precluded the detection of early agricultural activities. In addition to early food production, the area along the eastern slopes of the Andes also saw an early development of exchange systems involving vertical control of different ecological zones. Obsidian exchange is indicated as early as 10000 BP, and by 5000 BP, the Mayo-Chinchipe complex had established a pottery-producing culture that was part of an extensive interaction sphere stretching across the Andes to the coastline, as well in the north-south direction (Valdez 2008:880, 885). The material exchange between the coast and the tropical lowlands via the mountain passes of the Ecuadorian Andes seems to have been a pervasive feature of the area, as indicated by the many traces of trade items throughout the pre-historical sequence.

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[19] It is unusual to refer to calibrated dates using the BP scale, as normally the calibration process gives calendrical dates on the BC/AD scale. However, since Athens and Ward (1999) choose to present their dates as calibrated BP, this is also how they are presented here.

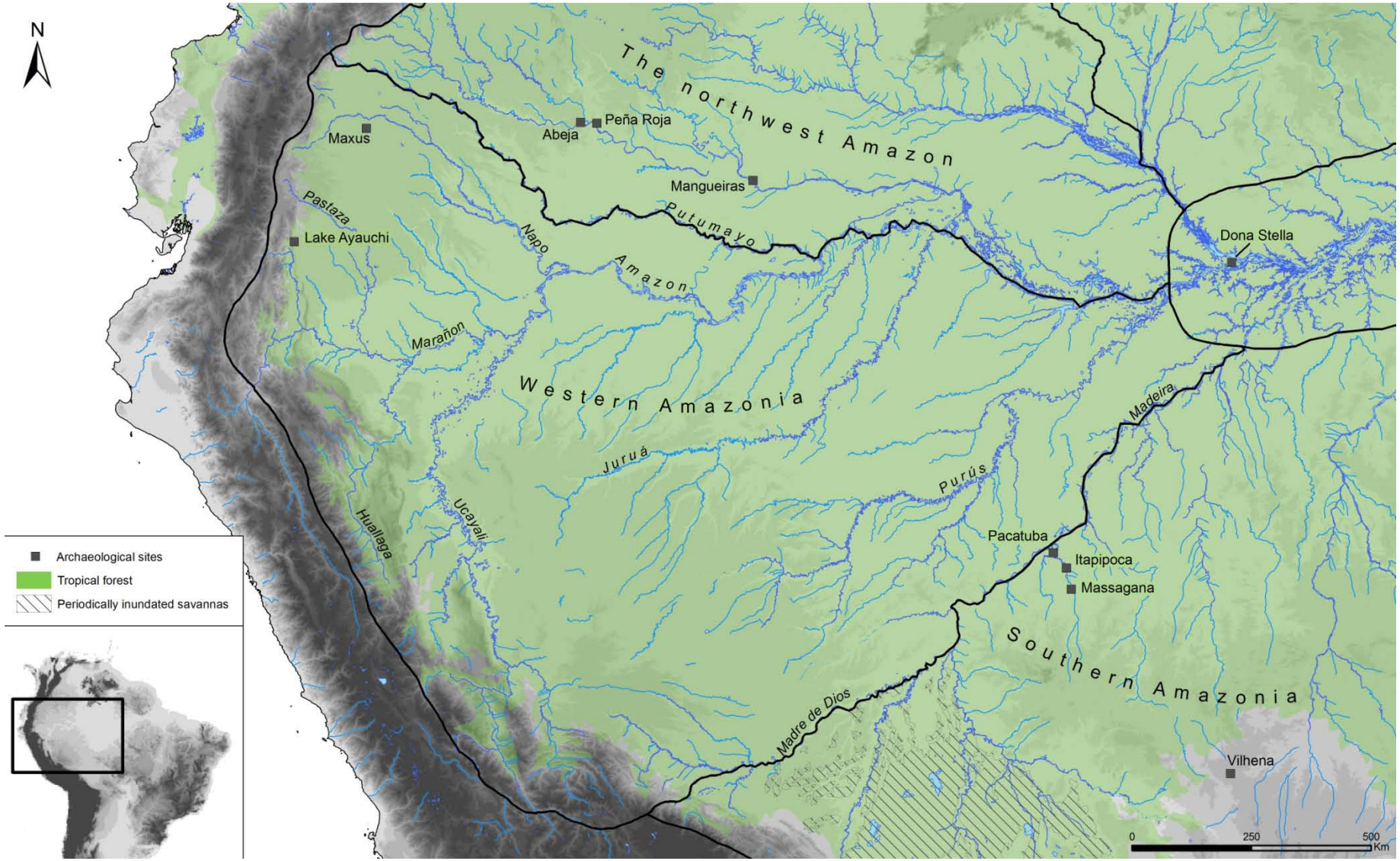

Figure 2.2.1 Archaeological sites of the pre-agricultural period.

After initial agricultural experimentation between 8000 and 5000 BP, societies with a more fully established horticultural component seem to have been present in the region around 5000 BP, although hunting, fishing, and gathering would still have been essential complements. The maize farmers at Lake Ayauchi had counterparts in the settled agriculturalists of the Valdivia culture (5500 – 3500 BP) on the western side of the Andes, who had actually practiced maize agriculture since this crop was first introduced into the region from its homeland in Mexico by 7 000 BP (Piperno and Pearsall 1998:244ff). Already in the 1970s, Lathrap suggested links between the formative cultures of the eastern and western sides of the Andes. He proposed a connection between Pastaza[20] and Valdivia, and to Brochado and Lathrap (1982:11), Pastaza, Valdivia, the coastal complex of Machalilla, and the early Tutishcainyo complex of the Ucayali River were all part of a "widespread network of interaction" through which exchange of various items of material culture occurred. Given the indications of early exchange between coastal Ecuador and the Ucayali River, the introduction of maize along the Ucayali probably took place during Tutishcainyo times, if not earlier. Manioc agriculture is indicated in the region from 4 000 BP (ca. 2400 BC), although an earlier date for the introduction of this crop is probable, since it had been domesticated and spread across Amazonia as early as 7 000 BP (Piperno and Pearsall 1998:312). In the light of these datings, we can assume that the Tutishcainyo complex represents an agricultural society based on manioc cultivation and early experimentation with maize.

Around 2000 – 1500 BC, the Napo-Amazon route and the Huallaga and Pastaza Rivers were used to link the site of Tutishcainyo on the middle Ucayali to the Ecuadorian highlands (Lathrap 1973:177) (fig. 2.2.2). At this time, the route via Huallaga and Pastaza was also used to transfer the idea of the double spout-and-bridge ceramic bottle between Machalilla settlements in coastal Ecuador and the middle Ucayali (Lathrap 1973:177; Valdez 2008:871f) (fig. 2.2.2). Machalilla is dated 1500 – 900 BC (Hoopes 1994; Staller 2001) and early Tutishcainyo 2000 – 1600 BC[21] (Brochado and Lathrap 1982:4) (fig. 2.2.3). The Pastaza tradition, represented by the Huasaga and Pumpuentsa sites, has two C^{14} dates around 4100 – 4000 BP (ca. 2500 BC), while most of the dates cluster in the second millennium AD (Brochado and Lathrap 1982:11 and references therein). To Salazar (2008:264), the Pastaza ceramic tradition developed around 2200 BC and spread throughout a zone 40-80 kilometers wide along the eastern Andean slopes from the Upano River in the south to the Guames River and San Agustín in present-day Colombia. The Pastaza phase developed through at least four phases (labeled A-D), with Pastaza D still in place at the time of European arrival. Other

[20] The Pastaza tradition was recovered at the Huasaga and Pumpuentsa sites on the upper Pastaza River (Athens 1986).

[21] No absolute dates are available for this complex.

complexes closely related to Pastaza include the Kamihun phase (2300 – 1900 BC), located downstream from Huasaga along the river with the same name (DeBoer et al. 1977), the Macás[22] phase (1200 – 1000 BC) on the upper Upano River, and the Chiguaza[23] phase (1000 – 800 BC) in the upper Pastaza River area (Brochado and Lathrap 1982:11) (fig. 2.2.2). Another phase that appears to be related to the Pastaza tradition and thus also to the Tutishcainyo complex is the Yasuní phase of the Napo River. A ceramic component discovered along with the Yasuní material related to Tutishcainyo showed influence from the Barrancoid tradition. This component was dated to 2000±90 BP [SI-300] (AD 1 – 100 calibrated) (Evans and Meggers 1968:17, 81; Lathrap 1970:109; Brochado and Lathrap 1982:12). Another component related to the Tutishcainyo tradition is the so-called Fine Ware of the Cave of the Owls site, dated approximately to 1600 – 1400 BC (Brochado and Lathrap 1982:10) (fig. 2.2.2).

An additional cultural complex dated within this time period is indicated by the prehistoric remains discovered at the Santa Ana-La Florida site in the Ecuadorian Amazon. This complex, dated to 3000 – 200 BC, was linked with the Peruvian Amazon and the Ecuadorian coast through long-distance trade. The archaeological record suggests a society with high degrees of social ranking and a complex cosmological symbolism, and there is evidence of advanced craft production in the form of elaborate artefacts manufactured from lithic material and marine shells imported from the Ecuadorian coast. Another complex in the Ecuadorian Amazon that appears to date to this period is the so-called Pre-Upano tradition (3400 – 3000 BC) (Porras 1987:299), but Zeidler (2008:479) does not accept the dating and the association to other formative complexes of the region. Zeidler (ibid.) also rejects the inclusion of the Pastaza and Yasuní complexes in the formative interaction sphere posited by Brochado and Lathrap (1982:11). Although the Yasuní tradition lacks early C^{14} dates placing it in the same time period as the other formative complexes, Brochado and Lathrap (1982:12) emphasize the stylistic similarities with the Tutishcainyo tradition. The Pastaza and Pre-Upano traditions not only have stylistic correspondences with formative complexes, but also have several early C^{14} datings associated with them. I have here chosen to focus on the correspondences, rather than the differences, as the former suggest indications of past contacts between these complexes.

Lathrap (1970:14) also associates the Tutishcainyo tradition with Saladoid material from the Orinoco Valley and with the expansion of Arawak languages across Amazonia (Brochado and Lathrap 1982:5). The late Tutishcainyo phase (1200 – 1000 BC) shares similarities with pottery from the Huayurco site along the Chinchipe River, which appears to have been an

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[22] The Macás phase is also related to the late Tutishcainyo phase (Brochado and Lathrap 1982:11).

[23] The Chiguaza phase is related to the Macás phase and to the Barrancas phase of the Barrancoid tradition (Brochado and Lathrap 1982:11).

important site for the rise of social complexity in the lowlands east of the Andes (Brochado and Lathrap 1982:4; Zeidler 2008:481f). Zeidler (2008:481f) mentions Huayurco (dated to around 1500 BC) as a possible influence in the development of social complexity in the Valdivia culture. Huayurco shares decorational similarities with the early Shakimu phase, another component of the Ucayali sequence established by Lathrap (1968).[24] Early Shakimu decoration and vessel shapes resemble the Chavín art style centred on the upper Marañon, which expanded over much of the Andean area during the Early Horizon (900 – 200 BC) (Lathrap 1970:94; Brochado and Lathrap 1982:4) (fig. 2.2.2).

At the Casa de la Tía site along the Pachitea River, the ceramic tradition Nazaratequi is dated from 1800 BC to AD 600. Its primary component is the Cobichaniqui phase, dated to 1800 – 1400 BC (Brochado and Lathrap 1982:9; Myers 2004:89). Cobichaniqui is followed by the Pangotsi phase (1300 – 800 BC), an assemblage related to Tutishcainyo, and the Nazaratequi phase (800 BC – AD 600), during which manioc griddles first appear in the archaeological record of this tradition (Brochado and Lathrap 1982:9) (fig. 2.2.3). Brochado and Lathrap (1982:10) also relate the next phase of the area, Enoqui (AD 1200 – 1500), to the Nazaratequi tradition (although its datings falls outside those of the Nazaratequi tradition) and to the ceramics of the Arawak-speaking Yanesha, and conclude that the whole Nazaratequi tradition represents settlements of Arawak-speakers. Santos-Granero (1998:134) also subscribes to the view that the Nazaratequi tradition can be associated with Arawak-speakers and the Enoqui phase specifically with the Yanesha. Affiliations between the ceramic material from western Amazonia and the Barrancoid tradition have only been mentioned in passing so far, but at about 200 BC, a more or less completely Barrancoid component was established in the region in the form of the Hupa-iya phase. Hupa-iya ceramics have been discovered in at least five sites along the Ucayali River, all clearly related to the Barrancas and Los Barrancos phases of the Barrancoid tradition (Lathrap 1968:72, 1970:23; Brochado and Lathrap 1982:5; Myers 1990:191, 2004:78). As mentioned above, a couple of other phases in the region, such as Chiguaza and Yasuní, also appear to have been related to the Barrancoid tradition. This also applies to the Naranjal phase, which according to Lathrap (1970:122f) constitutes the late prehistoric pottery of the pre-Andine Arawak-speaking groups of the Perené River (fig. 2.2.2).

In the middle of the first millennium BC maize farming at Lake Ayauchi had grown in importance to a point where it could support sedentary farmers with increasing social complexity (Piperno and Pearsall 1998:259).[25] At approximately the same time the nearby

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[24] The two Shakimu components, early and late, have been dated to 1000 – 300 BC. They were excavated at three sites along the Ucayali River, one of which is indicated in figure 2.2.2 (Lathrap 1968, 1970; Brochado and Lathrap 1982:4).

[25] This development occurred shortly before the appearance of the Hupa-iya ceramic phase of the Barrancoid tradition on the Ucayali River at 200 BC and correlates with the date of the earliest

Upano Valley witnessed the constructions of the first earthworks in the form of settlement mounds at sites such as Huapula and Chiguaza (fig. 2.2.2). According to Rostain (1999:74), mound-building appears to have diffused along the Río Upano during the period 700 BC – AD 400, linking the agricultural societies of the eastern lowlands with those of the Cuenca Basin in the Ecuadorian Andes. During this period, the Upano Valley was the scene of a demographic concentration based on settled agriculture and exchange, indicated by mound-building societies that clearly had a chiefdom level of social organization (Salazar 2008:263).

The ceramics of the first mound-builders belonged to the Upano tradition, which developed through several phases until its replacement by pottery of the Pastaza C phase (labeled Huapula by Rostain) by about AD 700 – 800. Descola (1994:206) links Pastaza C pottery to the ceramics used by contemporary Jivaroan groups of the area and observes that there is continuity in settlement pattern between contemporary Jivaroans and archaeological sites of the Pastaza tradition. The remarkable stability of Jivaroan socioeconomic and political structures since the beginning of European colonization is noteworthy and may well indicate a long occupation of the region.

In the Ucayali Basin, the Hupa-iya phase was followed by the Yarinacocha phase, with one C^{14} date of 1860±110 BP [N-313] from the site of José's Hill placing it around AD 100 – 300 (Lathrap 1970:129) (figs. 2.2.2, 2.2.3). Brochado and Lathrap (1982:5) relate Yarinacocha to the Tutischcainyo tradition, considering it the last phase of that tradition.[26] The appearance of the Yarinacocha style is interpreted by Lathrap (1970:131) as reflecting a population displacement, viz. the return of "culturally degraded descendants of the Late Shakimu peoples who had been pushed off the flood plain by the Hupa-iya invaders" two or three centuries earlier.

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indications of maize farming at Parmana on the lower Orinoco, an area thought to be the birthplace of Barrancoid ceramics (Piperno and Pearsall 1998:260; Roosevelt 1980). By this time, maize agriculture was gaining importance in Amazonia and by 2000 BP it had developed into the basic source of food for many societies in the region (Piperno and Pearsall 1998:319f).

[26] Another phase related to Yarinacocha is the Monzón Coarse Ware, uncovered at the Cave of the Owls site. The dating of this phase has been approximated to AD 1000 – 1500 (Brochado and Lathrap 1982:10).

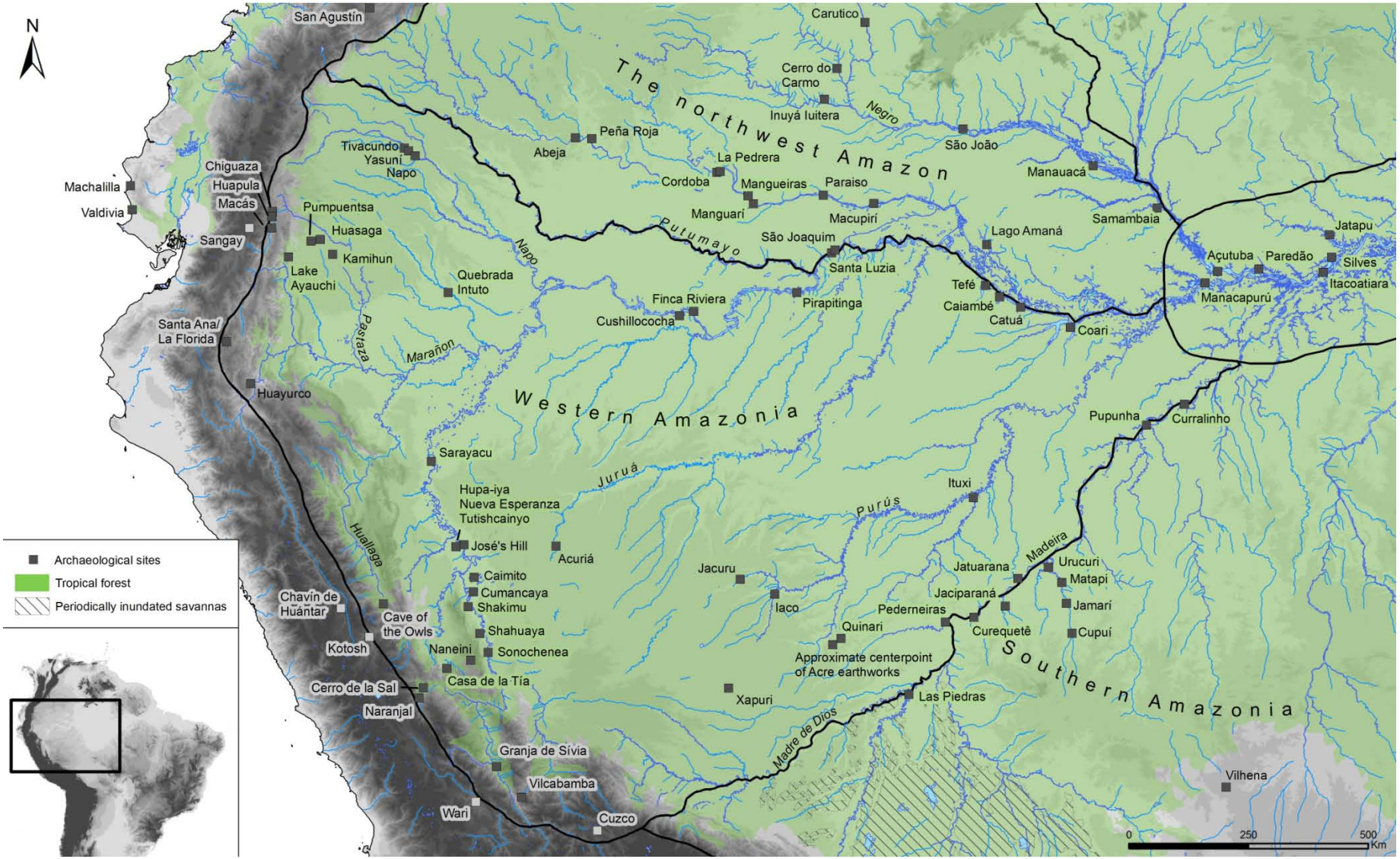

Figure 2.2.2. Archaeological sites of the agricultural period.

After Yarinacocha and Hupa-iya followed the Pacacocha tradition (AD 300 – 900), recovered from at least eight sites along the Ucayali River, among them Cumancaya, Nueva Esperanza, and Sarayacu (Lathrap 1970:131ff; Brochado and Lathrap 1982:6; Myers 1990:191) (figs. 2.2.2, 2.2.3). The Pacacocha phase of the Pacacocha tradition dates to AD 300 – 400 and is followed by the Cashibocaño (AD 400 – 500) and Nueva Esperanza (AD 500 – 900) phases. At the site of Nueva Esperanza, a C^{14} date of 1180±105 BP [N-312] places the occupation around AD 900 (Lathrap 1970:131-133; Brochado and Lathrap 1982:6). According to Lathrap, the introduction of the Pacacocha tradition represents yet another population displacement by "another ethnic group" producing a new set of ceramics. In a later article Lathrap, Gebhart-Sayer, Myers and Mester (1987) suggest that the introduction of the Pacacocha tradition marks the arrival of Panoans in the area. The subsequent ceramic development following the Pacacocha tradition was heavily influenced by elements from other traditions. According to Myers (1990:99, citing Brochado 1984; Lathrap, Gebhart-Sayer and Mester 1985; Lathrap Gebhart-Sayer, Myers and Mester 1987), there was a constant flow of influence from the Tupi (Guaraní) ceramic tradition in the south (apparently via the southern Panoan groups next to the Llanos de Mojos in what is now Bolivia) and from eastern Ecuador. Given the later connection between eastern Ecuador and the Ucayali during the Napo phase, and the earlier connections between the same areas pointed out by Lathrap, a similar connection during Pacacocha times does not seem unlikely. A further indication of socio-economic interaction in this area during what Andeanists refer to as the middle Horizon – roughly the second half of the first millennium AD – is the trade between the Wari (Huari) empire and the lowland areas along the Apurímac, Ene, Tambo, and Ucayali Rivers (Raymond 1988:298). Wari pottery was exported to the Vilcabamba area (Lyon 1981:9). The shift in political dominance from middle Horizon Wari to Late Horizon Cuzco was later to involve military conflict over the control of Vilcabamba and the shift from the Apurímac to the Urubamba as the main route to the lowlands (Santos-Granero 1992:43).

In part contemporary with Pacacocha is the Cumancaya tradition (AD 600 – 1700),[27] a relatively well-investigated ceramic complex found along the Ucayali, Ene, and Apurímac Rivers (figs. 2.2.2, 2.2.3). According to Myers (1990:105), the Cumancaya tradition evolved out of the earlier Pacacocha tradition and incorporated a series of Guaraní ceramic traits from the south, together with a group of characteristics from Sangay in eastern Ecuador. The Ecuadorian influences have also been interpreted as marking the arrival of Quechua-speakers on the Ucayali (Myers 1990:100). The tradition is composed of the Cumancaya, Sonochenea,

[27] The initiation date for Cumancaya is somewhat uncertain, and Brochado and Lathrap (1982:6) are hesitant to provide a clear answer. The earliest C^{14} date available for the complex is 1495±115 BP [Gx-2616] and suggests an initiation date around AD 600 (DeBoer 1974:340; Raymond et al. 1975:115).

Shahuaya, Iparía,[28] Sívia, and Naneini phases, and is clearly related to modern pottery of the Pano-speaking groups of the Ucayali Basin (Lathrap 1970:144; Brochado and Lathrap 1982:6f; Myers 2004:88f) (fig. 2.2.2).[29] Considering that the late phases of the Cumancaya tradition show great resemblance to modern Panoan pottery, the connection between the two posited by Lathrap (1970:140) is certainly not uncalled for, but the identification of the entire Cumancaya tradition with Pano-speakers does not reflect the fluid relationship between language and material culture that is reasonable to assume. The Sívia phase, located deep into the traditional territories of pre-Andine Arawak-speakers along the Apurímac River is dated through seven C^{14} samples from the Granja de Sívia site to AD 1000 – 1350, which makes the consistent association with Pano-speakers suggested by Lathrap appear unlikely. Moreover, the occurrence of burial urns in the Cumancaya material suggests influence from Arawak- and possibly also Tupi-speaking groups (Brochado and Lathrap 1982:7).

Partly contemporary with the Cumancaya complex is the Tivacundo tradition (AD 400 – 900) of the Napo River (Brochado and Lathrap 1982:13) (fig. 2.2.2). One C^{14} date of 1440±70 BP (SI-330), calibrated to around AD 650, is available from the Chacra Alfaro site (Evans and Meggers 1968:30, 81, 93). Lathrap (1970:143) identifies decorational features present in both Cumancaya and Tivacundo, making it likely that the groups manufacturing these two phases of ceramics were part of a common exchange network. Another ceramic phase of the region lacking obvious relationships with surrounding traditions, but sharing vessel shapes with Tivacundo, is Anatico, unearthed along the Huasaga River (DeBoer et al. 1977). Further east in western Amazonia, the site of Cushillococha on the main river in the Colombian *trapecio* features the Natá phase (AD 700 – 900), dated by one C^{14} sample to 1150±110 BP (N-311) (approximately AD 900 calibrated) (Lathrap 1972:19; Ravines 1982:186). According to Brochado and Lathrap (1982:14), the Natá phase pottery is related to other western Amazonian traditions such as Pacacocha and Cumancaya, to the Memoid tradition of coastal Venezuela, and more generally to modern pottery of the Arawak-speaking groups in the Río Negro-Vaupés area. The Memoid tradition (AD 1150 – 1800) has been found in an area inhabited by Carib-speaking groups at the time of contact (Cruxent and Rouse 1958:196ff; Navarette 1999:39). The resemblance between the pottery styles of the upper Amazon and the northwest Amazon is probably an effect of the long-distance

[28] According to Warren DeBoer (pers. com., March 2011), Shahuaya and Iparía do not belong in the Cumancaya tradition.

[29] Also related to the Cumancaya tradition is the Aspusana phase (500 BC – AD 900) on the upper Huallaga River (Brochado and Lathrap 1982:10).

interaction within Amazonia that had developed during late prehistory, transferring traits of the Amazonian Polychrome and Incised Punctated[30] traditions over large areas.

At 800 BP (ca. AD 1200), the agricultural sequence at Lake Ayauchi was interrupted (Piperno and Pearsall 1998:260). This event coincides with the termination of the second phase of the occupation in the Upano Valley (Salazar 2008:274) and with the proposed arrival of Tupi-speakers on the upper Amazon (Lathrap 1970), suggesting that Tupian groups may have influenced the cultural development at Lake Ayauchi in a manner similar to that evident in archaeological material from other sites in the region. The Tupian Cocama, Omagua, and Cocamilla quickly penetrated the upper Amazon area, spreading their diagnostic pottery of the Amazonian Polychrome tradition throughout the region as far west as the Aguarico River (Salazar 2008:264). Both archaeologists (Lathrap 1970; Evans and Meggers 1968; Myers 2004) and linguists (Adelaar with Muysken 2004; Dixon and Aikhenvald 1999a) seem to agree that the distribution of Tupian languages in the upper Amazon area is a relatively late phenomenon, initiated around AD 1200. As indicated by the spread of pottery of the Amazonian Polychrome tradition,[31] and the general impact on archaeological sequences of the region, the bearers of this ceramic tradition spread rapidly along the major rivers of the Peruvian and Ecuadorian Amazon (fig. 2.2.2). According to several linguists (Jensen 1999:129, ref. to Cabral; Adelaar with Muysken 2004:432), the structures of the Tupian languages (Omagua, Cocama, and Cocamilla) of the upper Amazon indicate that they represent a language shift from some non-Tupian language(s) to Tupinambá. This indicates that a new cultural pattern, including both language and material culture, was adopted in the region about AD 1200. Included in this cultural package was polychrome pottery, locally developed into the Napo and Caimito phases, and undoubtedly also the wooden trumpet (see section 2.4).

The Caimito phase of the Amazonian Polychrome tradition appeared on the Ucayali around AD 1200 (fig. 2.2.3). In closely resembling ceramics of similar age from the Río Napo in Ecuador and from the eastern coast of Brazil, it no doubt reflects the arrival of the ancestors of Tupi-speakers such as the Cocama and the Omagua (Lathrap 1970:150f). The polychrome decoration of recent Panoan pottery can be traced to their close coexistence with the Cocama at mission settlements during the seventeenth to nineteenth centuries (ibid., 184; Myers 1976; Brochado 1984:304; DeBoer and Raymond 1987:128-129; DeBoer 1990:87, 103).

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[30] Named after the type site of Arauquín, located on the middle Orinoco River, the Incised Punctated tradition is known as Arauquinoid in the Orinoco-Guiana region.

[31] The origin and development of the Amazonian Polychrome tradition is treated in detail in chapter 4.

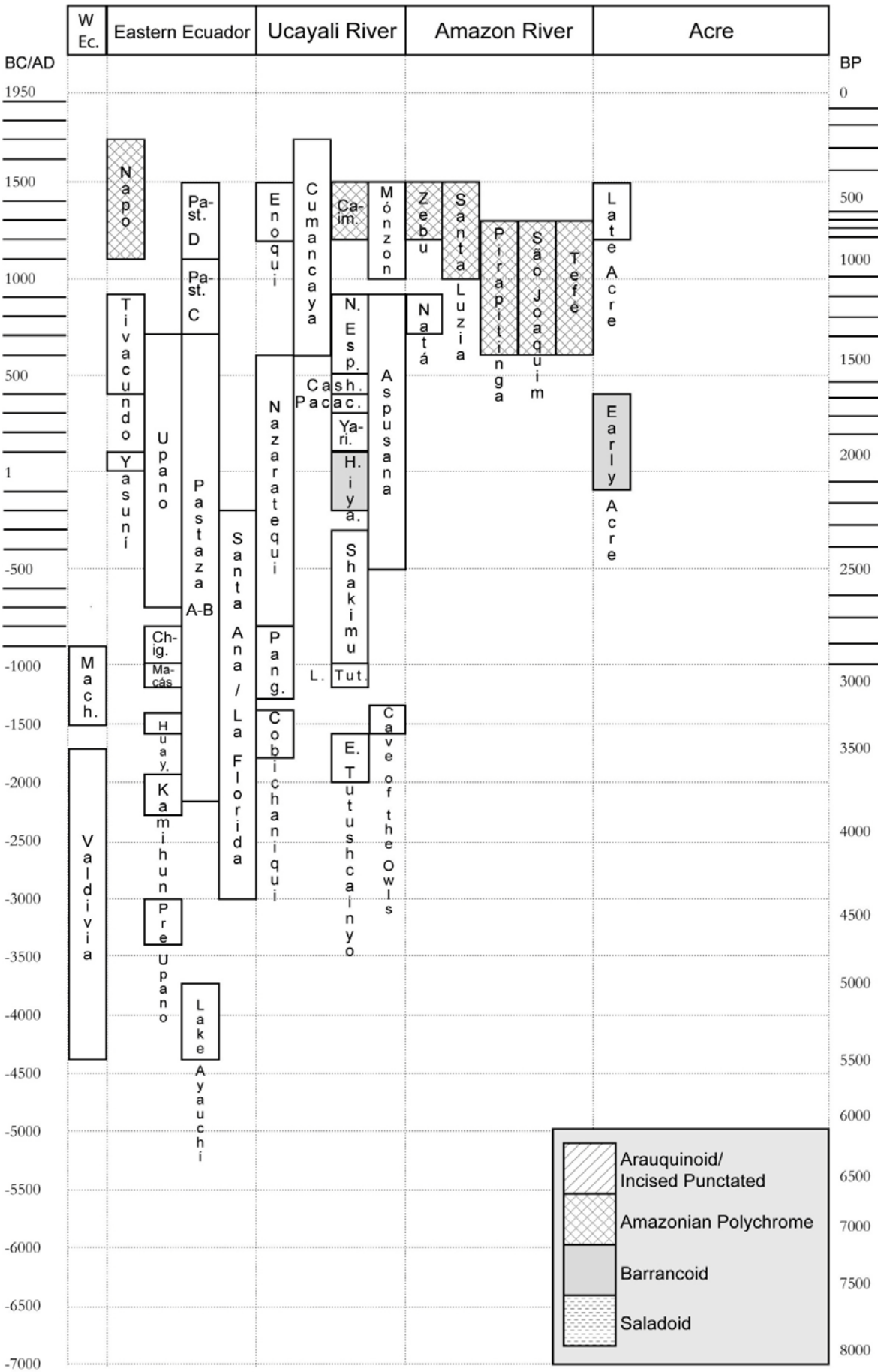
W Ec.
Eastern Ecuador
Ucayali River
Amazon River
Acre
BC/AD
BP
1950
1500
1000
500
1
-500
-1000
-1500
-2000
-2500
-3000
-3500
-4000
-4500
-5000
-5500
-6000
-6500
-7000
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
6500
7000
7500
8000
Napo
Tivacundo
Yasuní
Upano
Pastaza A-B
Pa-st. D
Pa-st. C
Ch-ig.
Ma-cás
Huay.
Kamihun
Pre Upano
Lake Ayauchi
Mach.
Valdivia
Santa Ana / La Florida
Enoqui
Nazaratequi
Pang.
Cobichaniqui
Cumancaya
Cash Pac
Cai-m.
N. Esp.
Ash. ac.
Yaní.
H. iya.
Shakimu
L. Tut.
E. Tutushcainyo
Cave of the Owls
Asputana
Monzon
Zebu
Natá
Santa Luzia
Piraptiinga
São Joaquim
Tefé
Late Acre
Early Acre
Arauquinoid/ Incised Punctated
Amazonian Polychrome
Barrancoid
Saladoid

Figure 2.2.3. Chronological chart of the archaeological phases of western Amazonia. Abbreviations: Caim. Caimito; Cash. Cashibocaño; Chig. Chiguaza; E. Tutishcainyo. Early Tutishcainyo; H. iya. Hupa-Iya; Huay. Huayurco; L. Tut. Late Tutishcainyo; Mach. Machalilla; N. Esp. Nueva Esperanza; Pacac. Pacacocha; Pang. Pangotsi; Past. Pastaza; Yari. Yarinacocha.

In western Amazonia, the Amazonian Polychrome tradition expanded during late prehistory in the form of the Napo phase (AD 1100 – 1700), which became widespread in the upper Napo area (Evans and Meggers 1968:32-81; Hilbert 1968:262; Brochado and Lathrap 1982:13), and the Caimito phase (AD 1200 – 1500) on the Ucayali River (Lathrap 1968:67, 1970:145; Brochado and Lathrap 1982:8; Myers 1990:191). At Cushillococha, there is also the Yanayaco phase, related to the Amazonian Polychrome tradition (Brochado and Lathrap 1982:14) (fig. 2.2.2), and at the Quebrada Intuto site on the Tigre River there is pottery with white-on-red painting related to the Napo phase (Morales 1999) (fig. 2.2.2). Polychrome pottery is also present along the Amazon River in the Colombian *trapecio*, where the Zebu phase has been recovered from the Finca Riviera site (Bolian 1975; Eden et al. 1984:127) (fig. 2.2.2). Further downstream along the Amazon are several Polychrome phases: Pirapitinga (AD 600 – 1300) (Hilbert 1968:185ff; Simões 1972:62); Santa Luzia (AD 1000 – 1500) (Hilbert 1968:239ff; Simões 1972:65; Simões and Araujo-Costa 1978:70); São Joaquim (AD 600 – 1300) (Hilbert 1968:173ff; Simões 1972:66; Simões and Araujo-Costa 1978:70); Tefé (AD 600 – 1300) (Hilbert 1968:165ff; Simões 1972:69f); and several sites containing occupations associated with the Guarita subtradition, such as Catuá and Coari 1 and 2 (Hilbert 1968:40; Heckenberger et al. 1999:357; Boomert 2004:266) (figs. 2.2.2, 2.2.3). Pottery of the Amazonian Polychrome tradition is also widespread along the Madeira River (see chapter 3).

Apart from the area along the eastern slopes of the Andes and along major rivers such as the Amazon, Ucayali, and Madeira, knowledge about the prehistoric cultures of western Amazonia is patchy. The area between the Amazon and Madeira Rivers is almost completely unknown, with only sporadic archaeological data available. One welcome exception is the recent focus on the prehistoric earthworks located between the Madre de Díos and upper Purús Rivers, in the Brazilian state of Acre and adjacent areas of northern Bolivia (fig. 2.2.2). These earthworks have been formed in different geometric shapes indicating ceremonial as well as defensive functions (Schaan et al. 2007; Mann 2008:1152; Saunaluoma 2010:106). At the time of Mann's (2008) publication, 150 geoglyphs had been documented, a number estimated to comprise only 10 per cent of the total number of such earthworks in the area. The earliest datings for these earthworks go back to 1200 BC, but most of the construction seems to have been accomplished during the first and second millennia AD (Saunaluoma 2010:104). Dates from several sites cluster between 100 BC and AD 400 (ibid., 106). This may be related to the general expansion of earthworks and Barrancoid ceramics into the area south of the Amazon River at this point in time. Interestingly, some of the ceramics recovered from the earthworks resemble Barrancoid pottery and are probably associated with the spread of such pottery into

the Llanos de Mojos and the upper Beni River area, where ceramics of the same tradition have been recovered (ibid., 94). Mann (2008:1152) proposes that the earthwork complex probably stretched continuously from Acre to the Beni River, indicating regional integration and exchange of ideas and technology throughout the area. The similarities with the upper Xingu earthworks should of course also be noted. As suggested by Heckenberger (Heckenberger 2008), the Arawak-derived cultural pattern of the late prehistoric upper Xingu area appears to have had close affinities with those of the linguistically related groups to the west (see chapter 3).

The uses of the earthworks are not always clear, but there is no doubt that the geoglyphs had both sacred and secular functions (Mann 2008:1152; Saunaluoma 2010:106). Some of the ditches could have been used for water management and some of the walls may have had defensive functions. Although the earthworks may have served important functions in agricultural systems and as fortifications in times of hostilities, the perfectly square or round geometric formations clearly visible in aerial photographs definitely also indicate a prominent spatial symbolism reflecting concepts of cosmological order Mann (2008:1152). A similar preoccupation with spatial symbolism has been documented among other Arawak-speaking groups, e.g. the topographic writing of the Yanesha and the complex symbolic organization of the landscape through the *Kúwai* routes among the northwest Amazon Arawaks. Saunaluoma (2010:108, citing Erickson 2006) notes that the motives behind the construction of earthworks may include (and combine) practical, aesthetic, ideological, social, and political incentives.

As for the relations between the ceramics found in the earthworks and those of the wider Purús River area, few attempts at regional comparative work have been made. As mentioned above, some of the pottery can be linked to the Barrancoid tradition, and Saunaluoma (2010:108) mentions links to the Ucayali complexes. Much of the pottery from the earthworks seems to pertain to local traditions, rather than being linked to any wider, pan-Amazonian traditions. One exception (apart from the Barrancoid ware) may be the pottery of the Tumichucua site, which shares features with the Curralinho complex on the lower Madeira. Interestingly, Curralinho was initially classified as belonging to the Incised Punctated tradition by Simões (1983, qtd. in Simões and Lopez 1987), then twice reclassified, first into the Amazonian Polychrome tradition by Myers (1988:76, qtd. in Saunaluoma 2010:103), and later into the Barrancoid tradition (Myers 2004:76). Although the dating of the Curralinho complex is almost a millennium later than that of the Tumichucua, the similarity between these two phases is definitely worth taking into consideration, particularly in light of Miller's (1992a) controversial dating of very early polychrome pottery from the upper Madeira River (see section 3.2).

As mentioned above, many of the datings for the Acre earthwork complex fall between 100 BC and AD 400, while a second cluster can be established from around AD 1200 (Mann

2008:1148; Saunaluoma 2010:106). These dates reflect two different periods of construction, possibly associated with two cultural complexes: the first one associated with the expansion of the Arawak regional exchange system across Amazonia, and the second one with the general increase of defensive fortifications precipitated by the expansion of Tupi-speakers in late prehistory.

Other ceramic phases of the Acre area include the Acuriá, Japiim, Jacamim, and Muru phases of the upper Jurúa River (Simões 1983), none of which we know much about. Also discovered in this region are the Ituxi phase of the middle Purús and the Jacuru phase of the upper Purús (Perota 1979, qtd. in Kern et al. 2003:56; Simões 1983). On the upper Purús River is also the Quinari tradition, composed of the Iquiri, Xapuri, Iaco, and Quinari phases (Dias 2006; qtd. in Saunaluoma 2010:102). Apart from the fact that the Quinari tradition shares some features with the Barrancoid and Amazonian Polychrome traditions, such as the use of *caraipé*[32] temper and anthropomorphic vessel shapes, these ceramic complexes are too unknown to serve as the basis for wider conclusions concerning general cultural development in the area.

2.3 Historical linguistics

At the time of contact, the area in western Amazonia with the highest linguistic diversity was the northwest corner of the region. Geographically delimited by the upper Amazon, the Napo River, and the Andean mountain chain, this area hosted a number of linguistic isolates such as Waorani, Muniche, Candoshi-Shapra, Tabancal, Urarina, Taushiro, and Paéz. Small families such as Hibito-Cholon and Cahuapanan contribute to the diversity (fig. 2.3.1). The only Chibchan language of the region, Cofán, is found in the extreme northwestern corner, in the upper Napo area. Further down the Napo, speakers of Western Tucanoan languages such as Siona, Macaguaje, and Orejón inhabited the area between the Napo and Putumayo Rivers. These languages are related to the Eastern Tucanoan languages of the northwest Amazon and were at some point separated from these by the large block of Witoto-speakers north of the Putumayo River. Further downstream, along the southern side of the Putumayo, were speakers of the Peba-Yagua family and in the area between the lower Putumayo and the upper Amazon lived speakers of the isolated Ticuna language.

The main Amazon River was at time of contact dominated by Tupi-speakers all the way from the lower Amazon up to the lower Ucayali, where Panoan languages begin to dominate. At the time of European arrival, the Tupian languages dominated the Amazon River for a distance of over 2000 km, with a number of different languages and dialects spoken. Starting from the

[32]As noted by Carneiro (1974a), the spelling of the name of this tempering material manufactured from tree-bark-ash has (wrongly) been standardized as *cariapé*. The correct spelling is *caraipé*.

easternmost part of western Amazonia, the largest Tupi-speaking groups on the southern shore of the main river were the Yurimagua, Ibonama, Cocama, Omagua, and Cocamilla. Finds of pottery of the Amazonian Polychrome tradition indicate that Tupi-speakers also exerted influence along the Napo River. Due to the rapid extinction of most of these groups, the internal structure of this Tupi-speaking cluster is poorly known.[33] Most linguistic studies recognize a maximum of three Tupian languages in this area: Omagua, Cocama, and Cocamilla (the latter two often grouped together as Cocama-Cocamilla) (see e.g. Campbell 1997:200; Jensen 1999:131; Lewis 2009). Linguistic studies have now exposed the relation between Cocama and Omagua as a non-genetic relationship, which means that these languages are not derived from a single ancestor language (Cabral 1995; Michael n.d.:7f). Prior to this discovery, Cocama and Omagua were considered products of an upriver migration of the Tupinambá, whose language would have diversified into Cocama and Omagua. Now that this account is no longer considered accurate, Epps (2009:599) has suggested that that Cocama and Omagua represent two different language shifts from Arawak languages to Nheengatú, the Tupinambá-based *lingua franca* still spoken in the northwest Amazon. As much data from these languages is lacking, a clear solution to the problem of the relationship between Cocama, Omagua, and the Tupian language family does not seem likely. However, the fact that from the mouth of the Purús to the Peruvian border, the Tupi-speakers along the main Amazon had Arawak-speaking neighbours immediately to their north may suggest that Arawaks once populated the main river (see fig. 2.3.1). Also, the case of the Waraikú, the only undisputable Arawak language between the upper Purús and the Amazon, suggests a refugee population surrounded on all sides by Pano- and Katukina-speakers.

Returning to the linguistic composition of western Amazonia at the time of contact, the area between the Amazon, Marañon, and Napo Rivers was, as mentioned above, characterized by a large number of language isolates and small families. Two small to medium-sized families, Jivaroan[34] and Zaparoan was also present in this area, exhibiting vertical control over the ecological zones along the eastern Andean slopes and the trade routes running through this territory.

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[33] Several factors contributed to the rapid reduction of Tupi-speaking societies of the upper Amazon: their strategic location along the main river exposed them to European-introduced diseases, slave raids, and military expeditions. Moreover, as these Tupian societies were already militarized before European conquest, having expanded rapidly in the centuries before contact and being used to conquering powerful enemies, they frequently chose to respond to European penetration into Amazonia with military force, which proved fatal to all indigenous groups attempting this strategy.

[34] The upland Jivaroans were heavily Incanized, while the lowland groups were less so (Adelaar with Muysken 2004:418).

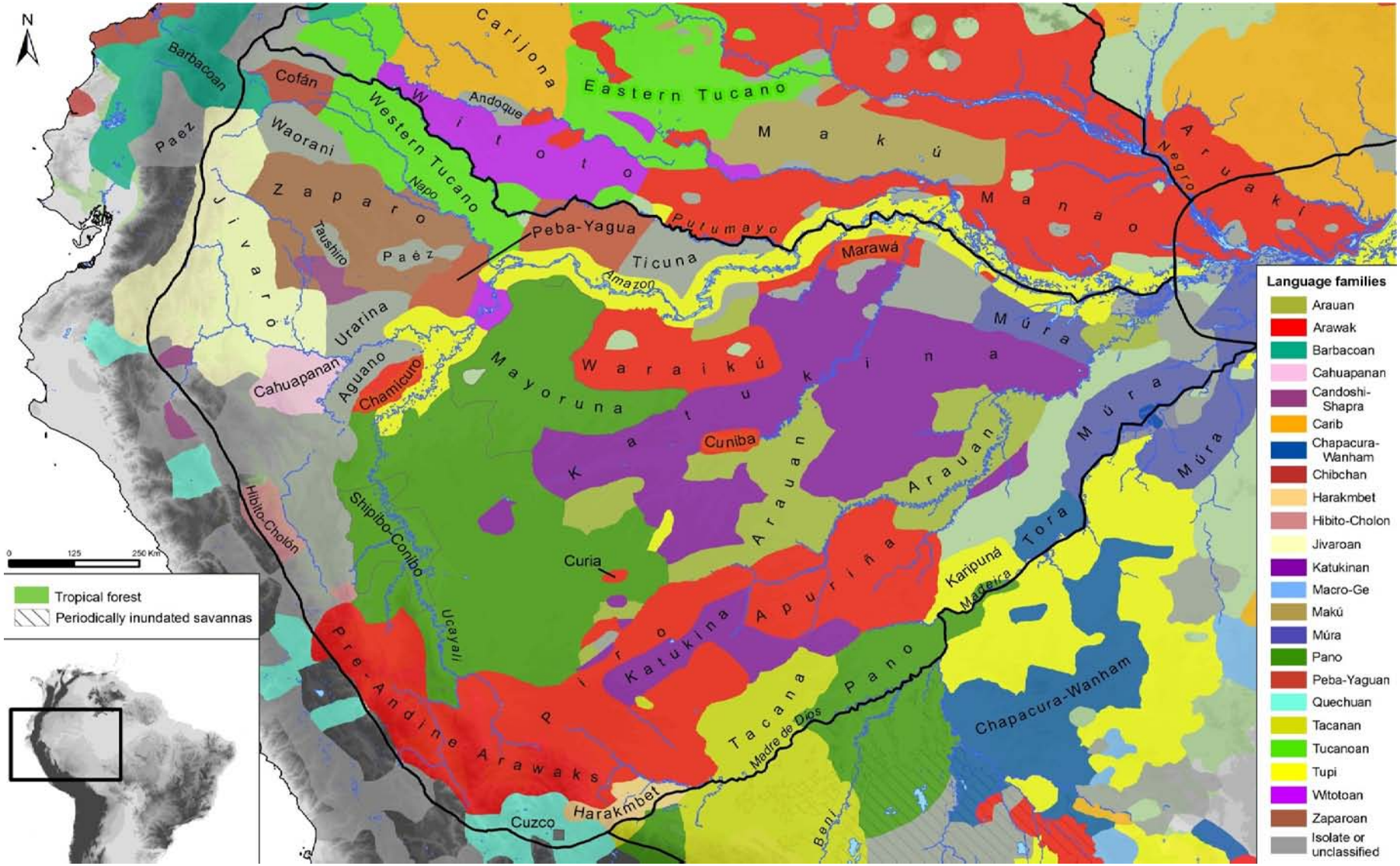

Figure 2.3.1. Ethno-linguistic groups of western Amazonia at the time of contact.

The Tupi-speaking groups were in almost total control of the main river up to the lower Ucayali area, but between the mouth of the Napo and Marañon Rivers, their dominance seems to have been broken by a group of Witoto-speaking Ocaina (fig. 2.3.1). The presence of the Ocaina along this part of the Amazon, however, may simply reflect the post-Tupian situation in the area. The Ocaina were also present north of the Putumayo River, neighboring the Andoke (a linguistic isolate). This may indicate that the Ocaina of the upper Amazon split off from the main block of Witoto-speakers and expanded south into western Amazonia, either following the general upheavals in the area during late prehistory due to the Tupian expansion, or during the early days of colonization when the power of the Omagua, Cocama, and Cocamilla was beginning to decline.

In the area around the Huallaga River, between the Marañon and Ucayali Rivers, a number of isolated or unclassified languages dominate the linguistic map. Here we find the unclassified Aguano, Muniche, Moyopampa, Chachapoya, and Payanso, as well as the small Cahuapanan and Hibito-Cholón families (fig. 2.3.1). Here also lived the Chamicuro, an Arawak-speaking group close to the lower Ucayali, most likely the remains of a more extensive Arawak cluster that once inhabited the upper Amazon. Taylor (1999:198) mentions that the upper Huallaga in pre-Inca times was inhabited by Arawak groups related to the Yanesha. These groups were probably also related to the Chamicuro,[35] who at the time of contact occupied the area between the lower Huallaga and the lower Ucayali. The linguistic affinity between Chamicuro and Yanesha (Adelaar with Muysken 2004:423; Campbell 1997:181) is not surprising, considering that they are situated at opposite ends of the same, major transport route.

Other scattered Arawak-speaking groups of western Amazonia at the time of contact include the Waraikú south of the Amazon River, separated from the immediate river by the Omagua (Campbell 1997:181); the Marawá,[36] in a position similar to that of the Waraikú further east; the Cuniba (Kuniba)[37] on the middle Jurua River; and the Curia (Kuria) in the southeastern corner of the northern Panoan cluster (fig. 2.3.1). In the highlands above the northwestern cluster of small families and language isolates, Quechuan languages were dominant, alongside

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[35] The Chamicuro are very similar culturally to the Itucale, a group of Urarina-speakers of the same area, north of the Marañon River (Steward and Métraux 1948:557). The Chamicuro were bitter enemies of the Aguano (linguistically unclassified, but claimed to be cognate to the Chamicuro [Gordon 2005]), but after severe decimation by epidemics, the two groups settled together at the San Xavier mission in 1758 (Steward and Métraux 1948:558).

[36] The location of the Marawá in this part of the Amazon, confirmed by Métraux (1948:662f), is puzzling, considering that the other members of this ethnolinguistic group were located in Brazilian Amapá. Perhaps this group is a fragment of a once much greater territorial grouping of Marawá, or a subgroup that migrated here during the upheavals following European colonization.

[37] The Arawak-speaking Cuniba are not to be confused with the Arauan-speaking Culina (Kulina) to the west (Aikhenvald 1999:68; Métraux 1948d:662; Landar 1977:461).

several unclassified languages that became extinct rapidly following the Spanish arrival. The expansion of the Inca state prior to Spanish arrival most likely also contributed to a decreased linguistic diversity in the highlands.

Further up the Ucayali River, above the last outposts of Tupi-speakers, Panoan languages are predominant. The Panoan languages form two large blocks in western and southern Amazonia, one of them centered east of the Ucayali, the other one along the lower part of the Madre de Díos River.[38] Among the Pano-speaking groups of the northern cluster, there seems to have been an internal division based on subsistence strategies, with one group practicing riverside agriculture along the *várzea* of the Ucayali River, while another occupied the hinterlands east of the Ucayali. Among the riverine Panoans are the Sensi, Panobo, Shipibo, and Conibo, the latter two often grouped into a single language (Shipibo-Conibo) after having coexisted at mission settlements during the colonial period. The hinterland Panoans comprise a number of separate languages, with many small groups of mobile hunter-gatherer populations that remain poorly known today. Hinterland Panoan groups with more extensive geographical distribution include the Mayoruna,[39] who have occupied a large tract of land east of the lower Ucayali and upper Amazon (fig. 2.3.1). Separating the two blocks of Pano-speakers was a wedge of Arawak-speaking groups stretching from the Apuriña of the middle Purús River all the way to the pre-Andine Arawak[40] languages such as Yanesha,[41] Nanti, and Machiguenga on the eastern Andean slopes west of the upper Ucayali. East of the pre-Andine cluster, the Arawak-speaking Piro[42] maintained contact with the Apuriña, the easternmost Arawak-speaking group of western Amazonia. As for the relationships between these Arawak groups in the region, Gow (2002) and Renard-Casevitz (2002) note a clear distinction between the Piro and the pre-Andine groups. Although the Piro for a long time have lived close to their Arawak neighbors in the west and share some cultural similarities with them, their main cultural affinities are with the riverine, Pano-speaking Shipibo and Conibo.

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[38] Apart from these two coherent clusters of Pano-speakers, the Pano-speaking Atsahuaca inhabited the eastern Andean slopes south of the upper Madre de Díos River (fig. 2.3.1, 3.3.1).

[39] The Mayoruna language is often referred to as Matses (Lewis 2009).

[40] The pre-Andine Arawak groups are sometimes referred to by the derogatory umbrella term "Campa". In this text, the term "pre-Andine" (Gordon 2005) is used instead.

[41] The intensive exchange between highland and lowland groups resulted in extensive linguistic interaction. For example, the Yanesha language was so strongly influenced by Quechua that early researchers found it difficult to classify it as Arawak (Adelaar with Muysken 2004:424). The links between the Inca empire and lowland areas were numerous and far more flexible than what many colonial chroniclers would have us believe (Taylor 1999:203). In fact, Inca pressure on lowland groups appears to have intensified military alliances and trading networks in the lowlands – especially those under Arawak control (ibid.).

[42] The Piro language is also known as Yine.

Linguistically, the Piro are most closely related to the Apurinã, from whom they at some point must have split off, entering into socio-economic and cultural relationships with their western neighbors. Although the pre-Andine and Purús Arawaks are part of the same Arawak branch (southern Maipurean, also including the southern Arawaks Baure, Guaná, Chané, Terêna, Mojo [Ignaciano and Trinitario] [Payne 1991]), their internal differences suggest a considerable time depth. The case of the western Maipurean languages, Yanesha (Amuesha) and Chamicuro, who are even less closely related to Piro and Apurinã, also indicate a considerable time depth for the diversification of Arawak languages in the region.

Judging from the establishment of the earthworks in Acre at 100 BC and in the Llanos de Mojos at 400 BC, a type of settlement organization and agricultural technology characteristic of Arawak-speaking groups appears to have diffused through southwestern Amazonia during the final centuries BC. It should be noted that the earthworks of the Llanos de Mojos seem to have been established before those of Acre, suggesting that the wet savannas of the Llanos de Mojos stimulated this type of landscape organization before it spread north into Acre. This may indicate that the presumably Arawak-speaking societies responsible for the earthworks preferred to settle in the savanna habitat before expanding into the dryer landscape of Acre. On the other hand, future excavations may invert this picture, perhaps showing that the diffusion in fact occurred from the north. A careful estimation of the date of separation between the southern, pre-Andine, and western Maipurean Arawaks would be that the western Maipurean and pre-Andine Arawaks were separated from the southern Arawaks at least by the end of the first millennium BC. This estimate allows plenty of time for the socio-cultural and linguistic diversification of southern Arawaks such as Guaná and Chané and the subsequent Andeanization of the Chané before the arrival of the Tupi-speaking Chiriguano into their territory in the 1300s (see chapter 3).

Gow (2002:159) describes the socio-linguistic development of the region as "an ancient radiation of Proto-southern Maipurean speakers within southwestern Amazonia, leading to the ancestral speakers of Proto-Campa-Machiguenga being located in the northwest in southeastern Peru and the ancestral speakers of Proto-Piro-Apurinã-Baure-Ignaciano being located in northern Bolivia." To Gow (2002:162, 164), the opportunities of trade with the pre-Andine Arawaks and the Shipibo and Conibo was the main force of attraction for the Piro, stimulating their split from the Apurinã and their subsequent move to the west. The Piro share cultural features such as manioc beer, means of food preparation, and clothing customs with their pre-Andine Arawak neighbors and they do recognize them as being "people like us" (ibid., 154). However, modern Piro also emphasize their differences from these Arawaks, pointing instead to their cultural similarities with the Shipibo and Conibo, who are "people of the river", and with whom they share canoe manufacturing and transportation, pottery

styles,[43] and other design features (ibid., 155), all indicating long-term socio-cultural interaction and ethnogenesis.

During the colonial period, the areas occupied by pre-Andine Arawak groups in Peru and Bolivia represented an economic and cultural zone mediating between the Quechua- and Aymara-speakers of the Andean highlands and the Pano-speakers of the tropical rainforests in the lowlands. This pattern of exchange no doubt dates back to pre-Columbian times. Further north along the eastern Andean slopes, the Jivaroans had been interacting with highland Quechua-speakers at least since the Inca era (Adelaar with Muysken 2004:418). Adelaar and Muysken (ibid., 432) mention that Jivaroan territory in pre-Columbian times may have extended into the southwestern part of Ecuador (the Loja province), reaching down the western slopes of the Andes. If that was the case, the Inca conquest of highland Jivaroan territories would explain the heavily Incanized condition of Jivaroan groups of the eastern slopes mentioned by Adelaar and Muysken.

Quechuan influence on the languages along the eastern Andean slopes has been "far from trivial" (Adelaar with Muysken 2004:499). Languages such as Cholón, Yanesha, Muniche, and Shuar have adopted Quechua vocabulary, and Quechua numerals are found among the Conibo, Shipibo, Muniche, Tacana, Urarina, Yameo, and Yanesha. Quechua has also functioned as a *lingua franca* and even replaced the original languages in several areas in the lowlands and along the Andean slopes.

There have also been significant linguistic influences between Panoan and Arawak languages (Aikhenvald and Dixon 1998:251-252). The ancestors of what are now known as riverine Panoans (e.g. the Shipibo and Conibo) probably emulated the lifestyle and organization of Arawak-speaking communities on the Ucayali, whereas the Arawak-speaking Piro have obviously been influenced by their long history of interaction with Pano-speakers (Santos-Granero 2002:31-32). An example of the many cultural convergences between Panoans and Arawaks is the practice of tooth blackening, characteristic of most Panoans but also of the Arawak-speaking Piro, to whom it conferred the name Chontaquiro (Steward and Métraux 1948:539, 574).

In the area around the Madre de Díos River was a large block of languages associated with the Tacanan family, a linguistic unit which some scholars have classified together with the Panoan family (see e.g. Adelaar with Muysken 2004; Kaufman 2007). In the southwestern corner of the region was a cluster of Quechuan languages around Cuzco, as well as the small Harakmbet

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[43] The Piro have painted pottery influenced by the polychrome ceramics manufactured by Shipibo and Conibo, the roots of which derive from Caimito pottery, which was probably made by Tupi-speakers (Gow 2002:160). Here we can thus trace how ceramic influences have passed through three linguistic families, from Tupi- through Pano- to Arawak-speakers.

family.[44] Harakmbet was previously classified together with their Arawak-speaking neighbors (see comment in Aikhenvald 1999:74), but the current consensus among linguists is that they should be treated as a language isolate (Wise 1999:307) and that their structural similarities with Arawak languages in the area is the result of borrowing (ibid., 312).

Between the Madeira and Amazon Rivers, in the Brazilian state of Amazonas, two large blocks of Arauan- and Katukina-speakers were found at the time of contact (fig. 2.3.1). The Katukina-speakers dominated the area along the Jurua River, while the Arauan languages formed a continuous block along the Purús. East of the Arauan languages, along the northwestern shore of the Madeira, is an area that is left unclassified in most linguistic reconstructions for the time of contact (cf. Campbell 1997; Kaufman 2007). During the 1700s and 1800s, this area was inhabited by Múra-speaking[45] groups that had expanded over a vast area, from the Trombetas River in Brazil to the border of Peru. However, according to Aikhenvald and Dixon (1999:353), the Múra expansion occurred after the original inhabitants of these areas had been eliminated by European diseases and slave raids, and therefore offers no clue to which languages were spoken in the area at the time of contact. On the northern bank of the middle Madeira River were also the Tora, Chapacura-Wanham-speakers with their main distribution in Rôndonia (fig. 2.3.1)

Anne-Christine Taylor (1999:208) has suggested that western Amazonia was much less ethno-linguistically fragmented than what authors such as Julian Steward and Donald Lathrap would have us believe. Taylor proposes that during pre-Columbian times the area was divided into relatively homogenous ethnic and linguistic zones and that the views presented by Steward (1948a) and Lathrap (1970) are heavily influenced by cultural fragmentation following European colonization. Whatever the case, there are numerous indications of interaction between the different ethno-linguistic groups of the area.

The most obvious signs of this interaction are the many documented trade relations between western Amazonian groups, but there are also many linguistic indications of inter-group contact. Adelaar and Muysken (2004:5f) distinguish between different types of language contact in the Andes and list six types of contact situations:

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[44] Harakmbet has been classified either as a single language with two dialects, Amarakaeri and Huachipaeri (Wachipaeri) (Wise 1999:311), or as a language family with Amarakaeri and Huachipaeri as the two language components (Gordon 2005). It was previously thought to belong to the Arawak language family, but is now known to be related to the Brazilian Katukina family (Adelaar with Muysken 2004:39).

[45] Múra (Múra-Pirahã) once comprised a number of dialects, of which Pirahã is the only one surviving to this day (Aikhenvald and Dixon 1999:354).

1. Borrowing or diffusion of specific lexical items between groups, sometimes via intermediate groups.
2. Lexical influence from demographically or culturally dominant languages, e.g. Quechuan influence on Yanesha (Amuesha).
3. Long-term convergence of languages, as in the case of Quechua and Aymara, which have coexisted in the same region for a substantial amount of time.
4. Language mixture through relexification, i.e. language change by replacement of lexicon without grammatical change, e.g. the Kallawaya secret language and possibly also Cocama and Omagua.
5. Language fusion, occurring when decimated groups are socioculturally absorbed by another group, but retaining their old language, as in the Chiquitano area in Bolivia, or among the Island Carib[46] of the lesser Antilles.
6. The influence of Spanish (or Portuguese in Brazil). This has occurred in a number of ways all over Amazonia in the form of borrowing, convergence, language shift, and the creation of pidgin languages.

This list of different forms of language interaction is interesting not only from a linguistic point of view, but can also serve as a tool for classifying different kinds of sociocultural interaction. It is clear that the different forms of linguistic contact are dependent on the type of relationship between the groups involved. In the case of lexical borrowing, for example, there is no necessary indication of unequal power relations between the groups involved. For example, a group can simply choose to borrow a lexical item on the basis of the introduction of e.g. a new technology, crop species, or weapon. In other cases there may be a substantial amount of military or economic power involved in the language change, such as in the case of European influence or in other circumstances where demographically and/or culturally dominant ethnic groups exert influence over less powerful groups (cf. Santos-Granero 2009).

2.4 Ethnohistory

There are numerous indications of contact and exchange between various groups of western Amazonia in historical as well as archaeological sources. The region was characterized by what Reeve (1993:107) calls a "three-way trade pattern": a flow of merchandise and ideas between the Andean area and western Amazonia as well as between the latter area and areas further east such as the middle and lower Amazon River, the Río Negro and the Llanos de Mojos. These trade connections were present in pre-Columbian times, and they continued to be used for the circulation of European as well as indigenous trade goods after Spanish contact. European

[46] For an extended discussion on Island Carib, see chapters 5 and 6.

contact altered old alliances and created new relationships between indigenous groups, not least as a consequence of the slave trade, which generated a marked increase in hostilities (ibid., 108).

In western Amazonia, the most important routes of exchange coincided with major rivers, particularly the Madeira-Madre de Díos, Ucayali, Huallaga, Napo, and Amazon Rivers. Some groups were specialized mediators of trade and controlled certain routes of exchange, such as the Arawak-speaking Piro, who controlled much of the exchange along the upper Ucayali (Taylor 1999:199). The Piro appear to have developed a more extrovert and inclusive attitude to other peoples, including whites, than both the pre-Andine Arawaks and the Apurinã (Gow 2002). This attitude is probably closely connected with their identity as moderators of trade in the region. Indeed, the historical documentation of trade in the area identify the Piro as the most active traders, mediating trade in products between the Andean highlands and the eastern lowlands, as well as along the north-south direction of the upper Ucayali.

One of the most spectacular features of western Amazonian exchange was the long-distance trade conducted by groups like Piro, Conibo, and Omagua (Taylor 1999:199), reaching beyond the borders of the area treated in this chapter. Examples of such long-distance exchange include the trade between the central Amazon and the Cuzco area, and along the Purús and Madeira Rivers. The latter trade routes span over more than 2000 km as the crow flies, a distance qualifying as one of the longest trade routes in Amazonia (fig. 2.4.1) (Santos-Granero 1992:23, 45).

Mapping the native trade routes of the area is important not only for our understanding of who traded what along which routes, but also for our understanding of the routes of diffusion of non-material culture such as language, technological knowledge, and religious ideas. The obvious need of a means of communication among traders along a route crossing linguistic boundaries stimulated the emergence of trade languages and multilingualism among the participants. A brief look at the system of trade routes in western Amazonia (fig. 2.4.1) will suffice to confirm the extent to which trade did cross such linguistic boundaries. Indigenous strategies for mastering the diverse linguistic landscape should come as no surprise in a region such as Amazonia, with its numerous examples of multilingualism. The occurrence of multilingualism and language shifts has been documented in various parts of Amazonia (Schmidt 1917; Sorensen 1967; Jackson 1983; Campbell 1997; Aikhenvald 2002, 2003).

The region of the upper Ucayali, Purús, and Madre de Díos Rivers is described by Santos-Granero (1992:29) as one of the four most important trade routes in the whole Amazon

region.[47] Centered on the extraction of salt at Cerro de la Sal,[48] trade routes reached out in all directions, following the Ene, Tambo, Perené, and Apurímac Rivers (fig. 2.4.1). The Ucayali route was a key link in the transport of merchandise between the Andean highlands and the lowland rainforest and was predominantly occupied by Arawak-speakers at the time of contact. The Arawak-speaking groups in the region are divided into three groups: Western Maipurean (Yanesha and Chamicuro); pre-Andine (about ten closely related groups including the Ashéninka, Asháninka, Caquinte, Nanti, Machiguenga, and Nomatsiguenga); Purús Arawaks (Apuriña, Mashco Piro, Iñapari, Machinere, Kanamaré, and Yine [Piro]). The area is also home to Panoan groups, including the Shipibo and Conibo along the Ucayali River and various hinterland groups along the tributaries (Campbell 1997; Dixon and Aikhenvald 1999a; Gordon 2005; Kaufman 2007; Lewis 2009).

It is not until the historical period that we can really begin to grasp the extent of the trade and exchange along the eastern slopes of the Andes of western Amazonia. Much of the exchange pattern documented from the historical period originated in pre-Columbian times, and there is no reason to believe that trade was less intense before the arrival of the Spanish. However, the historical records permit us to examine in greater detail which groups were in control of which routes, and what items they traded.

The now extinct Puruhá[49] used the route through the Andean slopes of western Ecuador to acquire salt in exchange for *cabuya* fiber[50] (Murra 1946:798). Immediately south of the Puruhá, the Cañari, who are believed to be linguistically related to the Puruhá (ibid., 799; Landar 1977:449),[51] used both sides of the Andean slopes to trade cotton and salt with lowland groups (Murra 1946:800).

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[47] The other three are: 1) Highland Ecuador, via the Napo River to the lower Amazon; 2) the lower Amazon – Río Negro – Casiquiare – Orinoco – Guianas; 3) the lower Ucayali – Cuzco (Santos-Granero 1992:29).

[48] Besides being an important site for salt extraction, Cerro de la Sal was an important component in the "topographic writing" of the Yanesha (Santos-Granero 1998:142). This area had been important for indigenous exchange since prehistoric times. Already by 1200 BC, the lowland area below Cerro de la Sal was linked to the site of Kotosh in the highlands and to the Tank site at Ancón, near present-day Lima (Lathrap 1973:180). This route was in turn linked to the coastal trade routes along the Peruvian and Ecuadorian coast, and thus ultimately to Valdivia in coastal Ecuador (Lathrap 1973:176-180).

[49] The Puruhá language is poorly documented but it is believed to have belonged to the Chimúan language family (Campbell 1997:187; Landar 1977:500).

[50] The scientific name of this plant is *Furcraea andina.* It is used for garments, ropes, hammocks, etc.

[51] Murra (1946:801) remarks that throughout the area inhabited by the Palta (who spoke Shuar, a Jivaroan language [Gordon 2005]), the Cañari language was understood. Taylor (1999:198) mentions that the Palta probably had occupied that region since the seventh century AD and that they seem to have been socio-culturally close to the Jivaroan groups Bracamoro (Bracomoro), Zamora, and

Another route connecting the lowlands with the Cuenca Basin passed through the high Andes of southern Ecuador and northern Peru, via the trade center of Bagua on the Peruvian side (fig. 2.4.1). From this point, trade with the lowlands along the Río Marañon was still active during the 1500s (Burger 1992:117). During the 1800s, the Jivaroan Canelos transported salt and dart poison from the Ecuadorian Andes via the Bobonaza, Pastaza, and Marañon Rivers down to the Huallaga (Oberem 1974[1967]:346-356, qtd. in Lyon 1974). During the 1700s, lowland products such as salt fish, woven pouches, beeswax, manioc meal, feathered hats, container lids, coca, and fish lines were sold or traded to the highland peoples along the Huallaga (Steward and Métraux 1948:604).

Evans and Meggers (1968:5) mention numerous examples of trade routes linking highland and lowland areas along the eastern slopes of the Ecuadorian Andes and further down the Napo, Pastaza, and Huallaga Rivers.[52] In the northern part of this area, trade routes were part of the *mindalá* exchange network that stretched into the southern Colombian Andes and to the upper Putumayo River. The *mindalá* were a specialized elite group of merchants from the Barbacoan-speaking Yumbos[53] (Valdez 2008:866), whose trade routes had been in use since pre-Incaic times (Salomon 1986:102, 105, 108-110). The *mindalá* traded gold, *chaquira,*[54] bone beads, cotton, fish, salt, capsicum pepper, and coca between different groups in the area (Salomon 1986:68-69, 83-96, 102-105). Routes along the eastern slopes of the northern Ecuadorian Andes were also used by the Barbacoan-speaking Cara[55] to acquire cotton, *achiote*, parrots, monkeys, and even children in exchange for blankets, salt, and dogs (Murra 1946:794). The Quijo conducted long trading expeditions through this area to the lower Huallaga in order to exchange textiles for salt. At their own markets, the Quijo also traded in gold, food, and slaves, in addition to cloth. The Quijo were one of the few tribes in the area reported to have a fixed medium of exchange, the *curato* (*carato*), similar to money. The *curato* consisted of strings of 24 bone beads and was used to fulfill social obligations and to

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Chinchipe. Chinchipe, however, remain linguistically unclassified in most sources (Steward and Métraux 1948:615-617; Landar 1977:456).

[52] Unlike the trade networks of the southern Peruvian Amazon, which were dismembered by the intervention of the Peruvian army in the mid-1800s, the exchange systems of eastern Ecuador and Bolivia remained intact well into the 1900s (Taylor 1999:245f).

[53] The Yumbos language is now extinct and has been replaced by Quechua (Landar 1977:523).

[54] *Chaquira* are a kind of shell beads (Steward 1959:56).

[55] The Cara were particularly focused on keeping themselves stocked with salt and coca, since their mythology required fasting for seven or eight days, consuming only salt and coca, to prevent death after seeing a mythological snake (Murra 1946:795).

remunerate workers (Steward and Métraux 1948:654). The function of the *curato* seems to have been very similar to that of *quirípa* in the northwest Amazon (see chapter 6).

The Jebero seem to have been an important link in the trading connections across this part of the Andes. They traded regularly with the Spaniards in Moyobamba, exchanging captives for iron tools that were passed on to the Cocama in exchange for canoes and clothing (Reeve 1993:112). In serving as strategically positioned middlemen between the Spaniards and the native tribes, groups such as the Jebero were able to strengthen their position in the regional trade network (fig. 2.4.1).

The Cocama were connected with the Andean area via the Muniche,[56] from whom they acquired dart poison (Reeve 1993:112). The Muniche also traded with other native groups along the upper Huallaga, and may have been in contact with the Cholon and Hibito on the upper Marañon, who in the 1600s launched trading expeditions to Cajamarquilla to trade coca for Spanish garments and iron (Steward and Métraux 1948:603) (fig. 2.4.1). The Cholon and Hibito represented the uppermost extent of tropical forest peoples in the Andean region (Reeve 1993:112), and together with the Arawak Pantagua[57] of the same area managed to maintain their traditional role as intermediaries between the Andes and the lowlands well into the 1700s (Taylor 1999:217).

The Tupian cultural repertoire appears to have been very attractive to non-Tupian groups in the region. According to Métraux (1948e:697), "Omagua painted earthenware, calabashes, and cotton cloth seem to have been in great demand in Colonial times among neighboring tribes." There was also a demand among Tupian groups for products manufactured by non-Tupians. The Omagua and Cocama travelled to the Peba and Ticuna to obtain *curare* for their blowgun darts (Métraux 1948e:697), and the Cocama traded with the Cahuapanan-speaking Jebero of the Huallaga River, exchanging canoes and decorated woven clothing for iron tools (Reeve 1993:110).

At the time of contact, the Tupian groups Cocama, Omagua and Cocamilla controlled the trade on the upper Amazon, the Napo, and further downstream along the Amazon. They had trade connections with other Tupian groups such as the Yurimagua, who were in turn connected to the trade networks of the Río Negro via routes to the north of the Amazon and Japura Rivers (Reeve 1993:114).

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[56] The Muniche language was previously thought to have been a member of the Cahuapanan family (Reeve 1993:112), but is now classified as a linguistic isolate (Gordon 2005).

[57] Pantagua belonged to the pre-Andine Arawak block.

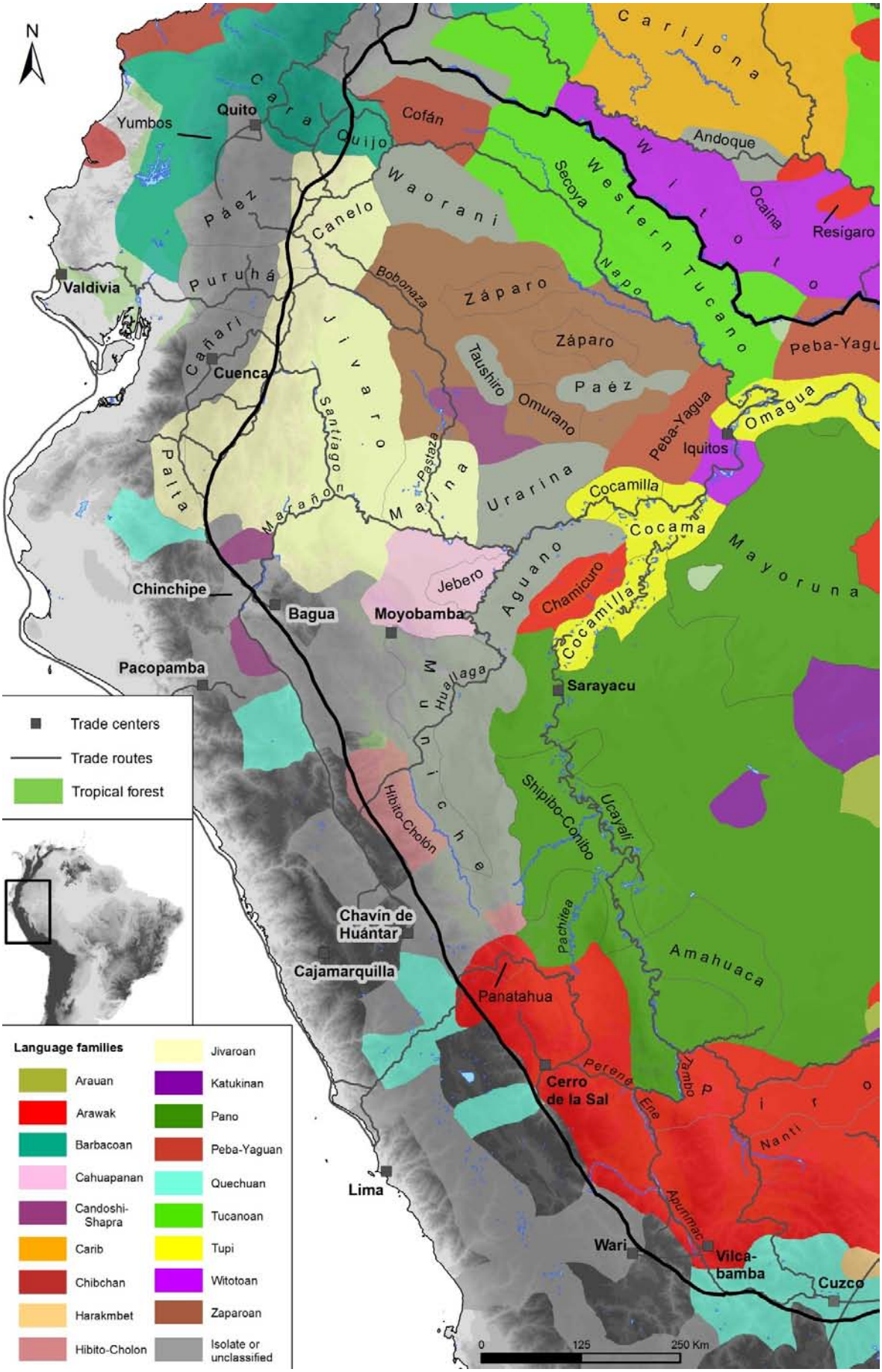
N
Quito
Yumbos
Cofán
Andoque
Resigaro
Valdivia
Cuenca
Chinchipe
Bagua
Moyobamba
Pacopamba
Sarayacu
Iquitos
Chavín de Huántar
Cajamarquilla
Panatahua
Cerro de la Sal
Lima
Wari
Vilca-bamba
Cuzco
Trade centers
Trade routes
Tropical forest
Language families
Arauan
Arawak
Barbacoan
Cahuapanan
Candoshi-Shapra
Carib
Chibchan
Harakmbet
Hibito-Cholon
Jivaroan
Katukinan
Pano
Peba-Yaguan
Quechuan
Tucanoan
Tupi
Witotoan
Zaparoan
Isolate or unclassified
0
125
250 Km

Figure 2.4.1. Ethnohistoric interaction networks in western Amazonia.

On the middle and lower Ucayali, the Panoan Conibo and Shipibo mediated the trade between the Tupian groups (Steward and Métraux 1948:581) and the Piro, who controlled the trade in the area around Cuzco. The two main trade routes connecting Cuzco with the lowlands during the 1500s were: (1) via the Urubamba River and down the Ucayali to the north, and (2) via the Madre de Díos to the lowland areas in the south (Lyon 1981; Camino 1977; Santos-Granero 1992; Pärssinen and Korpisaari 2003). Trade between Cuzco and the Vilcabamba area was intense during the 1500s, when coca, cotton, *ají*,[58] feathers, resins, wax, wood, and dyestuffs were marketed at the Inca capital (Lyon 1981:4). Between the 1500s and 1800s, the Piro distributed gold and silver from the Andes as a source of chiefly prestige among the Conibo and Cocama of the lowlands (Taylor 1999:199). In the 1800s, the Piro traded parrots and monkeys for iron tools at Sarayacu (Steward and Métraux 1948:545). The Shipibo and Conibo controlled exchange along the middle Ucayali, trading upstream with the Piro (Santos-Granero 1992:19) as well as downstream with the Tupi-speaking Cocama, Cocamilla, and Omagua (Steward and Métraux 1948:581). The trade between the Piro and the groups of the lower Ucayali also involved the pre-Andine Arawak Anti[59] (Taylor 1999:199), who lived close to the Yanesha of the upper Huallaga. Together with the pre-Andine Arawak groups, the Piro controlled the trade between the highlands, the tropical lowlands, and the Llanos de Mojos[60] via the Urubamba, Apurímac, and Madre de Díos Rivers. The connections between the pre-Andine Arawaks and their linguistic relatives on the Llanos de Mojos appear to have involved both material and ceremonial exchange. According to Renard-Casevitz (2002:136), both the Mojo and some pre-Andine groups travelled to Cuzco to take part in religious ceremonies.

The trade between the pre-Andine Arawaks and the groups along the Ucayali and upper Amazon River was based on a multiethnic political organization that appears not to have been present in the northern part of the Andes. Both during the Inca period and in the 1700s, the pre-Andine Arawaks and Piro united themselves with downstream Panoan and Tupian groups

[58] Chili pepper (*Capsicum annuum*).

[59] According to Renard-Casevitz (2002:124) Anti was "an Incan name given to all the nonsubjugated pre-Andine Arawak living in the Antisuyu." Anti is not to be confused with the pre-Andine Arawak Nanti of the same region (Gordon 2005).

[60] The Llanos de Mojos of Bolivia also had a substantial Arawak population, and the Jesuit missionaries in the area between 1675 and 1768 tried to establish the local Arawak language as a "standard Indian language" (i.e. a *lingua franca*) to "do away with the 'babel' of Indian languages" (Taylor 1999:226f). The Jesuits did not succeed in this ambition, however, and the Llanos de Mojos and the area north of the Guaporé River in Brazil remain one of the most linguistically diverse in South America.

to form military alliances against the Incas and the Spaniards respectively (Taylor 1999:241; Gow 2002:152). Taylor (1999:242) points out that "[i]n the rest of the northern *montaña*, the mode of intertribal and interethnic relations underlying the Arawak confederation was unknown and even unthinkable." The reason for this was that the groups in the north were atomized, and lacking collective identity even under periods of political stress, and frequently engaged in feuding and intertribal wars that the pre-Andine Arawaks were spared. A similarly peaceful pattern is documented for southern Arawak groups such as the Mojo and Chané (Renard-Casevitz 2002:130). As observed by Santos-Granero (2002), the absence of intra-group warfare is one of the main characteristics of the Arawak ethos, and this pattern is clearly visible as early as in pre-Columbian times.

During the 1500s, some Piro groups conducted three-month trading expeditions along the Ucayali, reaching as far as Cocabambilla, more than 300 km from their home (fig. 2.4.1). At Cocabambilla, parrots, cotton *cushmas*,[61] cedar, canoes, gum, resins, and turtle oil were exchanged for metal tools, salt, and cloth (Camino 1977:131f; Santos-Granero 1992:23, 45). During the 1700s, the Piro exchanged salt and canoes for maize, tobacco, and animal skins from the Panoan Amahuaca (Santos-Granero 1992:19) and in 1806 they exchanged wax for tools, cloth, fishhooks, and beads from groups along the Ucayali (Steward and Métraux 1948:545). Piro groups also traded with the Spanish, even delivering children suspected of sorcery by the pre-Andine Arawaks (Taylor 1999:213). As late as the 1960s, the pre-Andine Arawaks northeast of Cerro de la Sal still engaged in an intense trade along the mountain slopes, exchanging items such as knives, dogs, baby-slings, *achiote*,[62] salt, machetes, pots, bows, arrows, *tsiri*,[63] *cushmas*, and cash (Bodley 1981:54f).

After the arrival of the Spaniards, European trade goods were in great demand among Tupian groups of the upper Amazon. The trade with the Spanish was mediated by the Barbacoan-speaking Quijo, the Cahuapanan Jebero (Jevero), and the Jivaroan Maina, who had direct access to both traditional highland products and European trade goods imported by the Spanish. There are reports of intermarriage between the Omagua of the Napo River and the Quijo in the early 1600s (Reeve 1993:113), which suggests a measure of bilingualism in that area. Cases of bilingual marriages are also reported between the Maina and Jebero, and between the Panoan Conibo and the Arawak-speaking Piro (Reeve 1993:119f). Such relations no doubt facilitated other forms of exchange in these areas. The Quijo and Jebero conveyed the prestigious European goods to Tupian groups (Taylor 1999:199) (fig. 2.4.1).

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[61] Bark shirts (Steward and Métraux 1948: plate 49).

[62] *Bixa Orellana*, from which a red pigment powder is extracted (O'Neale 1949:78).

[63] "A black waxy tar-like material prepared from tree resin and bees' wax" (Bodley 1981:51).

The Tupians in turn conveyed the European items through their established trade networks down the Amazon (Reeve 1993:112). The Cocama traded *cachibanco*[64] cloth, tunics, and mantles. Besides trading with their neighbors, the Omagua and Cocama also organized raiding expeditions to take tools, captives, and heads (Reeve 1993:110). Further down the Amazon River, Tupian groups such as the Aisuari and Yurimagua extended the trading connections through their contact with the Arawaks of the Río Negro and with inland groups (Reeve 1993:114). The Aisuari traded their polychrome pottery for gold from the Caquetá and Vaupés Rivers via the Río Negro Arawaks (Porro 1994:84). The Tupian groups of the upper Amazon (Omagua, Cocama, and Cocamilla) were closely tied to the river, relying mainly on riverine resources for their subsistence (Porro 1994:82). Further downstream, the Aisuari relied more on floodplain resources and *terra firme* gardens of manioc and maize and were more closely connected to inland groups than e.g. the Omagua (Porro 1994:84). The upper Amazon region appears to have been little influenced by Tupian agricultural technology typical of the middle Amazon (Myers 2004). There is no evidence of ADE-sites associated with the Napo Phase, despite 300 years of occupation along the Napo River. On the Ucayali, the only exception is the site of Imariacocha, where dark earth has been associated with the polychrome Caimito phase (Myers 2004:91). Considering the regular association between ADE-sites and polychrome pottery along the central Amazon, the polychrome sites of the upper Amazon seem atypical. To Myers (ibid.) this indicates that the Caimito occupation was temporary and that local populations forced the intrusive makers of polychrome pottery back down the Ucayali soon after their arrival. Myers argues that most of the local Tucanoan-speaking settlements[65] were located away from the Napo River and that there was no need for the Tupians to invest in large ADE-sites, due to the low threat from the local population and to the abundant opportunities for *várzea* cultivation along the Napo (ibid., 92).

A more probable explanation for the absence of *terra preta* in the upper Amazon may be that the Tupian occupation of the region did not comprise massive population movements replacing previous inhabitants. Rather, the Tupians were probably represented by relatively small groups raiding and trading along the major rivers, carrying with them a repertoire of cultural elements that were variously adopted by local groups. The subsistence systems of the local groups were based on local adaptations developed through millennia, apparently without involving *terra preta*. The Tupian settlements along the upper Amazon were relatively small

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[64] Fine cloth made of fibers from the burity (*buritì*) palm (*Mauritia flexuosa*) (Lowie 1948:24).

[65] According to Myers (2004:90), the Tucanoan population along the Napo River is represented by the ceramics of the Tivacundo Phase, dated to the middle of the first millennium AD. Despite a time gap of approximately 1000 years, Myers attributes the Tivacundo ceramics to the ancestors of the Tucanoan-speaking Encabellado and the linguistically unclassified Abishira.

(Myers 2004) and were able to rely on riverine resources and farming of the fertile *várzea*, thus eliminating the need for ADE-soils.

Small groups of Tupi-speakers penetrating the upper Amazon were no doubt able to exert a strong influence on local populations, not least through their predatory attitude, as illustrated by the case of the Tupi-speaking Chiriguano invading the lands of the Arawak-speaking Chané in northwestern Argentina around 1200 AD. Although outnumbered in the range of 1:10, the Chiriguano managed to subjugate the Chané and impose their Tupi language on them, to the point where the Chané only maintained their original language in religious ceremonies, until it finally vanished completely.[66]

The Spanish presence in western Amazonia transformed the indigenous relationships and would continue to do so during the 1600s and 1700s. The Jesuit missionaries had arrived in western Amazonia in 1638 and their influence on the indigenous groups was substantial until they were expelled from the area in 1767 (Reeve 1993:118). The trade relations between the Spaniards and the Indians were regularly interrupted by military conflict caused by the ever-increasing Spanish demand for slaves. These military conflicts stimulated alliances between different indigenous groups. An example is the violent rebellion of 1663, when Tupian Cocama allied with the Panoan Chepeo (Shipibo) and the Arawak Maparina (Chamicuro) in a revolt against the Jesuit missionaries (ibid., 121). Prior to this, the Barbacoan Quijo and Jivaroan groups had attacked the missions in an attempt to free themselves from Spanish slave raids. There was apparently a tendency for rebellions to start at the periphery of Spanish control. Reeve (ibid., 122f) notes that when the frontier moved east as the Spanish conquest progressed, new rebellions followed in its wake. This can be compared to the upper Huallaga area, which had been under Inca control before the Spanish arrival and was never the scene of any rebellions against the Europeans.

The arrival of the Jesuits had multiple effects. Their main goal, to Christianize the population, differed from that of earlier Europeans with whom the indigenous population had been in contact. The Jesuit missions offered a sanctuary from Spanish slave raids and later on from the Portuguese, who launched expeditions up the Amazon to search for slaves as the natives became scarce on the Portuguese side of the border. The Jesuits also had a substantial impact on indigenous trade networks, due to their strategy of controlling trade in crucial items such as salt and dart poison (Reeve 1993:125). The Jesuits understood the importance of controlling the trade in such crucial commodities and were successful in their strategy. The combination of access to trade goods and protection against slave raiders attracted many indigenous groups to the mission stations (ibid., 122).

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[66] For a fuller account of this event, see chapter 3.

The control of the salt trade became crucial for the Jesuits. Annual trips to collect salt were organized at each mission, and the Jesuits sent people from as far away as the Napo and Amazon Rivers to collect salt on the Huallaga (Reeve 1993:125). The salt was traded for dart poison from groups such as the Ticuna[67] and Peba[68] of the upper Amazon (figs. 2.4.1, 6.4.3). Although the missionaries managed to control much of the trade in western Amazonia during the 1600s and 1700s, direct exchange between indigenous groups continued. Indigenous trade along the route from highland Ecuador via the Napo down to the lower Amazon River (Santos-Granero 1992:29) was linked to the extensive trade networks of the northwest Amazon via the Japurá, Río Negro, and Caquetá Rivers (Porro 1994; Newson 1996). The Napo route was used to trade a local specialty of the Záparo,[69] the *chambira* hammock, to indigenous groups as well as to Spaniards (Steward and Métraux 1948:644). The Záparo traded iron knives received for their hammocks on to more remote tribes (ibid.). Their Zaparoan-speaking neighbors, the Roamaina (Omurano[70]) provided palm-fiber mosquito tents (ibid.). Several tribes of the tropical lowlands of eastern Ecuador and Peru (e.g. the Canelo, Roamaina, and Záparo) undertook long trading expeditions to the lower Napo and the Amazon to acquire *curare* from the Ticuna and Pava,[71] and to the Napo River to obtain signal and dance drums (ibid.).

The missionaries sought control over existing indigenous trade routes and some of their special merchandise in order to reach the goal of Christianizing the Indians. The trade routes also served as supply routes between the Andes and the missions, the Napo being the most important in the north, while the Pastaza and Huallaga were important further south (Reeve 1993:127). The Jesuits' control over indigenous trade routes shifted the focus of exchange and contributed to undermining former patterns of long-distance exchange (ibid., 128). The groups living near missions, e.g. the Quijo and the people of the middle Huallaga, were able to strengthen their positions in the regional trade networks, while other groups such as the Jivaroans and the Tupian Cocama chose to isolate themselves from sustained contact with the Europeans (ibid., 129). The Tupian groups of the upper Amazon soon found themselves in an

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[67] Ticuna is an isolated language spoken on the borders between Brazil, Peru, and Colombia (Gordon 2005).

[68] Peba belongs together with Yagua in the Peba-Yagua language family, found on the northern shore of the upper Amazon (Gordon 2005).

[69] Záparo is a member of the Zaparoan language family. The language is now extinct in Peru and is reported to have one single speaker left in Ecuador (Gordon 2005).

[70] Omurano is the name used in modern linguistic classifications. The language became extinct in 1958 (Gordon 2005).

[71] The Pava lived in the same area as the Roamaina (Omurano), between the Pastaza and Marañon Rivers in Peru. They spoke the same Zaparoan language (Omurano) (Steward and Métraux 1948:634).

increasingly difficult situation, with the Spaniards advancing from the west and the Portuguese approaching them the east. Initially, the Omagua and Cocama provided the Portuguese with slaves, but as the demand steadily increased, in 1695 they eventually refused to sell any more slaves to the Portuguese and had to seek refuge at the Jesuit missions to avoid being captured as slaves themselves (Reeve 1993:130; Taylor 1999:214). The trade routes used by the missionaries in order to gain control over indigenous groups were taken over by white traders after the Jesuit expulsion in 1767 (Reeve 1993:128). When the Jesuits disappeared, there was a reorganization of regional interaction which remained intact until the mid-twentieth century (ibid., 130). In the 1900s, Quechua traders were still operating along the Andean slopes. For indigenous traders of the early and middle 1900s, the trade between the valleys and the highlands, exchanging products between different ecological niches, was the most important. Quechua-speaking traders in Peru and Bolivia during the 1900s carried ideas and news from one village to another during their trading expeditions. In many cases, these traders seem to have been the principal means of communication between the communities visited by them (Mishkin 1946:435). Rather than conducting the trade in order to gain monetary or material profit, it appears as if the traders' main incentive was to maintain their identity as mediators of exchange and communication between different areas (ibid.).

The Jivaroan groups of the eastern Andean slopes are known for the long-term stability of their socio-economic and political structures, and for maintaining a strong cultural heritage up to the present date (Descola 1994). A cultural item among Jivaroan groups that may be of ancient date is the shell trumpet. These items, manufactured from shells of the marine species *Strombus gigas* were also in use among the Záparo and the Mayoruna. The shells were traded across the Andes since the early formative period (5500 – 1000 BC). According to Izikowitz (1935:242), shell trumpets are one of the oldest types of trumpets found in South America. Izikowitz draws his conclusion on the basis of the wide distribution of this instrument. As with other dates of instrument types in Izikowitz's study, however, there are reasons to remain skeptical, since very few instruments have been recovered in secure archaeological contexts. Nevertheless, as indicated by the early trade in these items across the Andes into Amazonia, it is likely that they have been in use for several millennia. Besides being used among lowland groups such as the Shuar, Záparo, and the Mayoruna,[72] shell trumpets were also used by highland groups such as the Aymara,[73] and have been recovered in archaeological contexts in the Andes. Izikowitz (1935:242) suggests that shell trumpets spread as a trade item through

[72] Shell trumpets were also used in the interior of the Guiana Highlands (see chapter 5).

[73] Aymara-speaking groups in the highlands were engaged in an intensive trade with the lowlands. In southern Peru and northern Bolivia, Aymaran traders traveled from their homelands in the Altiplano to the coast to acquire guano, sea shells, and cotton, and embarked on trading missions to the tropical lowlands to exchange dried meat (*chuñu*), salt, and grain for tropical fruits, bamboo, and maize (Tschopik 1946:538).

the interior of the continent. In western Amazonia this conclusion fits well with early indications of trade networks in the region, and with later observations that the Záparo and Jivaroan groups such as the Shuar served as intermediaries between the highlands and the lowlands. The use of shell trumpets probably spread from the coast via highland groups to intermediaries on the eastern slopes, who in turn conveyed such instruments to the groups east of the Ucayali River.

Another type of musical instrument, the geographical distribution of which may reflect past socio-cultural contacts, are the ritual wind instruments belonging to the sacred flutes complex. This complex is thoroughly discussed in chapter 6, but there are reasons to consider its occurrence also among western Amazonian groups. The sacred flutes complex is best documented among the northwest Amazon Arawaks, but it has also spread to many other Amazonian groups as part of a ceremonial pattern centered around feasts where the sacred flutes were played in pairs to commemorate a creation myth associated with the cultural hero *Kúwai* or *Yuruparí*. In western Amazonia, groups dedicated to the sacred flutes complex included the Yagua and Ticuna, who lived south of the Putumayo River and had learned of the instruments from their Arawak-speaking neighbors north of the river; the Tupi-speaking Omagua, Cocama, and Cocamilla of the upper Amazon, who may have retained the instruments through a language shift from Arawak to Tupi; the Múra of the lower Madeira and Purús area, who may have retained the instruments from the time when this area was integrated in the Arawak regional exchange system or adopted it from their Tupi-speaking neighbors, the Mundurukú; and finally the Apuriña of the middle Purús River, who represent a link between the Arawaks of the northwest Amazon and those of southern Amazonia such as the Mojo, Baure, Terêna, Parecís, and ultimately the upper Xingu Arawaks. The sacred flutes ceremonies of the Apuriña were particularly similar to those of the northwest Amazon Arawaks (Wright 2011), indicating close cultural contact between these populations since the days of the Arawak regional exchange system. The pre-Andine Arawaks, however, were not involved in the sacred flutes complex, perhaps because they were more closely linked to their Andean neighbors than to lowland Arawaks.

One of the particular instruments of the sacred flutes complex shared by Arawak-speakers all over Amazonia is the bark trumpet. It is particularly common among the Arawak groups of the northwest Amazon (see chapter 6) and it also occurs in western Amazonia among the Apurinã. The distribution of bark trumpets is particularly interesting for two reasons: 1) Although the raw material (bark) is present throughout Amazonia, the distribution of bark trumpets is concentrated along major transport routes and in particular locations in western, northwestern and northern Amazonia. They are practically absent in southern Amazonia. 2) The diffusion of bark trumpets has been attributed to Arawak-speakers, and there is indeed a striking correlation between areas of Arawak influence and the distribution of bark trumpets. According to Izikowitz (1935:242), the bark trumpet originated somewhere north of the

Amazon River and spread from there south via the Purús and Madeira Rivers, to the Apurinã and further on to the Arawak groups of the Llanos de Mojos who shared them with their Tacanan-speaking Cavineña neighbors and with the Itonama speaking an isolated language (see chapter 3). The bark trumpets are often joined together to form an instrument similar to pan-pipes and, like the pan-pipes, they are also played in pairs (ibid., 224). Izikowitz (ibid., 226) suggests that such versions of bark trumpets are a post-Columbian instrument inspired by the introduction of church organs. Although some of the specific arrangements of bark trumpets may have been inspired by European organs, it is more likely that the main influence came from the pan-pipe. The pan-pipe is an ancient invention that had spread over much of South America before Europeans arrived on the continent, and in many cases its distribution correlates with that of the bark trumpets. Given the wide distribution of bark trumpets and the fact that their use had spread to non-Arawak neighbors along the Arawak-controlled trade routes, the invention of the bark trumpet probably dates far back in time. Again, the difficulty of dating the invention of these instruments and determining the direction of their spread must be stressed. Izikowitz (ibid., 242) claims that the instruments spread north to south, but if no link can be established as far back in time as when the Arawak languages originally dispersed from their proposed homeland, e.g. somewhere in the northwest Amazon (Aikhenvald 1999), we cannot be certain of the date, nor the direction of the spread.

Three more conclusions can be drawn, however: 1) To a significant degree, the distribution of bark trumpets is concentrated in areas of Arawak influence. 2) Whether or not these instruments spread to these areas together with the initial expansion of Arawak-speakers several millennia ago, or later in time, the exchange networks established by Arawak-speakers over vast parts of Amazonia is an important component in explaining the distribution of the bark trumpet. 3) Several areas that were rapidly depopulated after 1492 and that remain linguistically unknown (the middle and lower Amazon, the lower Madeira River, central Venezuela [Kaufman 2007]) suggest gaps in otherwise homogenous Arawak populations, and were later repopulated by groups with bark trumpets. This might perhaps be an indication of an ancient Arawak dominance in these areas.

As distinct from the sacred flutes of the Arawaks, the single wooden trumpet had a specific distribution pattern largely correlated with the spread of Tupian languages in Amazonia (Izikowitz 1935). It was found among groups along the main Amazon River and was particularly concentrated to the Tupian groups on the southern shore of the middle and lower Amazon. Such trumpets were also found among some Arawak and Tukanoan groups of the northwest Amazon region, and among the Tukanoan-speaking Secoya of the Peruvian and Ecuadorian Amazon. They were also used by Múra groups on the middle Amazon and

Madeira Rivers, and among the Chibcha[74] on the western margins of the northwest Amazon region. According to Izikowitz (ibid., 220), the wooden trumpet spread from the mouth of the Amazon via Tupi-speakers upstream along the main river and its tributaries relatively late in pre-Columbian times. As for ceramics of the Amazonian Polychrome tradition, Arawak-speakers appear to have been responsible for the spread of wooden trumpets along the Río Negro and into the northwest Amazon, while Tupi-speakers carried it along the upper Amazon into western Amazonia. Tupi-speakers thus appear to have adopted wooden trumpets, a variant of the Arawak sacred flutes complex, and included them, alongside Polychrome ceramics and Arawak-derived *terra preta* horticulture as elements of a Tupian identity.

The cosmological construction of the landscape characteristic of the Llanos de Mojos and northwest Amazon Arawaks is also characteristic of the pre-Andine Yanesha, who apply an intricate system of "topographic writing" in order to maintain an intimate relationship to their landscape (Santos-Granero 1998). "Topographic writing" is the concept Santos-Granero uses to describe how individual place names (topograms) are connected into extensive systems (topographs) and reiterated, for instance through chanting, in ceremonies (ibid., 128). Such ritual place-naming is also well documented from the northwest Amazon Arawaks (Vidal 2000, 2002; Hill and Chaumeil 2011a; Wright 2011) and from Arawaks in southern Amazonia such as the Parecís (Schmidt 1917 (3):21f). Santos-Granero (1998:132, 139) refers to topographic writing among the Yanesha as a form of proto-writing, also present among other Amazonian groups such as the Paéz, a linguistic isolate between the Marañon and Napo Rivers, and the Arawak-speaking Wakuénai of the northwest Amazon (Hill 1996a:153f; 2002:235f; 2009:250).

The pre-Andine Arawaks, too, share cultural traits with their northern and eastern neighbors. There is, for example, evidence of similar discourse forms among the Nanti (Pucapucari) and the northwest Amazon Arawaks, including parallelism, echo speech, and ritual chanting performed in ceremonial contexts (Beier et al. 2002:131, 135).[75]

Beyond the conception that trade was a strategy to increase human carrying capacity in an impoverished landscape (Reeve 1993:108), it is evident that the trade networks of western Amazonia first and foremost served as routes of communication, e.g. for conveying elements of both material and non-material culture, exchanging information, and forming alliances (cf. Santos-Granero 2007). Buying or selling specific kinds of produce implicates identity. Local

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[74] The Chibcha were a specific ethnic group with its own language within the Chibchan language family. They were reduced from almost one million speakers to complete extinction in the 1700s (Gordon 2005).

[75] For an extended discussion of such linguistic features see section 6.4.

specialization in a given manufacture may seem irrational from an ecological perspective, e.g. when the resources required for the manufacture are present in the whole region, but fills a crucial function in creating and maintaining ethnic identities. Although trade in foodstuffs may have been vital for survival in certain regions during parts of the year (e.g. the upper Río Negro area), very little of the items traded in western Amazonia consisted of foodstuffs and other basic resources. Trade goods were mostly local products manufactured by groups specialized in specific technologies, sometimes using resources originating in their different ecological zones, e.g. certain types of pottery, hammocks, weapons, preciosities, medicinal and hallucinogenic herbs,[76] etc., indicating that the purpose of indigenous trade was primarily to communicate with neighbouring societies.

[76] Apart from herbs, an important trade object with medicinal properties was Tapir feet (Warren DeBoer, pers. com., March 2011).

3. Southern Amazonia

3.1 Physical geography

The geographical delimitations for southern Amazonia as defined in this chapter are constituted by the highlands of the Andean mountain chain in the west and those of the Brazilian Shield in the south and southeast. Between these two upland areas, the northern limit of the flat Gran Chaco area of Argentina and Paraguay make up the southern border that lies between these highland areas. In the northeast, the region stretches all the way out to the Brazilian coast and its northern limit is tentatively drawn approximately 150 km south of the Amazon River, an area treated in chapter 4. Finally, the northwestern border is constituted by the Madeira River and Madre de Díos Rivers.

The physical geography of southern Amazonia is relatively diverse, both regarding geology and ecology. The area rests on two different geological formations and one of them, the Brazilian highlands, accounts for the relatively dry highland climate in the southern part of the region. While most of the area is covered by evergreen tropical forest growing in a warm humid climate that experiences small fluctuations in temperature and rainfall over the year, several different ecosystems in the southern part of the region experience great fluctuations in rainfall, resulting in annual cycles of flooding and drought.

The solid earth geology of the region is characterized by two completely different components deriving from the ancient Brazilian Shield and the much younger Andean mountain chain. The Brazilian highlands were formed during pre-Cambrian and Palaeozoic times, long before the Andean mountain chain existed, and has been deeply weathered, lacking many of the available nutrients present in the much younger Andean formation. The rivers draining these two geological formations therefore have very different nutrient content. While the Andes produce the well known white-water rivers typical of much of Amazonia including the Amazon River itself, the Brazilian Shield creates clear-water rivers, poor in available nutrients, such as the Tocantins, Xingu, and Tapajós Rivers (Furley 2007:145) (fig. 3.1.1).

The alluvial sediments that make up the low lying areas of southern Amazonia were mainly deposited during the creation of the Andean mountain chain, when the Amazon Basin was transformed into a giant lake as the west-flowing Amazon River was dammed up by the rising Andean mountain chain, creating a large watershed covering the whole Amazon Basin. At the time when the Andes had risen to a point where the Amazon River changed its flow from west to east, huge amounts of sediments had been deposited, completely covering the bedrock with

fine-grained particles. This spectacular geological event created the relatively flat topography of the Amazon Basin, the southernmost extension of which is treated in this chapter.

Although most of the rivers of the region are a product of the Brazilian Shield described above, an important exception is to be found in the western part of the region where the Beni and Madre de Díos Rivers, which converge with the Guaporé to form the Madeira River, instead drain the Andes. This explains Madeira's status as the only major white-water river of southern Amazonia.

Regarding the ecology of southern Amazonia, we note that the northern part is totally dominated by the tropical forest characteristic of the Amazon Basin. The southern part of the region is much more ecologically diverse in terms of ecosystems due to the influence of the Brazilian highlands. Here we find drier savanna climate and regions with seasonal inundations. Although seasonal inundations also occur along the main Amazon River, there is a clear difference between these two types of events. While the annual rise of the Amazon River is mainly a product of melting snow in the Andes during the Andean spring, and not caused by an increase in rainfall in the areas experiencing the inundations, the flooded savannas of southern Amazonia are ecosystems characterized by high seasonal variation in rainfall and less permeable soils, resulting in extensive periods of flooding based on a local increase in rainfall.

East of the Guaporé and Madeira Rivers the moist tropical forest stretches across the northern part of the region all the way to the Atlantic Ocean where it meets a narrow belt of mangrove forest along the coastline. Along the southern border of the region the dry *cerrado* woodlands and savannas of the Brazilian highlands replaces the dominance of the moist evergreen forest. Adjacent to the *cerrado*, in the southernmost section of the region, is an ecosystem referred to as *chiquitano* dry forest, also characterized by drier vegetation influenced by the Brazilian highlands (fig. 3.1.1).

Along the Andean slopes an ecosystem referred to as *yungas* or cloud forest, characterized by a rainy and humid climate, dominates the zone between 1000 and 3500 masl. Above this level, the Andean high plateau, or *puna*, is characterized by a cold, treeless climate.

The area between the highlands of the Andes and the Brazilian Shield, more precisely northern Bolivia south of the upper Madeira River, is unusual from an ecological perspective. This region is referred to as the Beni savanna, more commonly known as the Llanos de Mojos. The area is drained by the Beni, Mamoré and Guaporé Rivers, which converge further downstream, and is characterized by heavy seasonal rainfall and less permeable soils. These conditions explain why the landscape is flooded for extensive periods each year, and why water management is a crucial component in the human adaptation of the landscape. The extensive flooding makes continuous forests rare on the Llanos de Mojos and trees tend to cluster on slightly elevated areas, both natural and anthropogenic (fig. 3.1.1).

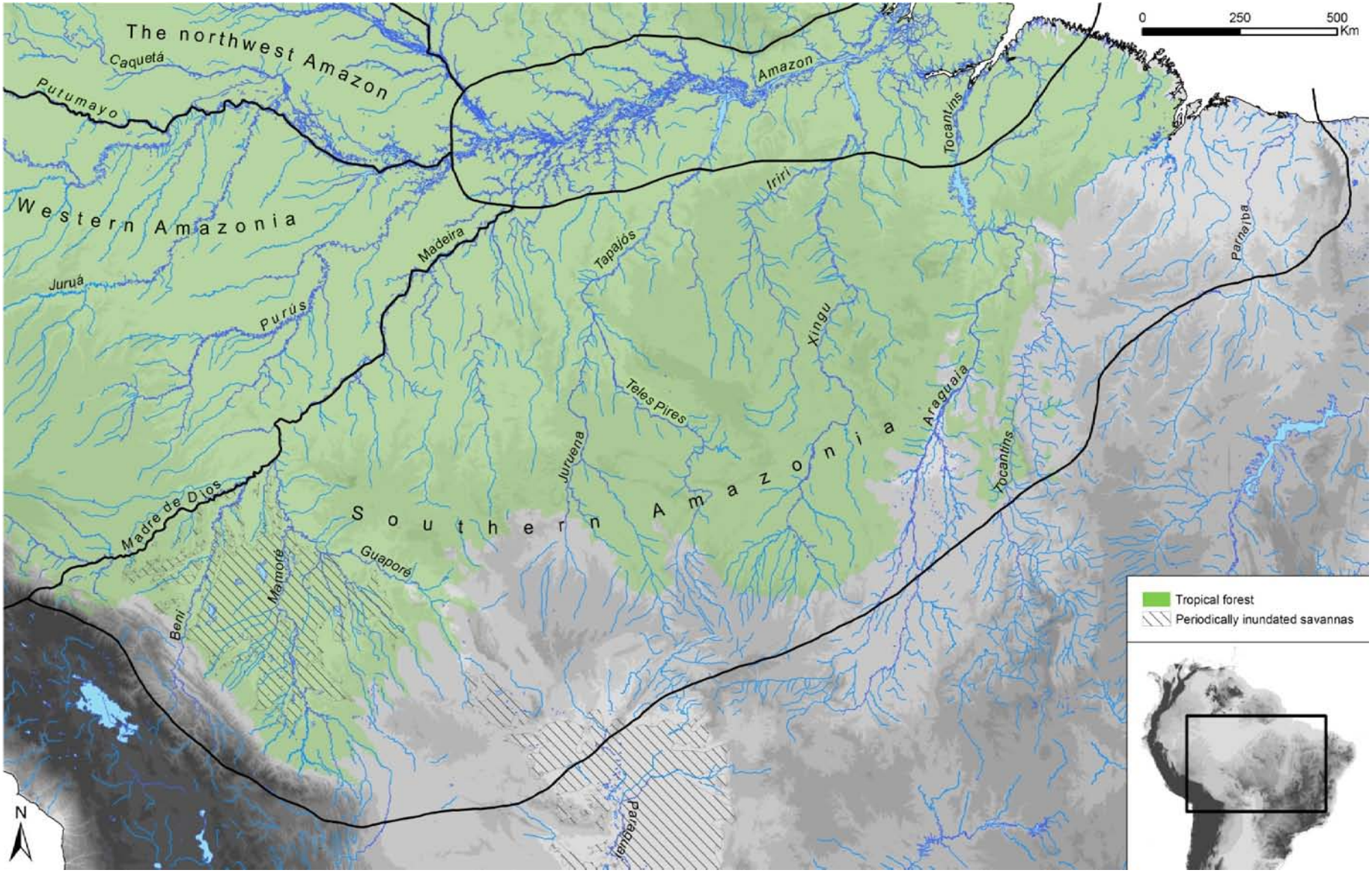

Figure 3.1.1. The physical geography of southern Amazonia.

Finally, the southern border between the Andes and the Brazilian highlands coincides with the northern limit of the Gran Chaco, the dry savanna of what is today northern Argentina. The Gran Chaco is bordered in the east by the Pantanal flooded savannas which drain into the south-flowing Paraguay River. Both these areas lie outside the Amazon Basin proper but since references will be made to groups inhabiting these areas, both during the pre-Columbian and historical periods, they are also included in this summary of the physical geography of southern Amazonia.

3.2 Archaeology

The prehistoric sequence of southern Amazonia is probably the least explored of the five geographical areas investigated in this study. Basic chronology for human occupation and ceramic development is lacking in most parts of the region with few exceptions. Areas that have been more carefully explored include the upper Xingu, where Heckenberger's (1996, 2005) excavations have yielded data for the prehistoric sequence; the Llanos de Mojos, where the early excavations by Nordenskiöld (1913) have been complemented by later contributions by Erickson (2000, 2006; Erickson and Balée 2006), Walker (2004, 2008) and others; and along the Madeira and Guaporé Rivers where the most widely cited publications have been those by Miller (1983, 1992a, 1992b) and PRONAPABA (Simões 1983; Simões and Lopes 1987).

The oldest occupations unearthed so far come from a pre-ceramic occupation at the site of Abrigo do Sol in southwestern Mato Grosso, where Miller (1977, 1987) excavated material dating back to 14700±195 BP (uncalibrated). The calibrated dates for this site range between 8700 – 4500 BC (Brochado and Lathrap 1982:41). Another pre-ceramic occupation site excavated by Miller (1977) and located about 250 km north of Abrigo do Sol is Vilhena, dated between 3000 – 1900 BC. Between the Araguaia and middle Xingu Rivers is another pre-ceramic site named Gruta do Gavião, dated to 7100 – 900 BC (Magalhães 1994:62; Silveira 1994:38) (fig. 3.2.1).

In the area of the Jamari River and along the Madeira near its confluence with the Jamari, Miller (1992a, 1992b) established several phases, both pre-ceramic and ceramic. The Itapipoca phase, discovered in at least 4 sites, dates between 7500 – 5700 BC (Miller 1992a:36). Itapipoca is followed by Pacatuba, dated between 5000 – 3800 BC (Miller 1992a:37), and Massagana, dated between 3600 – 700 BC (Miller 1992a:38, 1992b:222, 228). In this area we also find the Girau phase, chronologically located in the middle Holocene period (Miller 1992b:222). All of the above mentioned phases are pre-ceramic (fig. 3.2.1).

The region around the Jamari River is also known for its early anthropogenic soils. At about 2500 BC, the earliest *terra preta* soils known in Amazonia were established along the river (Miller 1992a). These early *terra preta* dates have no counterparts in e.g. the middle and lower

Amazon region, where such soils started to form around AD 1 – 500 and where they would later have their most extensive distribution. As interpreted by Neves (2008:364), the early *terra preta* soils of the Jamari River were probably not part of the widespread phenomenon of *terra preta* farming that greatly influenced the agricultural development in many parts of Amazonia 3000 years later, but it may have been the initiation point of the technology itself.

The ceramic development in the upper Madeira region seems to have started after the establishment of the first *terra preta* soils in the area. Miller (1992a:39) identifies the Jamari tradition and its initial phase, Urucuri, located along the lower Jamari River as the first ceramic phase dated to about 700 – 150 BC. Urucuri is followed by the Jamarí[77] phase, dated through two C^{14} datings to about 150 – 1 BC and three datings placing it about AD 1450 – 1600 (Miller 1992a:44). The three late dates are most likely due to stratigraphic errors or contamination and should probably be disregarded. The Jamari tradition continues with the Cupuí phase,[78] dated to about AD 650 – 750 (Miller 1992a:45), and its final phase, Matapi, containing one C^{14} date placing it about AD 1650 – 1750 (Miller 1992a:48) (fig. 3.2.2).

Further up the Madeira is the undated and unaffiliated Pederneíras phase and along the Jaciparaná River, a right tributary of the Madeira, is the equally undated and unaffiliated Jaciparaná phase (Miller 1992b:225f) (fig. 3.2.2). Close to the sites of the Pederneíras phase is the site named Maloca excavated by Miller during the PRONAPABA project. Maloca contains the Curequetê phase that has no ceramic affiliation or dates listed (Simões 1983:68).

Interestingly, Miller's excavations in the upper Madeira region also revealed the earliest polychrome pottery in Amazonia. The Jatuarana phase, located along the upper Madeira, considered by Miller as a subtradition of the Amazonian Polychrome tradition, has dates clustering around AD 1 and some dates reaching back to 800 BC. The affiliation with the Amazonian Polychrome tradition seems doubtless (Neves 2008:368), but if the early dates are also confirmed, a reevaluation of the birth and evolution of the whole Amazonian Polychrome tradition will be required. Previously, the Marajoara phase, initiated at about AD 300, has been considered the oldest phase of the Polychrome tradition, but a stylistic and technological connection between the upper Madeira and the mouth of the Amazon has not been proposed before (ibid.).

The early date of 800 BC from the polychrome Jatuarana phase of the upper Madeira correlates closely in time with the first indications of human occupation of the periodically flooded savannas of the Llanos de Mojos not far south of the upper Madeira. These areas are

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[77] Please note the difference in spelling between the Jamari River and ceramic tradition and the Jamarí ceramic phase.

[78] In Miller 1992b:225, Cupui is no longer considered part of the Jamari tradition and its affiliation is listed as undetermined.

connected by the Guaporé River and early connections by river transportation can be suspected, based on stylistic similarities in the ceramic material.

South of the upper Madeira River the tropical savanna known as the Llanos de Mojos was one of several areas in South America inhabited by large sedentary agriculturalist populations in pre-Columbian times (Denevan 2001; Erickson 2008; Walker 2008). Abundant, highly seasonal rainfall in combination with low-permeability soils makes water management a crucial issue in the region. The pre-Columbian populations of the Llanos de Mojos not only adapted to this seasonally shifting ecosystem, but they also transformed the landscape into what Clark Erickson (2006:235) refers to as a "domesticated landscape". Formed by causeways and canals, mounds and raised fields, the landscape was steadily transformed into an anthropogenic environment suitable for large sedentary populations with intensive agriculture and demands for efficient routes of transportation.

Human occupation of the flooded savannas is documented from 900 BC. The agricultural earthworks seem to have been established about half a millennium later, around 400 BC, and they continued to be used and expanded until the arrival of the Europeans (Erickson 2006:253). The earthworks of the Mojos include raised fields, canals, causeways, reservoirs, dikes, and mounds, all with the purpose of improving the conditions for human occupation and subsistence in the area. Raised fields aim to improve agricultural conditions by elevating parts of the otherwise flat landscape for the improvement of soil conditions, drainage, water management, and nutrient production in order to stimulate agricultural productivity (Denevan 1970; Darch 1983; Erickson 2006:251). Raised fields are known to occur at varying locations throughout South America, including seasonally inundated regions in Ecuador, Colombia, Venezuela and the Guianas, and they are also present in the upper Xingu region and in highland locations such as the Titicaca Basin. Interestingly, the eastern part of Marajó Island is also characterized by seasonal inundation and agricultural earthworks constructed by the Marajoara culture. In the Llanos de Mojos, raised fields are concentrated to the eastern and southern parts of the region (Walker 2008, fig. 46.3), numbering some 100 000 according to Denevan (2001).

The pre-Columbian settlements of the Llanos de Mojos were concentrated on elevated mounds, numbering about 10000 in the Bolivian Amazon (Lee 1995, qtd. in Erickson 2006:257). Their composition of anthropogenic debris closely resembles that of the well known *terra preta* soils located throughout the Amazon Basin and they were consequently used for both occupation and agricultural activities, suggesting that there was a clear intention behind the composition of these soils (Erickson 2006:265f).

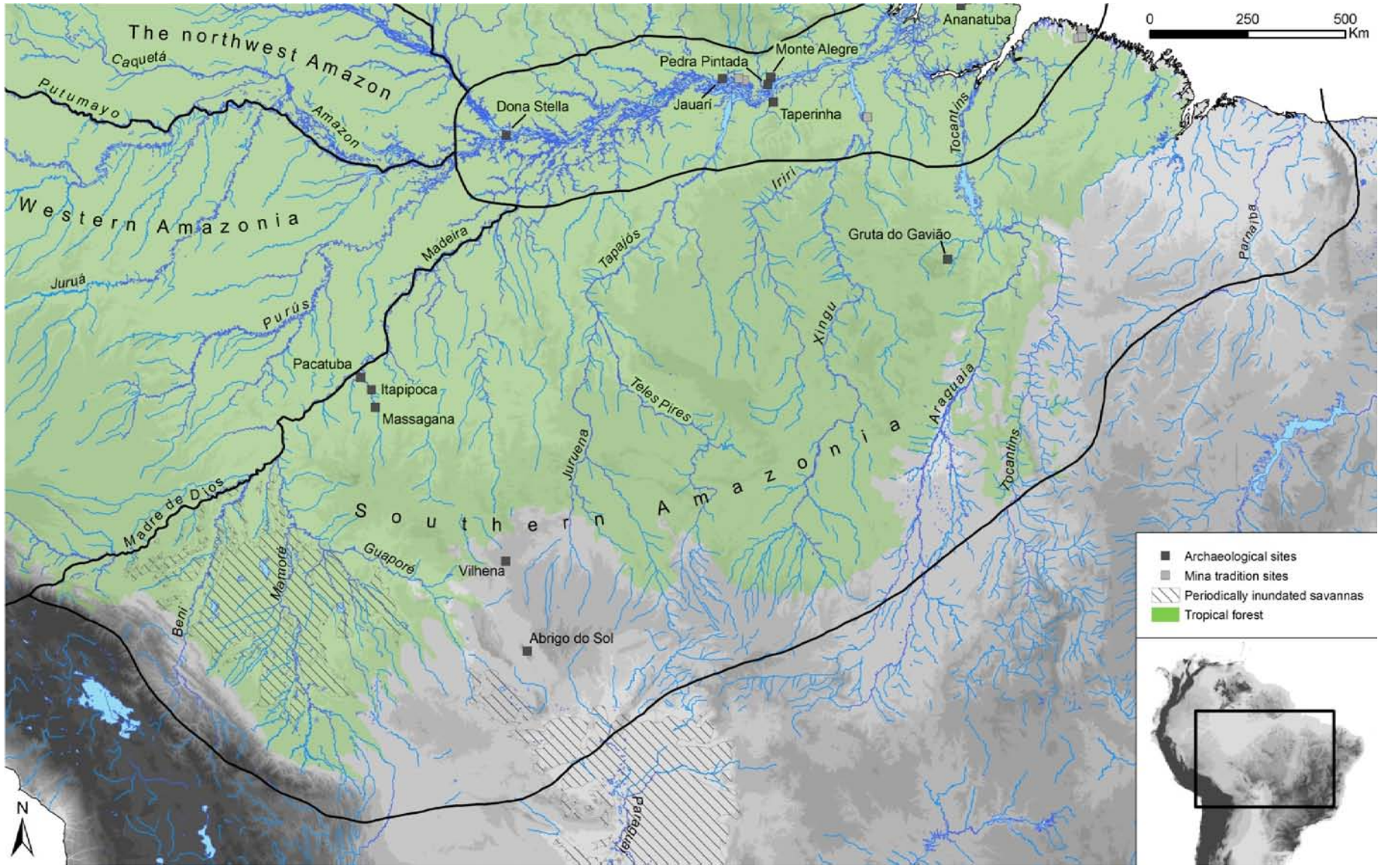

Figure 3.2.1. Archaeological sites of the pre-agricultural period.

Pre-Columbian settlements surrounded by a ring ditch, possibly with a defensive or at least restrictive function, are one type of occupation discovered in the Mojos. The ring ditched sites of the Mojos are located in the Baure region and similar constructions are known from the Acre and upper Xingu regions, the latter also featuring elevated causeways like those of the Mojos, suggesting early connections between these areas (Erickson 2006:260; Pärssinen et al. 2003a; Heckenberger et al. 2008; Mann 2008; Walker 2008:936).

The western part of the savanna was traditionally inhabited by the Arawak Mojo[79] (Métraux 1948b:408), who sustained themselves on the agricultural production of these fields at the time of European contact. In the eastern part of the savanna, earthworks in the form of fish weirs, palisaded villages, and zig-zag causeways dominate over raised fields. Erickson (2006:252, citing Denevan 1966, 2001; Erickson 1995) suggests that "[r]egional distinctions in the types of earthworks that are present suggest cultural and technological diversity", which fits nicely with the observation that the eastern part of the Mojos was populated by the Arawak-speaking Baure, who had a different social organization than the neighboring Mojo, and who – in contrast to the Mojo – depended on farming forest islands and gallery forests instead of raised fields (Erickson 2006:260).[80] While the Mojo, according to Renard-Casevitz (2002:138), had a social organization that lacked centralized power, the Baure have been classified as chiefdom societies (Métraux 1948b:409) sharing common features with the Arawak Parecís and Xinguano[81] societies to the east (Heckenberger 2008). Whether or not Mojo society had a less hierarchical social structure compared to the Baure (as suggested by Renard-Casevitz 2002), their raised field agricultural system was efficient enough to support "large dense populations during its 2 000 years of use" (Erickson 2006:253). On the basis of occupation debris Walker (2008:929) suggests population sizes of 1000 – 2000 for the villages supported by these raised fields.

A central element of the savanna earthworks are the elevated causeways used for transportation, suggesting that there was a demand for efficient transportation of goods and humans from an early date. These routes of transportation would have facilitated the transport of trade goods within the region and helped mediate contacts with groups outside the Mojos.

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[79] The term *Mojo* (Moho, Moxo) has caused much confusion due to its multiple uses in linguistics, ethnohistory, archeology, and geography. In this chapter the term "Mojo" is used to refer to the Arawak groups of the Llanos de Mojos speaking the Ignaciano and Trinitario languages, while "Mojos" is used to refer to the geographical area of the wet savannas of Bolivia.

[80] The Baure also relied on aquaculture as a source of protein, constructing slightly elevated fish weirs and ponds with the aim of producing fish and snails (Erickson 2006:262).

[81] The term Xinguano includes the Arawak-speaking Yawalapití, Mehinaku, Waurá, Kustenau and other groups that were "Arawakized" through interaction and exchange with these groups in the upper Xingu area (Heckenberger 2005:59).

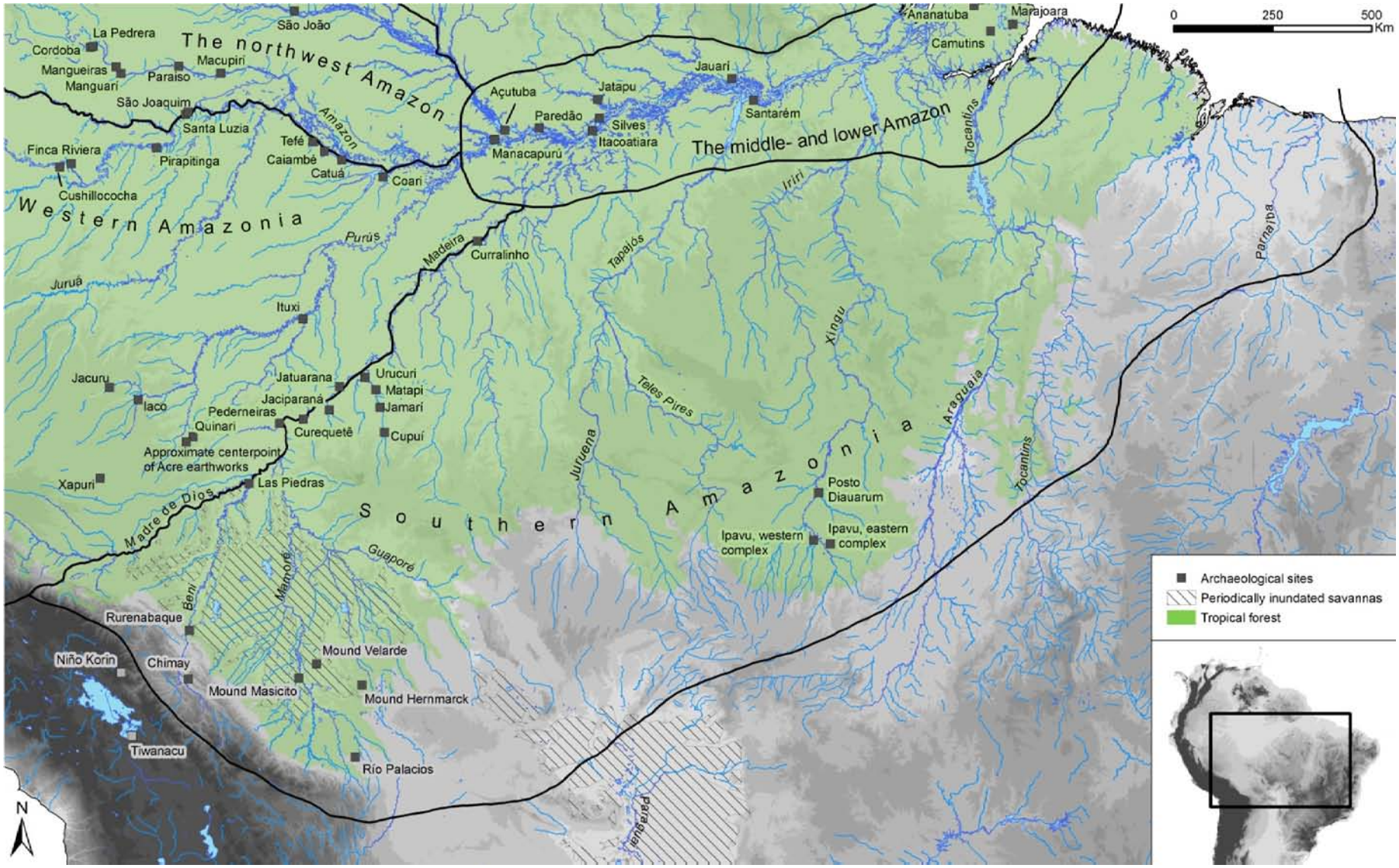

Figure 3.2.2. Archaeological sites of the agricultural period.

As will be shown in section 3.4, the Mojos were at the center of a large-scale trade network extending in all directions, incorporating neighboring groups into commercial relations with the savanna societies.

The ceramic inventory of the Mojos clearly relates to that of the surrounding regions. Northern influences come from the Barrancoid and Amazonian Polychrome traditions, in the west from highland Andean pottery, and from the south and southeast from polychrome pottery with corrugated decoration traditionally associated with Tupi-speaking groups (Howard 1947).

Archaeological fieldwork in the region began with Nordenskiöld's (1913) excavations, which revealed several pottery styles later grouped by Howard (1947) into two divisions: "Painted" and "Unpainted".[82] The Painted tradition includes the lower Mound Velarde, upper Mound Velarde, and Mound Hernmarck phases, while the unpainted tradition is composed of the Mound Masicito and Río Palacios phases (Howard 1947:72) (fig. 3.2.2). The Painted tradition is clearly related to the Amazonian Polychrome tradition, with which it shares many elements, and Howard (1947:85) particularly points to the similarities between the face representations in the Mound Hernmarck and the Marajoara material. Lathrap (1970a:159) also views Mound Hernmarck and upper Velarde as related to the Amazonian Polychrome tradition, but he does not affiliate lower Velarde with those complexes, pointing instead to Barrancoid influences in the modeled decoration of the vessels and an Andean influence in the painted decoration. Howard (1947:73) also noticed the difference between the upper and lower sequences of Velarde but kept these two complexes in the same tradition. To Lathrap (1970a:126), the painted decoration of the lower Velarde material resembles those of the Yampara tradition of the eastern Andean slopes, suggesting a date of approximately AD 600 – 700 for the lower Velarde complex. Furthermore, Lathrap (1970a:124) suggests a relationship between lower Velarde and the Chimay complex, located southwest of the llanos, based on their common derivation from the Barrancoid series, and dates the abandonment of the Chimay complex to approximately AD 800 (figs. 3.2.2, 3.2.3). Lathrap (1970a:142) further points to the similarities between the Río Palacios style unearthened by Nordenskiöld south of the Velarde and Hernmarck complexes with the Cumancaya material excavated by himself along the Ucayali River. To Lathrap, Cumancaya and Río Palacios are related through the use of corrugated decoration and vessel shapes. Corrugated decoration would point to an influence from the southeastern Tupi-Guaraní ceramic tradition, a similarity also noted by Métraux (1948b:411), who adds that the use of direct urn burial also suggests an influence from the

[82] Howard referred to these two groups of pottery as "divisions" and their subgroups as "styles". To make this chapter coherent with the rest of this publication, "division" is hereafter referred to as "tradition" and "style" is labeled "phase".

southern Guaraní groups, but concludes that this similarity is not in itself proof of a Tupian influence.

Finally, the Masicito complex share similarities with the Incised Punctated tradition that is widespread in the Guianas (Brochado and Lathrap 1982:39). The Incised Punctated tradition is a late pre-Columbian phenomenon, and the Masicito complex is also situated late in the chronological sequence (Métraux 1948b:411). Métraux (ibid.) points to certain similarities with the Chimay complex, tentatively dated to about AD 800 by Lathrap (1970a:124), but an affiliation with the Incised Punctated tradition suggests an even later date for this complex.

The lack of modern stratigraphic archaeological excavations with C^{14} dates from the Llanos de Mojos has hindered the establishment of a reliable ceramic chronology and a fuller understanding of the ceramic development in the region. Given the many suggestions for ceramic affiliations of various phases offered by various authors, the Llanos de Mojos is perhaps the most difficult area in Amazonia to decipher when it comes to understanding the ceramic sequence.

Nevertheless, a summary of what we think we know so far is offered here. The earliest ceramic complex in the Llanos de Mojos, lower Velarde, could have been established at about AD 600. This complex is related to Chimay, which would date to about AD 600 – 800, and these complexes are both related to the Barrancoid ceramic series (fig. 3.2.3). These two complexes are followed by the roughly contemporaneous upper Velarde and Hernmarck complexes, Hernmarck possibly being slightly older than upper Velarde (Métraux 1948b:411), which share similarities with the Amazonian Polychrome tradition and would date around AD 1000 (Brochado and Lathrap 1982:38). Some perforated vessels from the Hernmarck and upper Velarde complexes are similar to those used by the historical Mojo, indicating that these complexes may extend their dates up to AD 1500 – 1600 (Métraux 1948b:411).

Finally, two late pre-Columbian complexes, Río Palacios and Masicito, remain. Río Palacios shares certain elements with typically Tupian ceramics from southern Amazonia and the Atlantic coastline. It also has affiliations with the Cumancaya complex of western Amazonia. The Cumancaya complex first appears about AD 600 and also incorporated traits of Guaraní ceramics (Myers 1990:105; see also Raymond et al. 1975). This seems to leave two alternatives for dating the Río Palacios complex: it either influenced the development of the Cumancaya ceramics, including its Guaraní ceramic traits, before the actual establishment of Cumancaya at AD 600, or it was itself influenced by Cumancaya and/or Guaraní ceramics during the expansion of Tupi-speakers in Amazonia from about AD 1200. As for the Masicito complex, the similarities with the Incised Punctated tradition points to a date after AD 1000.

Howard (1947:86) draws the conclusion that polychrome painting originated in Amazonia and spread south from there. At the time when Howard wrote his synthesis of the prehistoric ceramic styles of lowland South America, C^{14} dates were not yet available and it was therefore

extremely difficult to sort the different regional chronologies by relative age. The old C^{14} dates extracted by Miller (1992a) for the polychrome pottery of the upper Madeira River also affects the interpretation of the ceramic material of the llanos; given the close geographical proximity between these areas, the Painted tradition of the Llanos de Mojos may very well be older than its Amazonian counterparts.

Moving further east in southern Amazonia, cultural development along the upper Xingu River began later than in the Llanos de Mojos, with the human occupation of the upper Xingu spanning approximately 2 000 years. Based on remains of material culture, Heckenberger (2006:329, 2008:955) suggests that the area has been occupied by Arawak- and, perhaps, Carib-speakers since at least AD 500, possibly even as early as AD 1. No earlier occupations of any kind have been found in the region (Heckenberger 2005:31). The spatial structures (circular plaza villages, radial road networks) and material culture (a late variant of Barrancoid pottery) typical of Arawak peoples in the region are visible in the archaeological material and shared with other southern Arawak groups further west (e.g. Baure and Terêna). Based on ethnographic and linguistic comparison, Heckenberger (2006:330) suggests that these features originated in proto-Arawak populations and later spread to other groups that were part of the multiethnic and multilingual region of southern Amazonia.

In the ceramic material, the Barrancoid features of the Xinguano pottery are visible throughout the cultural sequence (ca. AD 500 – present) (Heckenberger 2005:56), and this also applies to the other Arawak-associated cultural features of the region, including:

- Sedentary occupations in circular plaza villages,
- Fairly intensive agricultural economies,[83]
- Regional sociopolitical interaction,
- Non-offensive (non-predatory) ideologies and defensive military strategies,
- Local political organization including social hierarchies (Heckenberger 2005:60f).

The early ceramic inventory consists of the Ipavu phase, dated to AD 500 – 1650, divided into early Ipavu (ca. AD 500 – 1250), and late Ipavu (AD 1250 – 1650) (Simões 1972; Heckenberger 2005) (fig. 3.2.3). The Ipavu material is subdivided into a western complex

[83] Historical sources (Lévi-Strauss 1948:325) point to great crop diversity in the agricultural economy. Both maize and manioc were grown, the latter being the most important crop during the historical period. Given the early date of 850 BC for maize agriculture in the Brazilian highlands (Wüst and Barreto 1999:5), it can be expected that maize was known in the nearby region when the first occupation of the upper Xingu was established. Manioc agriculture almost certainly had an even earlier history in the region, given the fact that southern Amazonia is the proposed place of domestication for this crop and that it was domesticated as far back in time as 9000 BP (Piperno and Pearsall 1998; Oliver 2008:208).

characterized by large fortified plaza villages that Heckenberger (2005:70) assigns to the early Arawak-speakers, and an eastern complex composed of smaller circular house complexes associated with early Carib-speakers. To Heckenberger (ibid., 196), the spatial organization of the eastern complex is reminiscent of the village structures of the Guiana Caribs.

The western complex is further subdivided into a northern and southern section. The southern part is composed of large plaza villages with Ipavu phase pottery and the northern part of the sites belonging to Simões' (1967) Diauarum phase along the Xingu River proper (3.2.2). The Diauarum phase has been classified as a member of the Incised Punctated tradition (Simões 1972; Simões and Araujo-Costa 1978; Becquelin 2000). To Heckenberger (2005:68, footnote 6) these two phases represent a geographical and temporal continuum, not two distinctive complexes, both belonging to Arawak-speakers. The Diauarum phase is assigned to the ancestors of the Yawalapití[84] and the Ipavu phase to those of the Waurá, Mehinaku, and Kustenau.

The distribution of Arawak languages in southern Amazonia suggests a connection between the upper Xingu region and the Llanos de Mojos. The southern Arawak languages Saraveca, Enawené-Nawé, Paiconeca, and Parecís once formed a continuous belt from the Llanos de Mojos to the area of the Arinos River between the upper Juruena and Teles Pires Rivers, where they were separated from the upper Xingu by the Carib-speaking Bakairí. In the upper Xingu, the Arawak Waurá, Mehinaku, and the now extinct Kustenau and Yawalapití formed the easternmost extension of this Arawak branch.

The Arawak languages had established their widespread distribution around 1 AD and the southern Arawaks continued to maintain contact during the following 1500 years (Heckenberger 2006). By AD 1000 the Baure, Parecís,[85] Terêna, Guaná and Arawak Xinguano societies had formed a complex social formation that kept culturally interconnected until the European intrusion and that was described by the early Europeans as sophisticated, powerful, and "civilized". These southern Arawaks shared widespread characteristics such as social hierarchy, regional organization, fairly intensive agriculture, dense settled populations with circular plaza villages, causeways for efficient transportation, and navigation skills (Métraux 1948a:354; Heckenberger 2006:327, 2008:953).

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[84] The Yawalapití (Yawarapite) abandoned this area in the 1700s, migrating north into the upper Xingu Basin (Heckenberger 2005:72).

[85] The Parecís were described in the following way in the 1700s; "These people exist in such vast quantity, that it is not possible to count their settlements or villages, [and] many times in one day's march one passes ten or twelve villages, and in each one there are from ten to thirty houses … even their roads they make very straight and wide, and they keep them so clean that one will find not even a fallen leaf" (Heckenberger 2008:953).

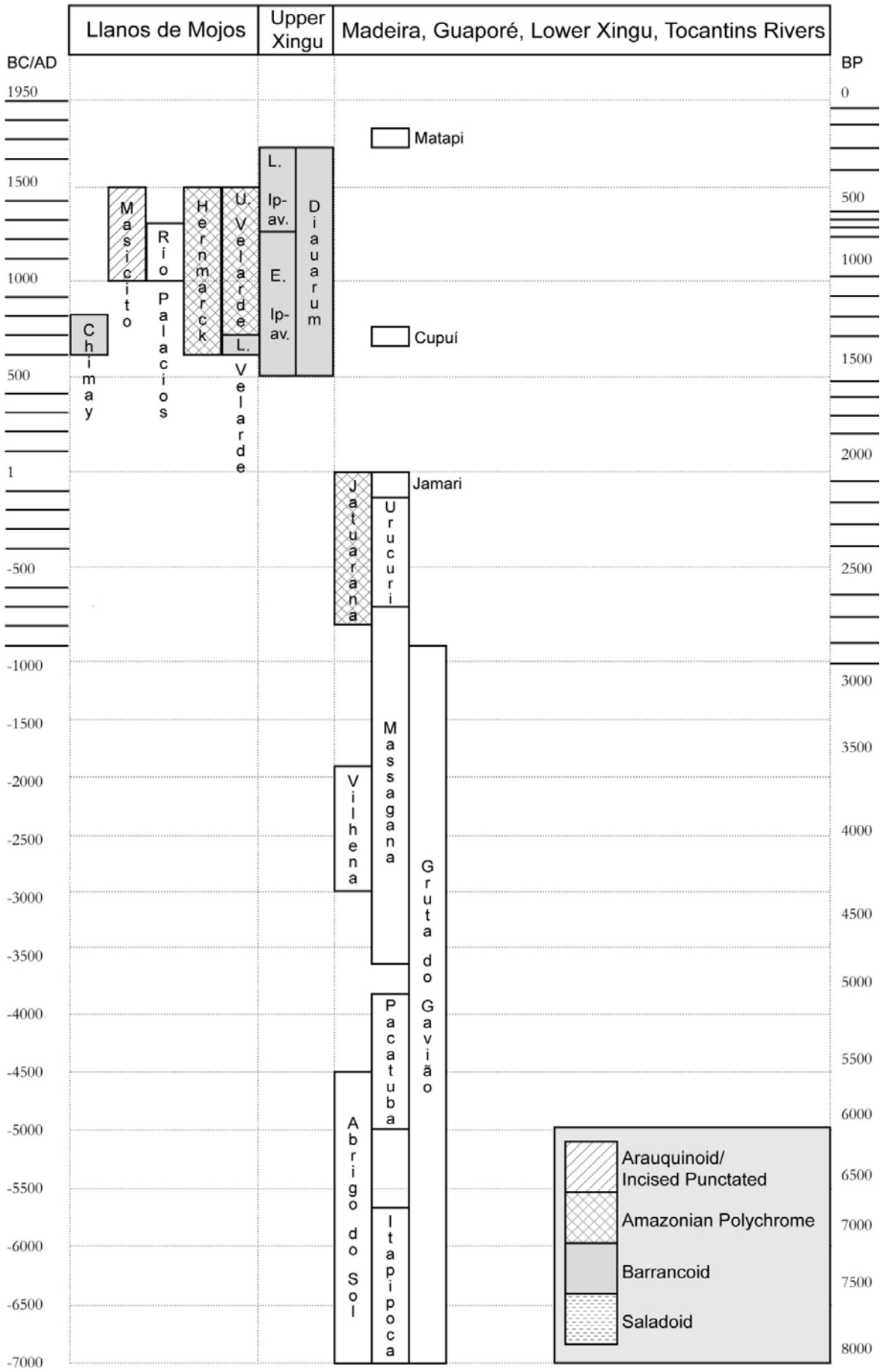
Llanos de Mojos
Upper Xingu
Madeira, Guaporé, Lower Xingu, Tocantins Rivers
BC/AD
BP
1950
1500
1000
500
1
-500
-1000
-1500
-2000
-2500
-3000
-3500
-4000
-4500
-5000
-5500
-6000
-6500
-7000
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
6500
7000
7500
8000
Chimay
Masicito
Rio Palacios
Hernmarck
U. Velarde
L. Velarde
L. Ip-av.
E. Ip-av.
Diauarum
Matapi
Cupuí
Jatuarana
Urucuri
Jamari
Vilhena
Massagana
Gruta do Gavião
Abrigo do Sol
Pacatuba
Itapipoca
Arauquinoid/
Incised Punctated
Amazonian Polychrome
Barrancoid
Saladoid

Figure 3.2.3. Chronological chart of the archaeological phases of southern Amazonia. Abbreviations: E. Ipav. Early Ipavu; L. Ipav. Late Ipavu; L. Velarde; Lower Velarde; U. Velarde. Upper Velarde.

At AD 1250 the upper Xingu area had developed integrated patterns of centers organized in multiethnic, or "galactic", clusters populated by up to 2500, and perhaps as many as 5000 inhabitants (Heckenberger 2006:330, 2008:955). These multiethnic confederations, referred to as an early form of urbanism by Heckenberger et al. (2008), were integrated by wide road-like causeways resembling the elevated causeways of the Llanos de Mojos, which facilitated cultural, linguistic, and material exchange within and between regions. From AD 1250, fortified villages begin to appear in the region. Heckenberger (2005:134, 141) ascribes this development to the external pressures of Tupi- and Macro-Ge-speakers and emphasizes the non-offensive nature of the Xinguano response to these provocations. The development of fortified villages in the upper Xingu was preceded by the construction of ring villages historically connected to Macro-Ge-speakers that started to appear in the Brazilian uplands around AD 800 as a response to the external pressure from Tupi-speakers. From AD 1300, polychrome ceramics assigned to Tupian groups is present at the ring village sites, suggesting an increased Tupian presence in the region, which corresponds chronologically with the development of defensive structures in the upper Xingu (Wüst and Barreto 1999:5, 10, 18). Although regional differences in village organization patterns occurred between the upper Xingu and the Brazilian uplands, there are also many parallels, particularly with regards to the pressure from Tupi-speakers and increasing village sizes. Estimations of population of up to 1738 persons per ring village have been made by Wüst (1983:258f, qtd. in Wüst and Barreto 1999:14).

3.3 Historical linguistics

At the time of contact, southern Amazonia was characterized by an extraordinary linguistic diversity with a concentration of small language families and isolates in the western part, particularly around the Guaporé River and along the Andean slopes. The diversity slowly decreases as we move toward the eastern part of the area, where Macro-Ge and Tupi are the two dominant language families. In late pre-Columbian times, both Macro-Ge and Tupi had an extensive distribution southeast of the area in focus in this chapter, the Macro-Ge languages dominating the highlands of the Brazilian Shield, circumscribed by the Tupi languages occupying the entire Brazilian coastline (fig. 3.3.1). To Heckenberger (2006:328), the central and eastern parts of pre-Columbian southern Amazonia were dominated by large settled populations of Arawaks and other groups culturally related to them occupying the headwaters of major rivers, surrounded mainly by Tupi-speakers in the north and Macro-Ge-speakers in the south. In the west the situation was more complex and the linguistic diversity recognized along the Andean mountain slopes of western Amazonia (see chapter 2) continued along the

Andean margin of southern Amazonia. Linguistic isolates such as Tsimané,[86] Leco,[87] and Yuracaré occupied the Andean slopes, while the Movima, Cayubaba (Cayavava), Itonama, and the probably extinct Canichana[88] lived in the adjacent lowlands (Adelaar with Muysken 2004:476). The area around Lake Titicaca and Poopó Lake was occupied by Uru-speakers of the Uru-Chipaya family,[89] Puquina,[90] and by Aymara- and Quechua-speakers. The Kallawaya also operated in the area between the Titicaca Basin and the lowlands (fig. 3.3.1).

Further south along the Andes, Arawak Chané[91] was spoken by groups who later shifted to Chiriguano (Eastern Bolivian Guaraní) spoken by neighboring Tupians. West of them were the Arawak Guaná and Terêna, and in the southern part of the area, Zamucoan languages were present at the time of contact. Since this language family has its main distribution outside Amazonia, *viz.* in the Chaco area, it will not be treated in this study (fig. 3.3.1).

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[86] Tsimané (Chimane) also includes two varieties of Mosetene (Adelaar with Muysken 2004; Gordon 2005). Kaufman (2007) groups these languages as a separate stock: Mosetén-Chónan.

[87] Leco (Leko) was thought to be extinct until van de Kerke (1998, qtd. in Adelaar with Muysken 2004:21) found at least 45 speakers still in existence.

[88] Kaufman (2007) groups Canichana together with Tekiraka, once spoken along the Napo River in the Peruvian Amazon, in a Tekiraka-Kanichana stock. Both these languages are probably extinct (Adelaar with Muysken 2004:364).

[89] The Uru-Chipaya family formerly consisted of several languages spread out in the Andes south from Lake Titicaca. *Chipaya* is the only member of this family that remains viable today (Adelaar with Muysken 2004:362).

[90] Puquina was a language once spoken around Lake Titicaca. It has been extinct for at least 200 years (Gordon 2005).

[91] At the time of contact, the area south of today's southern Bolivian border was home to Arawak Chané, Guaná, and Kinikinao. These three groups are treated as separate languages by Aikhenvald (1999), and they are also treated as separate ethno-linguistic entities in this text. Unfortunately, there is much confusion in the different linguistic reconstructions for the northern Chaco, especially concerning the Arawak languages there. Kaufman's (2007) reconstruction does not mention the Chané, Guaná, and Kinikinao and instead places one group of Terêna about 150 km south of the Mojo (Ignaciano and Trinitario) and another Terêna group slightly less than 300 km east of them. Kaufman's western Terêna are actually the Chané and his eastern group is the Guaná (including the Kinikinao). Nimuendajú (1987) does not distinguish between the Chané (which he calls Čane) and the Guaná and in Métraux 1946 (p. 198) Nimuendajú's eastern Čane is replaced by Guaná. These two groups obviously spoke closely related languages, but given their different geographical locations and their different cultures, it remains fruitful to be able to distinguish them from one another. Chané was spoken in the northwestern Chaco close to the Andes and Guaná was spoken in the western Chaco and in Mato Grosso, Brazil (Métraux 1946:211, 238). Given the close linguistic relationships between these languages, it is clear that these areas were in contact in late pre-Columbian times. The Chané were subjugated by the Tupian Chiriguano in the 1400s, but their language survived as a second language used only in religious ceremonies until the 1900s (Landar 1977:455; Adelaar with Muysken 2004:422; Gordon 2005).

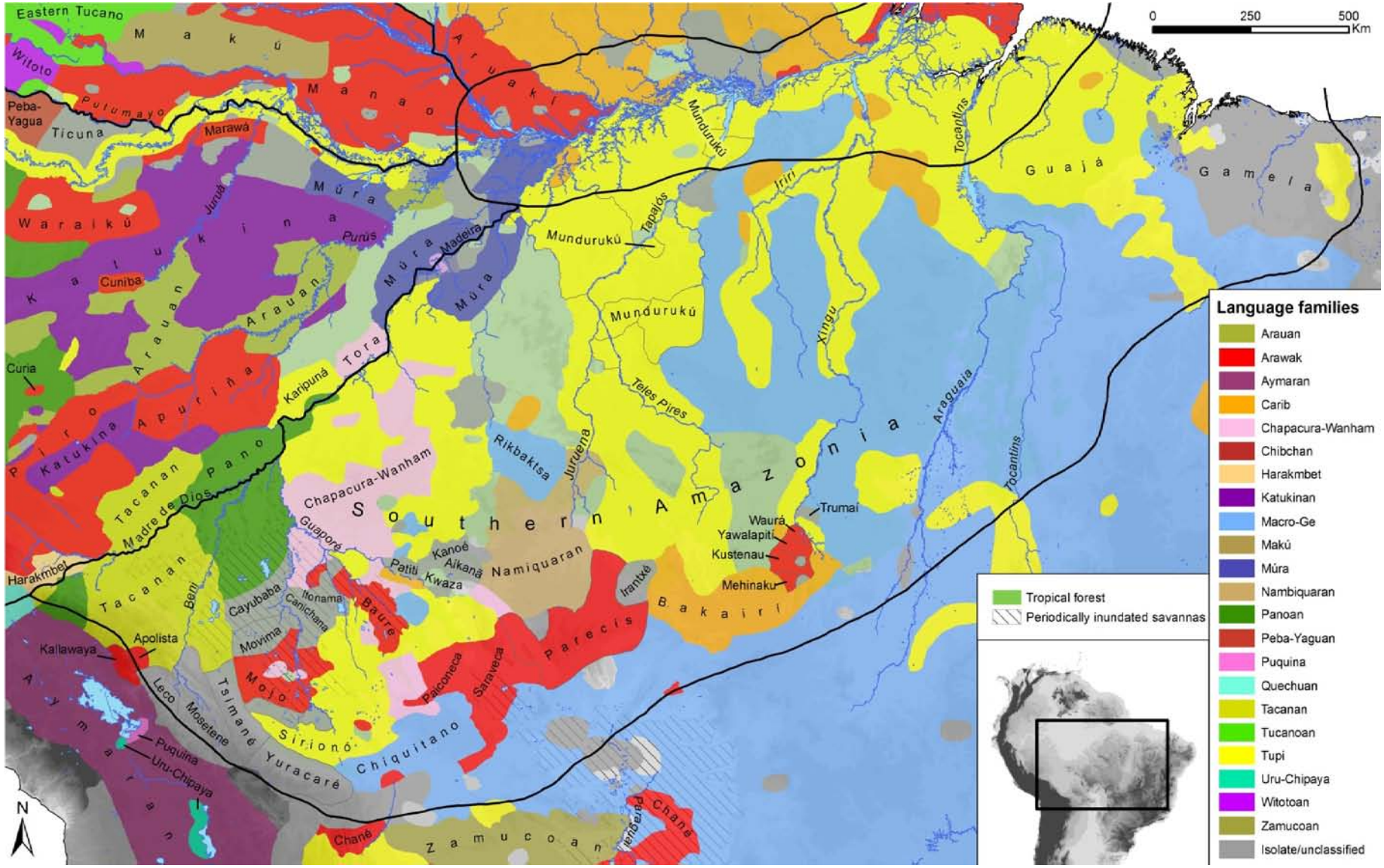

Figure 3.3.1. Ethno-linguistic groups of southern Amazonia at the time of contact.

Moving onto the wet savannas of the Llanos de Mojos, the linguistic diversity increases even further. Arawak, Tupi, Chapacura-Wanham, Carib, Macro-Ge, and Nambiquaran languages were all present in this area, together with a number of groups such as Urucuai, Palenten, Papamie, Patiti, Lambi, and Bicitiacap, of which most are now extinct and their languages remain unclassified (fig. 3.3.1). The dominant languages of the Llanos de Mojos seem to have been Arawak (Baure, Trinitario, and Ignaciano, the latter two known as "Mojo"), Chapacura-Wanham, and Tupian, but many groups were without a doubt multilingual (Walker 2008:933).

Speakers of Chiquitano[92] dominated the southeastern part of the Mojos, and immediately north of them was a large block of Arawak languages composed of the Irántxe, Parecís, Saraveca, Enawené-Nawé, Paiconeca, Paunaca, and Tubarão, whom at the time of contact formed a continuous block stretching east from the Llanos de Mojos (fig. 3.3.1). When the Jesuits had control over the Mojos, Chiquitano was chosen as a lingua franca and smaller ethno-linguistic groups were encouraged to become culturally integrated with the Chiquitano. This was the case with the speakers of Arawak Paunaca, which still survives as a second language among some Chiquitanos (Adelaar with Muysken 2004:477).

North of the Mojos and the Guaporé River, Tupian languages are predominant. This is the area of greatest diversity of Tupian languages and it is also the area proposed to be the origin of the Tupian language family (Rodrigues 1964). The area north of the Tupian block was occupied by Múra-speakers along the Madeira River and by unclassified groups such as the Irurí, Paranapixana, Tororí, and Onicoré.

As mentioned in chapter 2, the linguistic situation at the time of contact along both sides of the lower Madeira is uncertain, and this situation also applies to the area west of the upper Xingu River. The upper Xingu really deserves an ethno-linguistic chapter of its own due to the extraordinary diversity found in this area. Following long-term ethnogenetic processes and linguistic interaction, the area today hosts Arawak, Carib, Tupi, and Macro-Ge languages, together with the linguistically isolated Trumaí (fig. 3.3.1). At the time of contact the area was inhabited only by Arawak and Carib groups, and had not yet experienced the immigration of the other groups that inhabit the area today. (For a full summary of the ethno-linguistic history of this region, please see the accounts of the upper Xingu area in section 3.4)

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[92] Chiquitano is classified as an isolate by Adelaar and Muysken (2004:478) and by Aikhenvald and Dixon (1999:364). Gordon (2005) and Campbell (1997:195) consider it to be part of the Macro-Ge family. To make the confusion even greater, Kaufman (2007) places Chiquitano together with Bororo in his Chikitano-Boróroan stock. In figure 3.4.1, Chiquitano is marked by the color of the Macro-Ge family.

Finally, to the north and northeast of the upper Xingu were Tupi and Macro-Ge languages, and the coast of southern Amazonia, as defined in this chapter, was inhabited by Tupian groups and by the linguistically unclassified Gamela (Campbell 1997:198) (fig. 3.3.1).

3.4 Ethnohistory

As we have seen in the previous sections of this chapter, southern Amazonia is an extremely diverse region, both regarding culture and language, but also geographically. This diversity has contributed to a mosaic of ethno-linguistic groups interacting with each other within the region and with groups outside the area throughout the period of human occupation. In the western part of the region, there were important trade routes between the Andean highlands across the mountain slopes and further on into the lowland areas (see chapter 2). South of Lake Titicaca, these highland-lowland exchange systems were connected to areas of the southern Andes such as San Pedro de Atacama in Chile, and to northwestern Argentina. Southern Amazonia also lies adjacent to the Madeira River, which together with other major south-to-north flowing rivers, like the Tapajós, Xingu, and Tocantins, functioned as arteries between the main Amazon River and the inland regions, facilitating long-distance exchange. Southern Amazonia was also connected to the Atlantic Ocean southeast of the mouth of the Amazon, with access to the coastal trade that was initiated in pre-Columbian times and subsequently taken over by the Portuguese and the French after the Portuguese landing in Brazil in the year 1500.

Given the geographical composition and cultural diversity of the region, colonial history can be narrated in many different versions depending on the part of the region that is in focus. The Atlantic coast was hit by the initial colonization, resulting in a clash with the powerful Tupi-speaking groups that had a previous history of about 200-300 years of violent expansion over a large part of Amazonia south of the main river. The violent encounters between Europeans and the indigenous groups of the coast have significantly restricted our knowledge about the nature of these native societies and the affiliations of the languages they spoke. We know that many of them represented recently arrived or still expanding groups of Tupi-speakers, but there were also other groups that still held strongholds along the coast and others that had recently encountered the Tupians, resulting in conflicts as well as ethnogenetic processes.

On the western margins of the region, the meeting between Europeans and indigenous groups also took place at an early date, beginning with the Spanish conquest of the Incas in 1532, followed by European expeditions south to Lake Titicaca and further on into the lowlands. Soon thereafter, the Llanos de Mojos were affected by missionary activities heavily influencing the historic development of that area. However, in large parts of southern Amazonia, the European penetration was not as rapid as at the eastern and western ends, and the upper

Xingu region was not entered by Europeans until 1884, when Brazil had already received independency from Portugal more than half a century ago. Although it took several centuries for the Europeans to fully penetrate southern Amazonia, the effect of their initial establishment on the continent was surely felt even in the most remote regions. Both trade goods and microbes from across the Atlantic Ocean quickly raced through the indigenous exchange systems, rapidly affecting demography and indigenous priorities in exchange relations and alliances.

In this section, the most important historically documented exchange routes of southern Amazonia will be accounted for. Given the uneven pace of European penetration, the amount of information varies greatly between the different parts of the region. For some areas (e.g. upper Xingu) there are large amounts of information due to careful documentation despite a short period of historical contact. From other areas, we have little information despite long periods of contact with the Europeans. Given these conditions, some areas will be more intensively reviewed in this section while others will have to be left out due to the lack of available information. Three areas of southern Amazonia stand out as cases where more detailed ethnohistoric information is available. These are the Llanos de Mojos, the upper Xingu, and the northern Chaco, from which we have more detailed information about material culture, languages, trade, and interaction compared to the surrounding areas. From these three areas, there is information about the development of material culture and languages, and about interaction with surrounding groups over time. Investigations of these three interaction spheres allow us to examine the distribution of material culture and languages in these regions, as well as internal and external interactions, both regarding the principal actors involved and the routes of transportation used.

In the tropical savanna of the Llanos de Mojos, an anthropogenic landscape had begun to develop about 400 BC (Erickson 2006:253). At this point in time agricultural earthworks as well as causeways and canals for transportation were constructed, and the latter contributed significantly to the exchange relations of the Mojos documented in historical and archaeological sources. The main reason for distinguishing the Mojos from adjacent areas is the physical geography of the area and the specific ways in which indigenous groups have settled and adapted the landscape to suit their needs, thereby developing advanced agricultural systems and intense contacts with surrounding areas.

The Llanos de Mojos seem to have been the center point of an extensive interaction sphere stretching at least two millennia back in time. The area had connections reaching out in all directions, including the upper Xingu region in the east (via Arawak-speaking groups such as the Terêna, Saraveca, Parecís, and Enawené-Nawé) and to the middle Amazon via the Madeira River. The area also had connections with the highland areas of Peru and Bolivia, the pre-Andine Arawaks of Peru, the San Pedro de Atacama area in Chile, and the southern Arawak groups Chané and Guaná in the south.

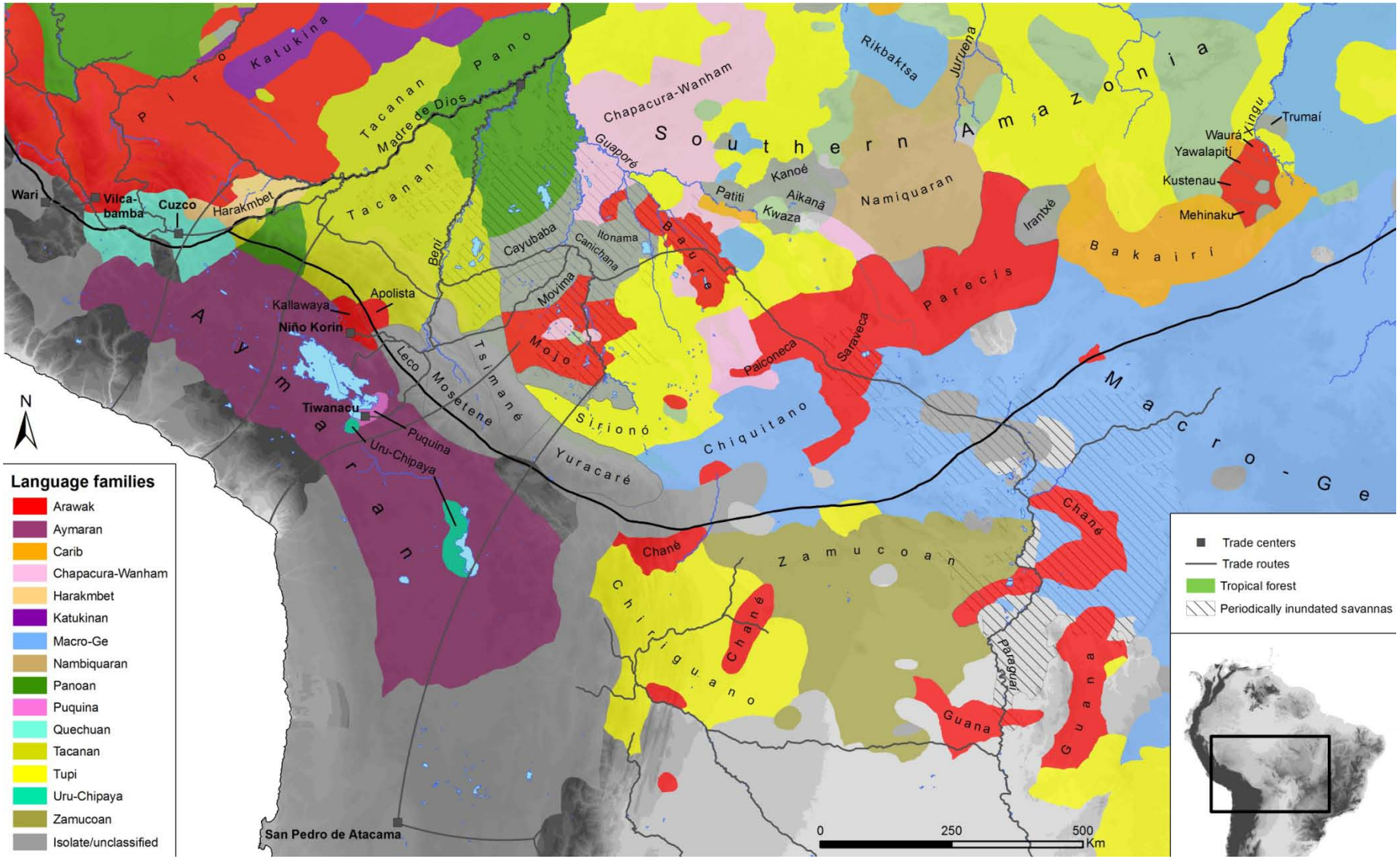

Figure 3.4.1. Ethno-linguistic groups, trade routes and archaeological sites mentioned in the text.

The attempt by Walker (2008:929f, building on Denevan 1966, 2001 and Erickson 2006) to map the different anthropogenic features of the Mojos has shown that the large raised fields are distributed in the northwest, an area populated by the linguistic isolate Movima at the time of contact (Métraux 1948b:426; Nimuendajú 1987; Kaufman 2007). South of this area, mounds, causeways, canals, raised fields, and gridiron fields are found west of the middle Mamoré River. This is the area traditionally inhabited by the Arawak Mojo. In the southeast, large mounds are located in an area overlapping the historical distribution of the Mojo and the Tupian Guarayú. In the northeast, just south of the Guaporé River, fish weirs, palisaded villages, and zig-zag causeways are found in the area traditionally inhabited by the Baure, but there were also groups of Guarayú, Chapacura-Wanham, and Macro-Ge speakers in close proximity to these features at the time of contact (fig. 3.4.1). What can be concluded from these patterns of distribution is that it is extremely difficult to determine which groups were responsible for the initial process of landscape domestication. What we do know is that although the construction of agricultural earthworks may not have required a social organization at the level of chiefdoms in order to raise the amount of labor necessary for these constructions, their presence allows for dense populations large enough to sustain chiefdoms in this part of Amazonia (see below).

There are numerous indications of connections linking the Arawak groups of the Mojos with the pre-Andine Arawaks of western Amazonia via the Guaporé and Madre de Dios Rivers. Between these two Arawak clusters Arawak-speaking groups such as the Piro (Yine) mediated the trade between Quechua- and Aymara-speakers of the Peruvian Andes and the lowland groups via the Urubamba, Apurímac, and Madre de Dios Rivers (Taylor 1999; Renard-Casevitz 2002) (fig. 3.4.1). Renard-Casevitz (2002) mentions connections between the Arawak-speaking Machiguenga of the Urubamba and upper Madre de Dios Rivers and the Arawaks of the Mojos. The Arawak groups of the Mojos were part of the pre-Andine interethnic trade network of western Amazonia that had been established early in pre-Columbian times and that expanded during the time of the Inca Empire. The extension and diversity of this trade network should be seen as an expression of its antiquity and allowed the network to persist even in times of local conflicts (Renard-Casevitz 2002:136-139). The Mojo were also in contact with the pre-Andine Arawaks via their expeditions to Cuzco, where they traded in salt, stone, and metals and took part in Inca celebrations, a custom also shared with the Piro and with the Panoan Shipibo and Conibo (ibid., 136).

Renard-Casevitz (ibid., 138f) proposes a convergence in social organization and way of life between the pre-Andine Arawaks and the Mojo. The latter shared an avoidance of intra-group warfare with the pre-Andine Arawaks and with most other Arawak groups of Amazonia (Santos-Granero 2002), and both clusters had been part of integrative multiethnic networks within an Arawak regional exchange system stretching far back in time (Hornborg 2005). To Renard-Casevitz (2002:141), the domestication of the savanna is a reflection of the social

organization shared by the pre-Andine Arawaks and the Mojo (a lack of central power or chieftainship) and "did not necessarily involve the mobilization of large amounts of labour" (Erickson 2000:191). In the article cited by Renard-Casevitz, however, Erickson is not discussing the Mojo, but the Baure, and he also states that the Baure "were able to sustain large dense populations in what many would consider a marginal environment" (ibid., 193). Moreover, as mentioned above, the domesticated landscape of the Mojos is extremely diverse and was constructed over a long period of time, making it difficult to reconstruct which groups were responsible for particular anthropogenic features of the area.

The flow of merchandise and knowledge between the Peruvian Andes and the Mojos via groups such as the Piro also had its parallels further south along the Andes, where the Beni River functioned as a link between the highland area of Lake Titicaca and the Mojos. The Beni River has been used as a trade route for at least two millennia, as indicated by the burial of a trading herbalist, possibly a Kallawaya, carrying hallucinogenic snuff (*Anadenanthera* or *Mimosa*) at Niño Korin, dated to AD 350 (Wassén 1972:63; Lathrap 1973:180f) (fig. 3.4.1). A few centuries later (AD 700), the Beni River was a route of diffusion of the technology of agricultural earthworks between the Mojos and the Titicaca Basin (Browman 1978:332-336), and Santos-Granero (1992:48) mentions Beni as an important trade route during the 1400s. There are strong similarities between the agricultural technologies of Tiwanaku and the Llanos de Mojos, and several sites on the Mojos date to Tiwanaku times or earlier (Walker 2004, 2008:934). As for the direction of the spread of the technology of agricultural earthworks, Walker (2008:935) concludes that the slow process of creating agrodiversity through the construction of agricultural landscapes suggests that there was no single point in time or space where the technology was transferred from one area to another, but rather that the raised fields should be seen as reflections of different agricultural problems in varying sociopolitical contexts with relationships to each other over time. Connections between Tiwanaku and the lowland Arawaks has also been suggested by Schmidt (Heckenberger 2006:328), who proposed a common origin for these groups rather than technological diffusion between them.

The Kallawaya trade is well documented along the Andean slopes of both western and southern Amazonia and the early dating of the finding at Niño Korin indicates that this trade is a very old phenomenon. The Kallawaya herbalists conducted trade in medicinal plants and hallucinogenic products from the tropical lowlands, mediating the contacts between highland Aymara and Quechua groups and the lowland Tacana and Arawaks (Rowe 1946:239; Wassén 1972:63; Lathrap 1973:180f; Taylor 1999:199). The Kallawaya had been independent traders, but were later assimilated into the Inca empire as *mitimaes*[93] along the Andean slopes east of

[93] The *mitimaes* were non-local groups of people installed by the Inca to impose tribute, create alliances, and exploit resources at the outskirts of the empire (Taylor 1999:200).

Lake Titicaca (Taylor 1999:200). The Kallawaya spoke a mixed language with Quechua and Puquina[94] components, in which Puquina formed the distinct roots of the language (Gordon 2005). The trade between the lowlands and the highlands also continued out to the Pacific coast via Aymaran traders who brought guano and sea shells from the coast and traded highland products such as dried meat, salt, *chuñu*, and grain for tropical fruits, bamboo, and maize from the lowlands (Tschopik 1946:538) (fig. 3.4.1). The rare but widespread finds of stone axes in the Mojos, derived from the eastern Andean slopes, also suggest connections between these two areas (Walker 2008:935).

During Inca times, the connections between the Andean empire and the Llanos de Mojos were lively. As shown by the discovery of an Inca fortress at Las Piedras on the Beni River in the northern Mojos (Pärssinen et al. 2003b), the Incas sought to establish themselves in the Mojos through the construction of military fortifications to secure access to the trade routes along the Beni, Madre de Dios, Guaporé, and Madeira Rivers, and further to the savanna societies of the Mojos (fig. 3.4.1). Some of the Mojo Arawaks of the Beni River had submitted to the Inca, serving them as middlemen in contacts with the multiethnic lowlands (Renard-Casevitz 2002:135f). Walker (2008:935) also suggests that the similarity in development and abandonment of agricultural earthworks between the highlands and the lowlands points in the direction of an ancient shared history uniting these two areas.

The Beni River was also used by the Mojo who traded actively in salt from the Mosetene of the upper parts of this river (Métraux 1948c:487). The Mosetene were positioned on the eastern Andean slopes, below Lake Titicaca, with their linguistic relatives Tsimané below and the Leco above them (Kaufman 2007). The Leco were specialized in transporting passengers and merchandise on the Beni River. During the colonization period, these groups controlled the vertical trade of the region, supplying the Mojo with European knives and beads in exchange for cotton cloth. Many Mosetene were also bilingual in Aymara, indicating the antiquity and importance of these trading relationships between the Andes and the Mojos (Métraux 1948c:487, 505) (fig. 3.4.1).[95]

An important and illuminating element in the material culture of the groups inhabiting the Llanos de Mojos was their musical instruments. As we saw in chapter 2, important conclusions about the cultural history of a given region can be drawn from the study of the spread of these

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[94] Puquina was a language once spoken around Lake Titicaca. It has been extinct for at least 200 years (Gordon 2005).

[95] Given their important role in the exchange system in this linguistically diverse region, many Mosetene probably spoke several languages. Linguistic connections between the Mosetene and Mojo are indicated by the occurrence of the mythological hero *"Keri"* (the word for "moon" in several Arawak dialects) among the Mosetene. This figure also appears with the same name among the Carib-speaking Bakairí (who also has Arawak neighbors) of the upper Xingu (Métraux 1948c:504).

items of material culture. As mentioned previously, the spread of bark trumpets in Amazonia has been attributed to Arawak-speakers and this conclusion, drawn by Izikowitz (1935:242), is certainly relevant also in the study of the groups inhabiting southern Amazonia.

In western Amazonia, bark trumpets are currently present among the Apurinã inhabiting the upper Purús River. From there, the distance to the Madeira, which was populated by the Múra, who also had bark trumpets, is not great. Via the Madeira, the connection continues south to the Llanos de Mojos, where bark trumpets were used by the Tacanan-speaking Cavineña, the Arawak-speaking Mojo, and the linguistically isolated Itonama. Interestingly, the Chipaya inhabiting the high Andes south of the Mojos also possessed bark trumpets. These were probably acquired from their linguistic relatives the Uru, who formerly inhabited the area around Tiwanaku close to Lake Titicaca (fig. 3.4.1). The Uru had direct access to the trade routes going down to the Llanos de Mojos and the frequent cultural contacts along this route probably spread the bark trumpets to the Chipaya (fig. 3.4.1). The Uru became extinct in the wake of European colonization and we do not know whether they themselves actually used bark trumpets.

In addition to being found among the groups along the Purús and Madeira Rivers and the Llanos de Mojos, bark trumpets also occur in southern Amazonia among the Jurúna of the Xingu River. This group once inhabited the lower parts of the river where they may have acquired the trumpet technology from the Arawak-speaking Palikúr, who were using the trumpets north of the mouth of the Amazon. Although bark trumpets have spread over a considerable area in southern Amazonia, their greatest distribution is to be found north of the Amazon River and they are particularly associated with the religious ceremonies of the Arawak societies in the northwest Amazon. Izikowitz recognizes several cultural features shared between the Arawak-speaking groups of the northwest Amazon and those of the Llanos de Mojos. He observes (1935:224, 226) that a dance occurring among the groups of the northwest Amazon is also performed by the Apurinã and the Mojo, and he concludes that the spread of the bark trumpets is associated with the spread of Arawak religious feasts and ceremonies, particularly the well known parallel feasts, from north to south (ibid., 227, 242). The spread of these ceremonies undoubtedly followed the trade routes along the Purús and Madeira Rivers, which mediated much of the cultural contact between northern and southern Amazonia (see section 7.3 for an extended discussion of this exchange).

Continuing on the theme of musical instruments in southern Amazonia, another interesting item to investigate is the spread of complex trumpets. Since this is a relatively wide category of instruments, including several different subcategories, it is also a very widespread phenomenon, particularly in southern Amazonia. North of the main river it occurs less frequently. Complex trumpets occur among many groups of the region, including members of several different language families, but Izikowitz (1935:235) observes that their distribution seems to be mediated mainly by Tupi- and Arawak-speakers. To Izikowitz, Arawak-speakers

are responsible for the initial spread of complex trumpets via their trade networks along the Purús and Madeira, further on to Llanos the Mojos, and south from there to the Diaguita-speakers of the southern Andes in what is today northwestern Argentina. Interestingly, the spread of complex trumpets to the Diaguita culture correlates with the spread of urn burials south of the Llanos de Mojos. As we saw in section 3.2, the urn burials of the Llanos de Mojos have much in common with the well known urn burials of the Amazonian Polychrome tradition of the lower Amazon, indicating some sort of contact between the mouth of the Amazon and the Llanos de Mojos around AD 500 – 1000. The spread of urn burials and complex trumpets to what is now Argentina suggests that these contacts were even more wide-reaching than previously thought. Once again it is interesting to note how the spread of complex trumpets was included in a package of religious ceremonies, making the connection with urn burials, as another part of this cultural package, quite logical (Izikowitz 1935:242). Even though the Diaguita were located far south of Amazonia, contacts with this region were mediated by the Chané, who traded maize and dried and smoked fish to groups such as the Chiriguano, Mataco, Toba, and Chorote of the northern Chaco, all close neighbors of the Diaguita (Métraux 1946:211, 1948c:467).

Izikowitz (1935:243) concludes that the initial southwestern spread of complex trumpets was mediated by the Arawaks via their trade networks in the western part of southern Amazonia. The remaining distribution of complex trumpets in southern Amazonia is ascribed to the late migrations of Tupi-speakers taking place from about AD 1200. Indeed many of the groups known to possess complex trumpets in southern Amazonia are Tupi-speakers or groups in close proximity to them. Many Tupian groups exercised great cultural influence over neighboring groups, as exemplified by the relationship between the Chiriguano and Chané. Izikowitz's argument that Tupi-speakers were responsible for the late dispersal of complex trumpets in southern Amazonia therefore seems reasonable.

An interesting feature of the Llanos de Mojos trade connections is the long-distance exchange with the San Pedro de Atacama area in Chile and further on to the area of what is today northwestern Argentina. During the 1300s, lowland specialties such as parrot feathers, alligator skins, and coca were traded between these areas, at least 1000 km apart as the crow flies (Torres 1987:33, 101). The Bolivian mountain slopes were also connected to these southern regions, as shown by the use of hallucinogenic plants such as *Anadenanthera.* This genus has been in use as the source of a hallucinogenic substance in large parts of South America and the Caribbean since pre-Columbian times, but the south central Andes, including southern Peru, the Lake Titicaca Basin, Andean Bolivia, the Atacama Desert, and northwestern Argentina, is the region with the most ancient and extensive use of this substance (Torres and Repke 2006:29). The earliest evidence for this psychoactive plant use comes from bone pipes discovered at the site of Inca Cueva, and from the site of Huachichocana, both located in the Puna de Jujuy in northwest Argentina and dated to approximately 4000 BP.

The practice of snuffing *Anadenanthera* seems to have been most intense in the Atacama region during the period AD 300 – 900, but thereafter the most intense use occurs in northwestern Argentina. In northwestern Argentina smoking seems to have been the predominant way of accessing the hallucinogenic effects of *Anadenanthera*, while snuffing was more prevalent in San Pedro de Atacama. Smoking also occurred in San Pedro de Atacama, where 60 ceramic smoking pipes, all dating before AD 400, have been found, and there are strong probabilities that these pipes originated in northwestern Argentina (Torres and Repke 2006:47). The most striking feature of the evidence for the use of *Anadenanthera* in the Atacama area is the large number of snuffing kits discovered. A total of 614 snuffing kits have been found in archaeological contexts in this area, suggesting that 20-22 percent of the adult male population used psychoactive snuffs during the period AD 200 – 900 (ibid., 44).

The snuff trays from San Pedro de Atacama shared stylistic similarities with corresponding ones from Niño Korin, and with stone sculptures from Tiwanaku, which also shared basic iconographical similarities with the Wari empire further north (Torres and Repke 2006:43), suggesting interaction between these areas during the first millennium AD (ibid., 35, 42) (fig. 3.4.1). Since *Anadenanthera* does not occur in the Atacama Desert today, and most probably did not during pre-Columbian times either (ibid., 50), the hallucinogenic seeds must have been imported either from northwestern Argentina or from present-day Bolivia, e.g. via Kallawaya traders. As indicated by the finds at Niño Korin, Kallawaya traders transported hallucinogenic substances between the lowlands and highlands (possibly as far south as northwestern Argentina) since at least AD 350 (Wassén 1972:63; Lathrap 1973:180f) (fig. 3.4.1). The presence of snuff paraphernalia originating in the Tiwanaku area suggests a network of interaction connecting Tiwanaku and San Pedro de Atacama, further linked to the sources of *Anadenanthera* in the lowland areas of the Tiwanaku sphere of influence and in northwestern Argentina during the first millennium AD. An interesting point noted by Torres and Repke (2006:50) is that the importance of Tiwanaku iconography identifiable in San Pedro de Atacama is not characteristic of northwestern Argentina, suggesting that the diffusion of complex ideological features did not always follow the patterns of trade in natural resources.

South of the Llanos de Mojos, a special relationship developed between the Tupi-speaking Chiriguano and the Arawak-speaking Guaná and Chané of the northern Chaco, in what today is northern Argentina. Although these groups inhabited an area just outside Amazonia, their close relationship to neighboring groups of the Llanos de Mojos, both in terms of language, culture , and trade connections , justifies their inclusion in this discussion .

Linguistically, the Guaná and Chané are offshoots of the block of southern Arawak languages roughly forming a bow stretching from the Llanos de Mojos to the upper Xingu (fig. 3.3.1). Their languages are closely related, possibly two different dialects of the same language, but they occupied different territories and had different cultural features. The Guaná are sometimes referred to as the eastern Chané. Chané was spoken in the northwestern Chaco

close to the Andes and Guaná was spoken in the western Chaco and in Mato Grosso, Brazil (Métraux (1946:211, 238). The Chané seem to have been in a similar position as their pre-Andine Arawak linguistic relatives in Peru, mediating trade between the highland groups of the southern Andes and various lowland groups of the Gran Chaco speaking Mataco-Guaicurú, Mascoian, and Tupian languages (Métraux 1946:211).

The Chané had probably settled in the lowlands along the southern Andes during the first millennium AD. In that location they were under strong cultural influence from the Andean highland cultures, adopting and conveying many Andean traits to the east through their trade connections with the Guaná and other groups of the region (Métraux 1948c:467). The Chané and their Tupian neighbors to the east, the Chiriguano, traded maize for dried or smoked fish with the Mataco-Guaicurú speaking Toba, Mataco, and Chorote groups of the Chaco (Métraux 1946:301), and this trade network extended further south and east on the Chaco. The Guaraní-speaking Chiriguano, who were originally settled in Paraguay, embarked on several western migrations across the Chaco during late pre-Columbian and early colonial times (Métraux 1948c:465; Alconini 2004). The first migration is recorded to have taken place 1471 or 1476 and was followed by several subsequent population movements across the Chaco. The Chiriguano had been introduced to Andean merchandise in the form of metal objects via the trade networks of the Chané and Guaná (Métraux 1948c:465), and their taste for these exotic objects in combination with their predatory disposition would have devastating effects on the Chané during the following centuries. In general, the Chané seem to have had a non-predatory approach to their neighbors and are referred to by Métraux (1948c:467) as "peaceful". According to Métraux, the Chané were an easy prey to the Chiriguano who, in accordance with Tupian customs shared with their linguistic relatives on the Brazilian coast (Hemming 2004[1978]), slaughtered and ate many Chané. The survivors continued to exist in subjugation despite the fact that they outnumbered their enemies by 10 to 1 (Métraux 1948c:467). The Chané adopted the Tupian Chiriguano language, but their original Arawak language survived as a second language used only in religious ceremonies until the 1900s (Landar 1977:455; Adelaar with Muysken 2004:422; Gordon 2005).

When the Chiriguano had raided and subjugated the Chané, they continued their expansion to the west, attacking the eastern flank of the Inca Empire.[96] The Inca had themselves previously tried to expand their empire to the west by attempting to colonize the Jivaro of the Ecuadorian montaña (Steward 1948a:509), the Arawak groups of the Mojos (Pärssinen et al.

[96] The Chiriguano also settled close to the Arawak Mojo and Baure of the Llanos de Mojos, but in that case there is no indication of a violent invasion similar to the one directed at the Chané. During the colonial period the Mojo used the Guapay River (the upper portion of the Mamoré) to trade their cotton cloth to the Chiriguano, who provided them with iron tools obtained from the Spanish (Métraux 1948b:409; Métraux 1948c:466).

2003b), and the groups of the Chaco (Alconini 2004), which stimulated trade relations (Steward 1948a:509; Alconini 2004:395). The failed Inca attempts to conquer the Chaco seem to have stimulated the migrations of the Chiriguano, whose appetite for metal objects had been established by their Chané trading partners. Partly in response to the Chiriguano attacks, the Inca constructed a series of fortresses along the eastern Andean slopes during the reigns of Tupac Yupanqui and his son Huayna Capac, starting in the 1470s (Alconini 2004:394).[97] The Chiriguano managed to capture one of these fortresses, Cuzcotuyo, and establish their presence in the area as evidenced by the appearance of Chiriguano-Guaraní pottery at this site (ibid., 413). This establishment initiated an acculturation process in which some Inca traits were adopted by the Chiriguano (Steward 1948a:510), and some Chiriguano groups were even incorporated as local allies to the Inca to ward off the threat of other hostile groups such as the Lule[98] (Alconini 2004:413).

Another frequently used trade route stretched south from the Mojos through the areas dominated by the Chiquitano and Bororo, reaching the upper Paraguay River and continuing along its course all the way down to the Río de la Plata (Métraux 1948b:409). This route conveyed merchandise of Andean origin across the continent, impressing and attracting remote groups in a manner similar to how the Chiriguano had been attracted by Andean trade goods brought to them by the Chané and Guaná. It is likely that Andean trade goods also reached the Chiriguano and other Tupian groups occupying the region east of the middle Paraguay River, via the Llanos de Mojos and the Paraguay River. After the Europeans arrived on the Brazilian coast, they too encountered precious objects from the Andes conveyed along the Paraguay River, stimulating several European expeditions searching for the source of these items (Métraux 1946:200; Métraux 1948b:409). It is known from historical sources that the Chiquitano-speaking Tarapecosi of the upper Paraguay River in eastern Bolivia received metal objects from the Payzuno, who acquired them from the Chané, Chimeno, Caracara, and Candire. According to Métraux (1948b:384; see also Métraux 1946:200), "Caracara and Candire were names used by the Guaraní of Paraguay to designate the mountain people of the west."[99] Neighbors of the Tarapecosi were the Xaraye, Ortu, and Aburune,[100] who also

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[97] Given the fact that some Inca settlements of the region were established before the Chiriguano invasions, it is likely that these settlements previously had different functions (Pärssinen 1992:120-136, qtd. in Alconini 2004:393).

[98] Lule is a now extinct tribe whose language belonged in the Lule-Vilela language family.

[99] An interesting detail is that in Nimuendajú's (1987) *Mapa Etno-Histôrico*, a group called Caracara is located just south of the junction between the Paraná and Paraguay Rivers. These Caracara are probably the same group as the Carcarana (Caracaraná), located on the southern bank of the lower Paraguay, who spoke Charrúa (Landar 1977:452; Campbell 1997:194).

[100] The Xaraye, Ortu (Ortue), and Aburune (Aburuñe) are now extinct and their languages remain unclassified (Landar 1977:436, 492, 510; Nimuendajú 1987).

obtained silver and gold ornaments from the Andean tribes, probably via the same channels as were used by the Tarapecosi (Métraux 1948b:394).

Further east in southern Amazonia, in the upper Xingu region, we find one of the most elaborate and interesting exchange systems documented in Amazonia. The absence of Europeans in the region until 1884 allowed this exchange system to remain in place until it could be documented by ethnographers, despite substantial population losses beginning around 1650.

The upper Xingu River basin is composed of the upper parts of the Xingu River and its tributaries draining the highlands of the Brazilian Shield (figs. 3.1.1, 3.4.2). The region is characterized by a moist tropical rainforest ecosystem that borders the dry woodlands and savannas of the Brazilian uplands, also known as the *cerrado*. The Xingu River, flowing in a south-north direction through the area and eventually emptying into the Amazon, is the main artery for transport and exchange in the region. Since 1961, the upper Xingu has been part of the Xingu National Park, aimed at protecting both the environment and the indigenous populations of the region. Established as a result of the efforts of the Villas Boas brothers, the creation of the park has led to the relocation of some indigenous groups to the area as they sought protection from exploitation of their original homelands.

As recounted in section 3.2, the exchange systems of the upper Xingu region had developed since the first half of the first millennium AD, when human occupation first began in the area. A connection with groups inhabiting the Llanos de Mojos and the area between the upper Xingu and the Mojos is indicated by the spread of Arawak languages in a more or less continuous belt between these regions, indicating contact at an early date.

At about AD 1250, the occupations of the upper Xingu had developed into integrated clusters of people numbering in the thousands, connected to each other by transportation causeways. Judging from the remains of this intricate transport system, a substantial system of cultural, linguistic, and material flows had been established by that time. Around AD 1650, the upper Xingu population began to decline following the introduction of European diseases. Heckenberger (2005:71) refers to this time as the "transitional period." Following the upheavals caused by the Europeans, Tupi-speakers, who had previously limited their presence in the region to raiding and trading, now entered the upper Xingu to establish permanent settlements.

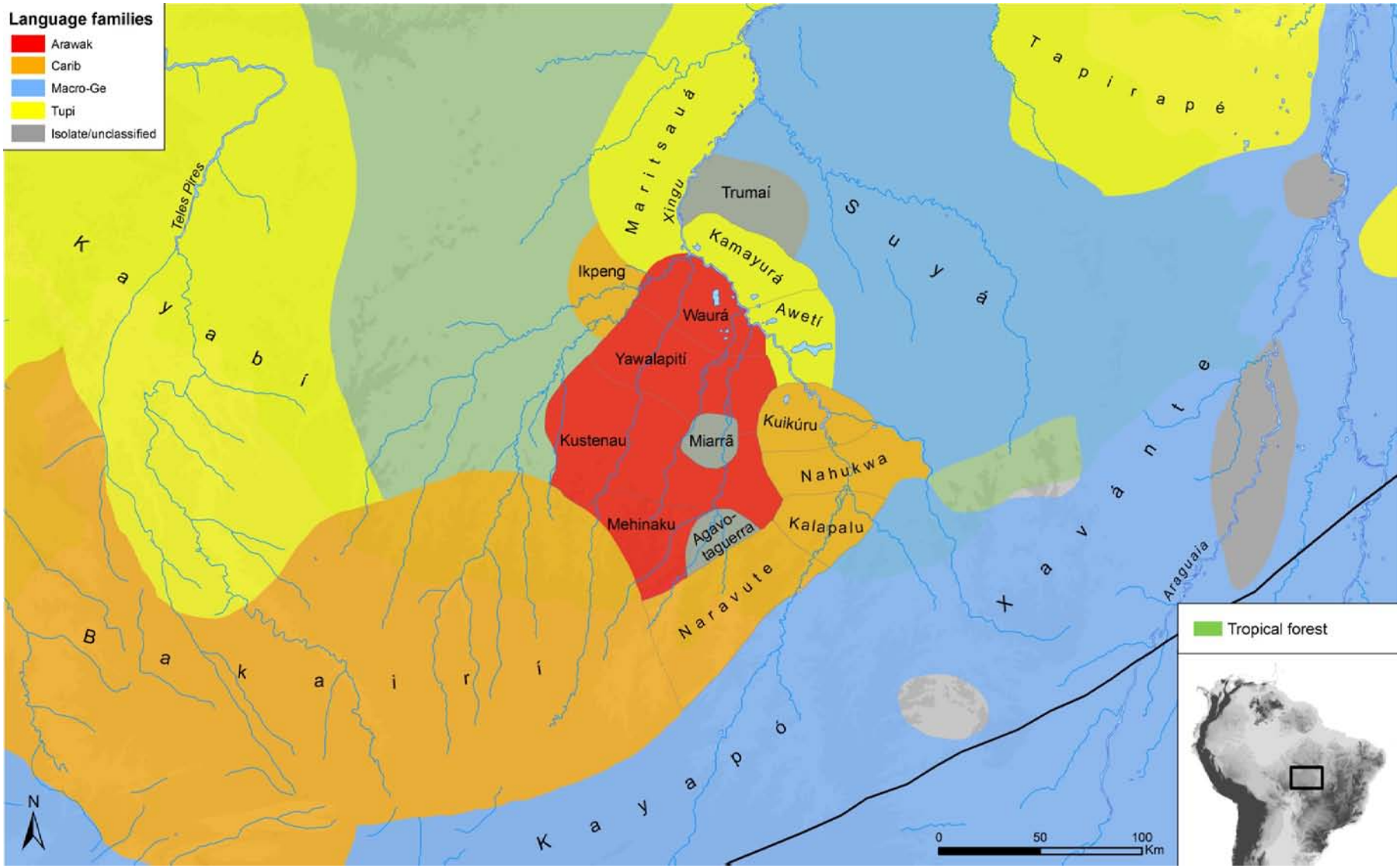

Figure 3.4.2. Ethno-linguistic groups of the upper Xingu River during the early Xinguano Period (1750-1884).

During the early Xinguano period (1750 – 1884), destabilization of the regional system continued, and groups such as Trumaí (linguistic isolate), Suyá and Yaruma[101] (Macro-Ge), Bakairí and Ikpeng (Carib), Arawine[102] (Tupi), and possibly also the now extinct Tupi-speaking Maritsauá (Manitsaua) migrated into the upper Xingu (Heckenberger 2005).[103] The beginning of the late Xinguano period is marked by the 1884 visit to the region by the German ethnographer Karl von den Steinen, who was followed by several German colleagues contributing to the study of the indigenous groups of the region. This period is further characterized by great population losses continuing until the 1960s, when the population began to increase again as a result of the protection afforded by the newly established national park (ibid., 71f).

The exchange systems of the upper Xingu region differ in several ways from those of western Amazonia. First, indications of trade between the upper Xingu and surrounding areas are relatively few. There are several explanations for this, one of the most important being the poor conditions for preservation of organic artefacts, no doubt affecting a great majority of the items formerly exchanged in the region. The conditions for forest products to be preserved in dry highland locations, thereby serving as indicators of pre-Columbian trade, that are present in the Andean part of western Amazonia is entirely lacking in the moist rainforests of the upper Xingu. Furthermore, the latter area remained isolated until the end of the 1800s, leaving a very short period for the documentation of indigenous exchange systems, and no documentation at all of the conditions prevailing before the introduction of European epidemics. Another important difference between western Amazonia and the upper Xingu is the absence of specializations based on access to products from different ecological zones. In western Amazonia, specializations as moderators of trade and as manufacturers of specific products served as sources of identity for the groups involved. In the upper Xingu most resources were readily available to all groups, making specializations based on access to specific resources more arbitrary. However, this does not seem to have stopped the groups in the area from developing ethno-specific products that were important components in the creation and maintenance of their identities as ethnic group.

Lévi-Strauss (1948:339) observes that intertribal trade seemed to create the impression of homogeneity in the material culture of the region, when in fact the manufactures were highly specialized, distinguishing between groups and forming an important part of their identities. Lévi-Strauss provides a description of the nature of this specialized production:

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[101] Gordon (2005) lists Yaruma as a dialect of Suyá (Macro-Ge).

[102] Landar (1977:442) classifies Arawine as a dialect of Kamayurá (Tupi).

[103] For more details on the migrations in the upper Xingu area, see Lévi-Strauss 1948:323.

> *"…ceramics were, and in some instances are now, furnished to the* Bacaïri *and* Nahukwa *by the* Custenau *and* Mehinacu*, and to the* Trumaí *and* Tupian-*speaking tribes by the* Waura*. In Von den Steinen's time, the* Bacaïri *specialized in the production or urucú and cotton, and in the manufacture of hammocks, rectangular beads, and other kinds of shell beads. The* Nahukwa *were the best producers of calabash containers, tucumã nut beads, and red shell beads. Stone implements were the monopoly of the* Trumaí *and* Suya; *tobacco raising was a specialty of the* Suya*; and the production of salt was, and still is, important among the* Trumaí *and* Mehinacu. *The* Arawak-*speaking tribes exchanged their pots for the calabashes of the* Nahukwa. *In 1938,* Trumaí *bows were still made by the* Camayura*"* (Steinen 1894; Quain ms., qtd. in Lévi-Strauss 1948:339).

The rivers were crucial as communication routes, but land transport was not unimportant as indicated by the construction of causeways for rapid inland transportation and by the fact that some groups (e.g. Macro-Ge speakers) did not utilize canoes for transport. Some trade seems to have been ritualized, as indicated by the Trumaí trade games in which each participant offered raw materials or manufactured objects for sale in ceremonies lasting for hours (Lévi-Strauss 1948:338). The Trumaí acquired their pottery from the Waurá, who, together with the other Arawak tribes, were the only ceramic manufacturers of the upper Xingu (ibid., 332). Pottery manufactured by Arawak women was frequently found among the Auetö, Kamayurá, Trumaí, and Nahukwa, who sometimes took Arawak wives (ibid., 333). The ethnic specializations in manufacture and trade also occurred in myths among different groups, all originating in the Arawak tale of the cycle of *Keri* and *Kame* – the sun and the moon.[104] According to the Trumaí, the cultural diversity of the upper Xingu was the result of choices of things that *Keri* offered to the people. The Waurá took the pots, the Kamayurá the bow, and the Trumaí themselves the beeswax. The white man preferred the ax and with it he constructed an extensive civilization (Quain ms., qtd. in Lévi-Strauss 1948:347f). Another specialty was rock quarries, Trumaí being one of the principal actors in this type of production (Lévi-Strauss 1948:330).

Intermarriage between groups, as in the case of the Arawak female potters described above, was common in the region. Intermarriage is explicitly mentioned between the Mehinaku and Nahukwa, the Bakairí and Kustenau, and between the tribes of the Culiseu River and the Nahukwa (Lévi-Strauss 1948:340). All this interaction resulted in extensive multilingualism, further facilitating intertribal relations.

Although the extensive relations between the groups of the region tied them closer to each other, there was no guarantee for peaceful relationships. In the words of Lévi-Strauss (1948:339): "…intertribal relations on the upper Xingu were not exactly pacific." The Bakairí

[104] As mentioned earlier in this chapter, *Keri* also occurs among the Mosetene and Mojo.

feared the Trumaí, who in their turn had to flee from the Suyá (ibid., 339). It is also well known that Tupian-speaking groups frequently invaded the upper Xingu from the south (Heckenberger 2005). Macro-Ge-speaking groups such as the Suyá and the Kayapó were particularly feared among the other groups (Nimuendajú 1948a:235).

Relationships between the groups of the upper Xingu and the tribes along the middle and lower sections of the river seem to have been limited. Except for a few contemporary indications such as some tribes acquiring bows from the Jurúna (Michael Heckenberger, pers. com., October 2008), and the fact that the Tupian Jurúna language has some influences from the Xinguano Arawaks (Nimuendajú 1948a:215), not much is known about the exchange between the different parts of the river. One of the reasons may be the difficulty of navigation through the rapids of Volta Grande, but the single most important factor is probably the different historical developments of the two regions after 1492, and the effects that this development has had on our knowledge about the pre-Columbian conditions. The almost total disappearance of the indigenous populations in a wide zone along the Amazon River and the lower parts of its tributaries, and the subsequent expansion of Tupi-, Macro-Ge-, and Múra-speakers over this area, makes it extremely difficult to reconstruct the pre-contact ethno-linguistic landscape and its exchange systems.

What we do know from historical sources is that the tribes of the middle and lower Xingu River were divided between riverine specialists such as the Jurúna and Shipaya and *terra firme* groups located away from the major river (Nimuendajú 1948a:213). The situation seems to have been similar to that of the Ucayali River, where riverine specialists such as the Pano-speaking Shipibo and Conibo and the Arawak Piro controlled the trade along the major river, mediating further exchange with the Panoan hinterland groups (see chapter 2). On the Xingu, the Tupi-speaking Tacunyapé mediated much of the trade, relaying goods to their linguistic relatives the Arupaí, also known as Maritsauá (ibid., 213). The Tacunyapé are one of the few tribes described by Nimuendajú as peaceful in a region otherwise characterized by military violence since the beginning of European colonization. The Kayapó were enemies of the Xingu Tupi and most Tupi groups were at war with each other. This situation was doubtlessly exacerbated by the European conquest and especially the introduction of metal tools and weapons and the constant European demand for slave labor. According to Nimuendajú (ibid., 217) the groups originally inhabiting the Xingu River disappeared as a consequence of European-introduced diseases or military conquest by Macro-Ge and Tupi groups, or through a combination of these two factors.

4. The middle and lower Amazon

4.1 Physical Geography

The area here referred to as the middle and lower Amazon consists of the eastern half of the approximately 3000 km long alluvial plain composed of sediments deposited along the Amazon River. In the north, the area is delimited by the ancient geological formation referred to as the Guiana Shield, and in the south the first minor elevation of the Brazilian highlands forms a natural border (fig. 4.1.1).

The Guiana and Brazilian Shields are geological features formed during pre-Cambrian and Palaeozoic times, long before the Andean mountain chain appeared. They have contributed to the rather special preconditions for the river systems of the region. In the north, the rivers draining the deeply weathered Guiana Shield are so-called black-water rivers, dark in color and low in nutrient content, such as the Río Negro and Río Trombetas (Furley 2007:138). In the south, the Brazilian Shield, also deeply weathered but with a different geological composition, produces clear-water rivers such as the Tapajós, Tocantins, and Xingu. These rivers are slightly higher in nutrient content compared to the black-water rivers draining the Guiana Shield, but still not sufficient to produce alluvial sediments such as are annually deposited by the rivers draining the eastern slopes of the Andes (ibid., 145) (fig. 4.1.1).

The alluvial soils along the main river between the Guiana and Brazilian Shields are composed partly of sediments deposited before the appearance of the Andean mountain chain, when the Amazon was still flowing from east to west, and partly of sediments originating in the Andes and conveyed by the current direction of the Amazon River. The relatively new geological formation of the Andes contributes large amounts of nutrient-rich sediments annually deposited along the course of the Amazon. These sediments, referred to as *várzea*, are rich in available nutrients and may be utilized for intensive agriculture during certain periods of the year. These sediments are deposited during the high-water season, initiated by the snow-melting period in the Andes. During this period, the water level of the Amazon rises dramatically and may reach 8 – 12 meters above dry-season levels at Manaus (Furley 2007:137). All the rivers flowing east from the Andes, eventually ending up in the Amazon, are thus sediment-rich and referred to as white-water rivers. Apart from the Amazon itself, examples of white-water rivers are the Japurá, Putumayo, Purús, and Madeira. Along the middle and lower Amazon, all the nutrient-poor black- and clear-water tributaries are transformed into one giant white-water river, transporting 1/5 of the earth's available fresh water into the Atlantic Ocean.

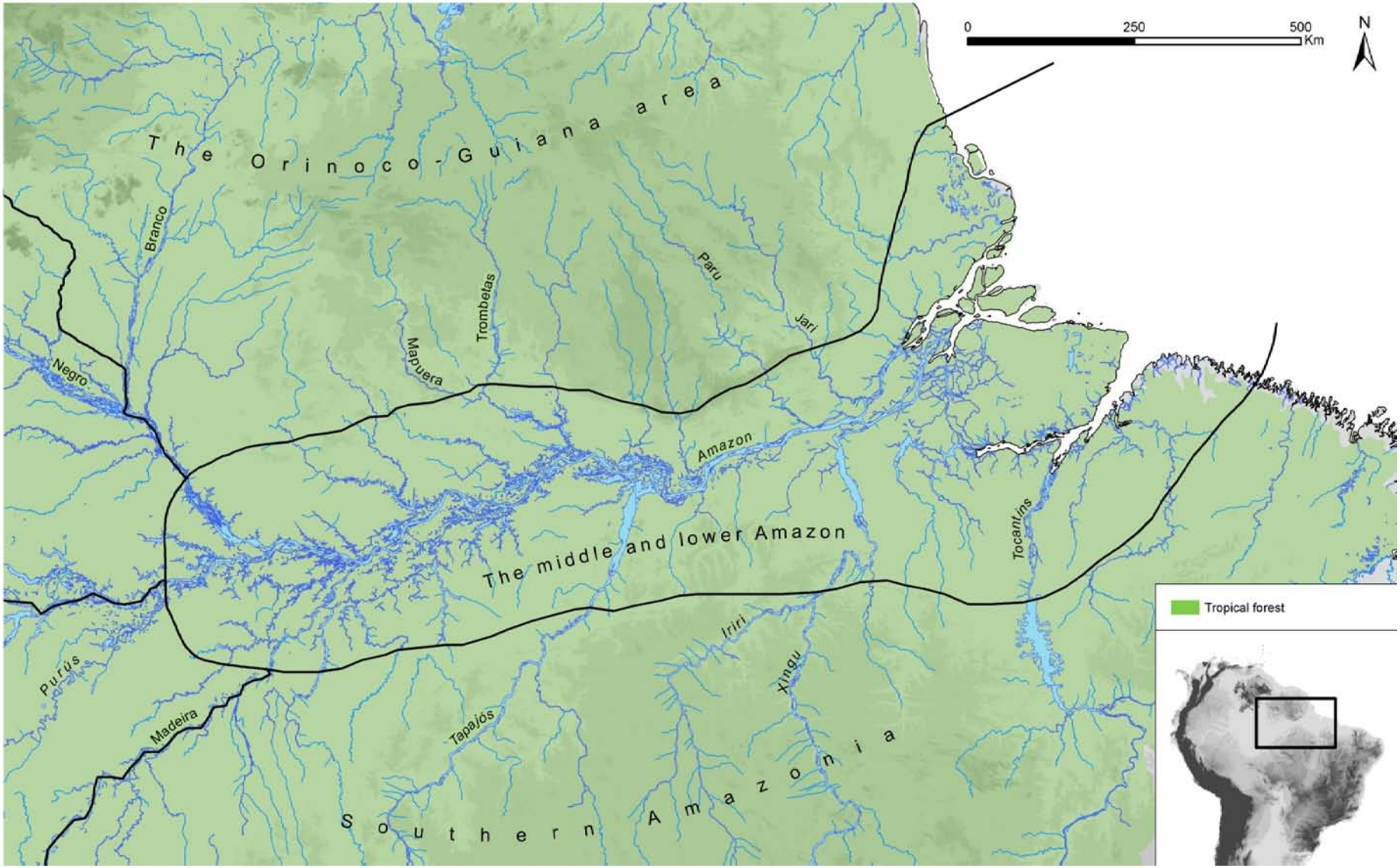

Figure 4.1.1. The physical geography of the middle and lower Amazon.

At the mouth of the Amazon, the sediments have formed several low-lying islands. The largest of these islands is Marajó, equal in size to Switzerland, followed in size by Caviana and Mexicana located just north of Marajó. These islands were all important areas of habitation for pre-Columbian cultures, particularly the Marajoara culture, whose inhabitants constructed water management systems to harvest fish, and erected large mounds at the mouth of the Amazon during the period AD 300 – 1200 (Meggers and Evans 1957; Roosevelt 1991; Schaan 2008).

One of the most remarkable features of the soils along the middle and lower Amazon, at least from an anthropological perspective, is the abundant occurrence of anthropogenic soils. The formation and composition of *terras pretas* and *terras mulatas,* named for their colors, will be discussed in section 4.2.

The middle and lower reaches of the Amazon River consist of an almost flat landscape where the water flow is more a result of the pushing effect of the water flowing down from the upper parts of the river than an actual difference in altitude along its lower sections. The confluence between the Amazon and Negro Rivers is located at a height of only 15 meters above sea level , making the lower parts of the river seem more like an elongated lake than a river.

Ecologically, the area is dominated by moist tropical forest along both sides of the river, interrupted only by the somewhat drier and more open landscape of the delta, where the river empties into the Atlantic Ocean. However, the vegetation cover in the area has shifted at different points in time. There has been a continuous anthropogenic effect on the landscape ever since the initial occupation dating to at least 11000 BP (Roosevelt et al. 1996; see also section 4.2). Humans have altered the landscape through settlement, hunting, gathering, burning, construction of earthworks and water management systems, and by cultivation, resulting in an ever-shifting landscape that is far from being "pristine" (Denevan 2007:265). Since the 1980s, the evidence indicating that pre-Columbian populations were a vital component in the formation of the landscape has been widely recognized, and today we can conclude that every landscape populated by pre-Columbian inhabitants in Amazonia has been modified, in one way or another.

In the middle and lower Amazon region, the first human impacts on the landscape were probably alterations in the species composition of forests. At the rock shelter of Pedra Pintada, various seeds and remains of palm fruits have been recovered (Roosevelt et al. 1996), suggesting that the indigenous population already at this point was favoring certain species, or at least influencing the composition of the forest through their patterned dispersal of seeds from useful plants. Seed dispersal and active forest management may have substantial effects on the forest, resulting in an anthropogenic landscape. Balée (1993:231) has suggested that 12% of the Amazonian forest may be anthropogenic (for a recent summary of the historical ecology of Amazonia, see Balée and Erickson 2006).

Apart from forest modification, the pre-Columbian populations of the middle and lower Amazon also engaged in more conspicuous modifications of the landscape. Along the lower Río Negro, large tracts of forest were transformed into a more open savanna landscape during the period AD 800 – 1200 (Prance and Schubart 1978, qtd. in Denevan 2007:269). At the confluence between Río Negro and the Amazon, transportation channels were constructed to facilitate river travel (William Woods, pers. com., July 2009), and the same was done at Santarém (Denevan 2007:275).

In summary, pre-Columbian human impact on the physical geography of the middle and lower Amazon has been substantial, both in terms of the composition of the vegetation and soils and in terms of physical changes in the landscape through the construction of earthworks, water management systems, and canals. All these modifications were intimately connected to the different societies inhabiting the region over time, and we now turn to a review of current knowledge of these societies.

4.2 Archaeology

The prehistoric sequence established for this area is one of the oldest in the New World. Since at least 11000 BP, it has seen continuous occupation by initial hunter-gatherers and later by farming societies. The oldest occupation is the rock shelter of Pedra Pintada, securely dated to 11000 BP (Roosevelt et al. 1996) (fig. 4.2.1). At 7000 BP the people that created the Taperinha shell mound at the mouth of the Tapajós River were producing the earliest known ceramics in the New World, although they sustained themselves primarily from aquatic resources without relying on farming (Roosevelt et al. 1991; Roosevelt 1995) (fig. 4.2.1). Around 7000 BP is also the advent of large-scale food production in the form of slash-and-burn[105] agriculture in Amazonia (Piperno and Pearsall 1998:4). Suitable crops such as bitter manioc (*Manihot esculenta crantz)* were being domesticated from as early as 9000 BP (Oliver 2008:208), but the first signs of large-scale forest clearing in Amazonia are evidently from about 7000 BP, e.g. the Dona Stella site, excavated by the CAP project and dated to about 7700 BP (Petersen et al. 2004:4) (fig. 4.2.1).

[105] Recently conducted experimental archaeology has led authors such as Denevan (2001:116ff) and Carneiro (1974b, 1979) to question the feasibility of slash-and-burn agriculture based on the use of stone axes. These experiments have shown that the use of stone axes for forest clearance is very inefficient, leading these authors to suggest that the slash-and-burn agriculture documented in Amazonia during the historical period is a recent phenomenon initiated after the introduction of European steel axes. Whether or not the forest was cleared with axes or by other means such as fire or girdling, the palynological evidence clearly shows that some sort of forest clearance took place in Amazonia from about 7000 BP and onwards.

Shell mounds similar to the Taperinha mound have also been discovered on the Atlantic coastline and along the lower Amazon and Xingu Rivers. These sites belong to the Mina tradition (figs. 4.2.1, 4.2.3), which includes phases such as Castália, Macapá, and Uruá, and dates around 5500 to 4000 BP (Simões and Araujo-Costa 1978; Roosevelt 1995). The Mina tradition is recognized by the excavators of these sites as belonging to a pre-agricultural society based on aquatic foraging, thus creating the shell mounds typical of their culture. However, at the site of Lake Geral located about 15 km from the main river in the area below the mouth of the Tapajós, forest disturbance indicates the presence of early agricultural activities from about 5760 BP, thereby predating the Mina culture (Bush et al. 2000). Considering that the middle and lower Amazon region is located between two possible centers of domestication of bitter manioc identified by Piperno and Pearsall (1998:164), viz., central Brazil and the southern part of the Guianas, and that frequent interaction between different parts of Amazonia seems to have spread the concept of food production rapidly all over the region (Piperno and Pearsall 1998:165, 286; Oliver 2008:208), it seems plausible that small-scale horticulture was known in the region at the time of the Mina culture .

On Marajó Island, an almost continuous ceramic sequence ranging from 3500 BP to 500 BP has been established through the early work of Betty Meggers and Clifford Evans (1957) and later investigations by Roosevelt (1991) and Schaan (2008). The initial phase is labeled Ananatuba, dating to 3500 – 3000 BP and included in Meggers and Evans' (1957:174-194) Zoned-Hachured tradition. Ananatuba is followed by Mangueiras (3000 – 2800 BP), and Formiga (AD 1 – 800) (Schaan et al. 2009:129) (fig. 4.2.3). Late prehistoric phases include Marajoara and Aruã. The Ananatuba phase is contemporary with the first evidence of maize agriculture in the middle and lower Amazon region, deriving from Lake Geral and dated to about 3350 BP, but evidence of large-scale maize agriculture in the region at this point in time is still lacking. The manufacturers of the early ceramic phases on Marajó seem to have sustained their cultures primarily on slash-and-burn agriculture combined with water management systems for aquaculture (Meggers and Evans 1957; Schaan 2008; Schaan et al. 2009).

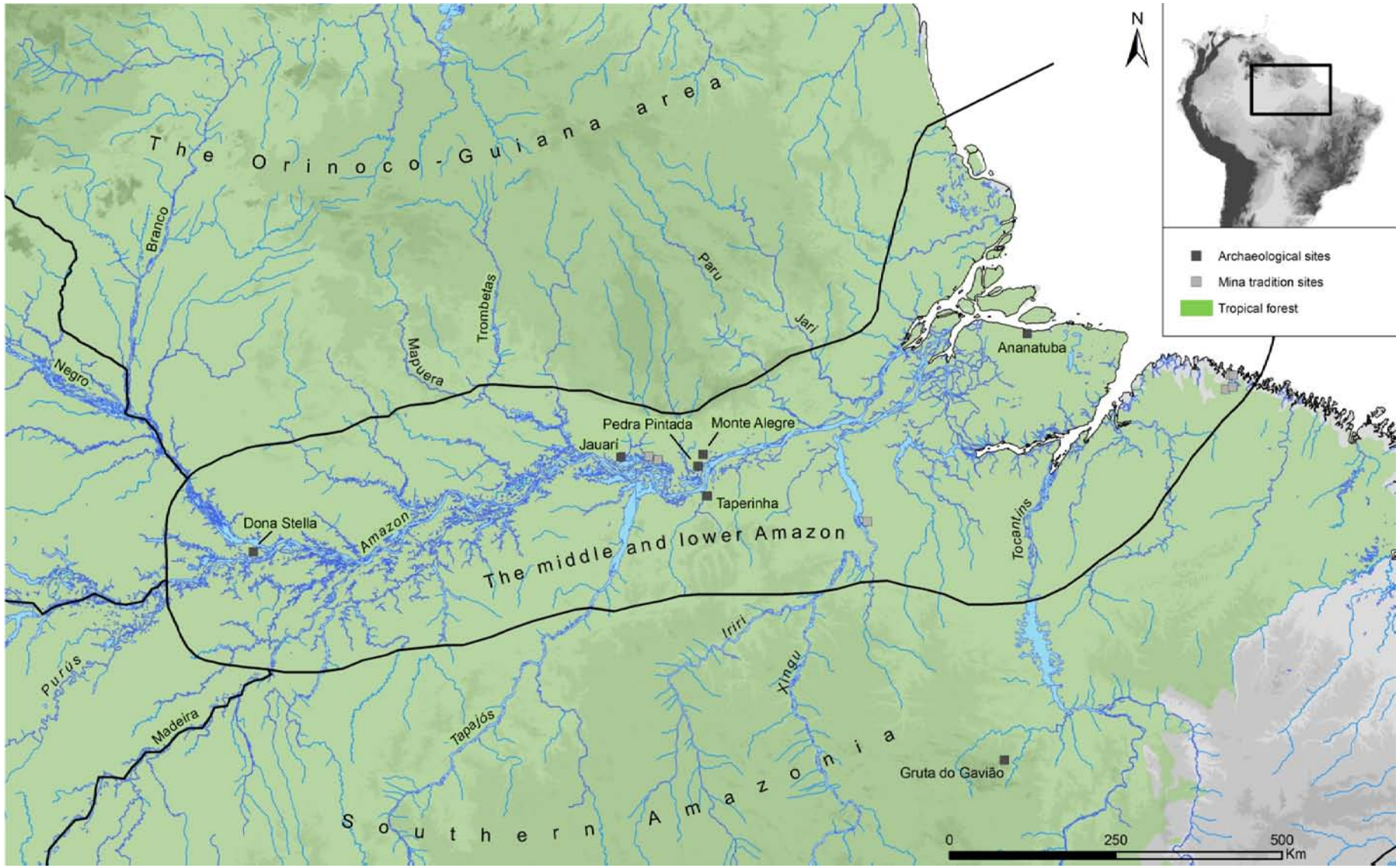

Figure 4.2.1. Archaeological sites of the pre-agricultural period.

Some authors have seen continuity in the ceramic material from Ananatuba and the subsequent Mangueiras phase, particularly as regards incision, decorative motifs, and tubular pipes (Petersen et al. 2004:13). To these authors, both the Ananatuba and Jauarí[106] phases of the Zoned-Hachured tradition are distantly related to the early Barrancoid material of the Manaus region, judging from ceramic traits such as *cauixí* temper, Zoned-Incised decoration, and vessel shapes. Ananatuba and Jauarí are "almost identical," according to Brochado and Lathrap (1982:8, citing Hilbert 1959).

When the Formiga phase on Marajó Island began about AD 1, another major ceramic tradition had already been established further up the Amazon River. Numerous sites containing ceramics from the Barrancoid tradition have been discovered along the Amazon between the mouth of the Negro and Tapajós Rivers. Together with the closely related Saladoid ceramics,[107] the Barrancoid tradition is the most far-flung ceramic tradition in South America. Saladoid ceramics range all over the Lesser and Greater Antilles, along the coast of Venezuela, and in the northern part of the Guianas, spreading there from its origin on the lower Orinoco River. The Barrancoid variant shares territory with Saladoid pottery on Trinidad and in Venezuela and the Guianas (see chapter 5), but also occurs along the Japurá and Caquetá Rivers between Brazil and Colombia, along the Ucayali River in Peru (see chapter 2), and along the middle and lower Amazon River. It also significantly influenced the ceramic development in southern Amazonia, both in the upper Xingu region and in the Llanos de Mojos (see chapter 3). On the middle and lower Amazon, the initial Barrancoid ceramics belong to the Manacapurú phase (400 BC – AD 900) which is further subdivided into two early components labeled Iranduba and Açutuba, and one late component labeled Manacapurú (see chronology).[108] The Açutuba component is replaced by the Manacapurú component at about AD 360 – 400 (Heckenberger et al. 1999; Rebellato et al. 2009). The pottery of this tradition has general affiliations to Barrancoid materials of the middle and lower Orinoco (chapter 5), upper Amazon (chapter 2) and southern Amazonia (chapter 3), suggesting early long-distance connections between these areas (Hilbert 1968; Lathrap 1970; Heckenberger et al. 1999; Petersen et al. 2001; Neves and Petersen 2006; Neves 2008).

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[106] The Jauarí phase, located on the left bank of the Amazon opposite to the mouth of the Tapajós River, is dated to approximately 2400 – 2100 BC (Simões 1972:50; Simões and Araujo-Costa 1978:111).

[107] To Roosevelt (1997:171f) these two ceramics styles form slight variations of one single ceramic tradition (Saladoid being the painted variant, Barrancoid the one carrying plastic decoration), i.e. the "Saladoid-Barrancoid series".

[108] Petersen et al. (2004:8) claim that Barrancoid ceramics may date back to about 950 BC at Açutuba. If this date is confirmed, it would support the long chronology proposed by Roosevelt (1980, 1997) for the Saladoid and Barrancoid series.

The chronology of the Saladoid and Barrancoid complexes has been the topic of an extensive debate initiated in the early 1980s as a consequence of Roosevelt's (1980) excavations in the middle Orinoco Valley. The debate is more fully accounted for in chapter 5, but since the structure of this chronology is highly relevant for the area in focus in this chapter, an outline of the debate is provided here. Briefly, Roosevelt's acceptance of some very early radiocarbon dates placing the beginning of the first Saladoid phase (La Gruta) at about 4000 BP (ca. 2400 BC) was harshly criticized by Venezuelan archaeologists such as Sanoja and Vargas (1983), Gassón (2002), and Zucchi (2002), who claimed that the early datings should be rejected based on stratigraphic errors and possible contamination of the samples. Sanoja and Vargas (1983), rejecting many of Roosevelt's (1980) dates, instead proposed a *short* chronology, in contrast to Roosevelt's *long* one, claiming that the beginning of the Saladoid series should be placed at about 2600 BP (ca. 600 BC). A growing majority of the specialists in the Orinoco region are now in favor of the short chronology, with a modified initiation date for the Saladoid series at about 2800 BP (ca. 900 BC) (Gassón 2002:281). Given the growing majority of archaeologists now favoring the short chronology, it is the one adopted here.

The problem of chronologies for the Saladoid and Barrancoid ceramic series is highly relevant also for the middle and lower Amazon region, since Barrancoid ceramics appear here at an early date. As mentioned above, the Barrancoid Manacapurú phase was established about 400 BC, leaving about 500 years for this ceramic technology to spread from the middle and lower Orinoco River to the middle and lower Amazon. This must be considered as a chronologically realistic scenario. Problems arise when authors such as Piperno and Pearsall (1998:281f, citing Roosevelt 1987) and Oliver (2008:209) use the long chronology, leading them to the conclusion that there were agricultural activities based on manioc cultivation reflected in the presence of ceramic griddles of Barrancoid type at about 3600 BP (ca. 1900 BC) at Caverna de Pedra Pintada. This date is much too early to fit into the chronology for the Barrancoid series in the middle and lower Amazon region. Given the fact that tuber crops are very difficult to trace through phytoliths and that they produce very little pollen (Piperno and Pearsall 1998:282), we might conclude that there may have been small-scale agricultural activities based on the cultivation of e.g. bitter manioc in the middle and lower Amazon region during the fourth millennium BP (possibly even from 5760 BP), but that these agriculturalists did not use Barrancoid ceramics.

The Barrancoid ceramics of the middle and lower Amazon also include the Itacoatiara phase, which has a wide range of C^{14} dates but with a probable span between AD 1 – 300, thereby making it contemporary with the Açutuba phase (Hilbert 1958, 1968; Simões and Araujo-Costa 1978, Myers 2004:76) (fig. 4.2.2). Also contemporary with these phases is the disputed Pocó phase (100 BC – AD 200), which has general affiliations to Saladoid material but is now considered to belong to the Amazonian Polychrome tradition (Hilbert and Hilbert 1980; Eden et al. 1984:127) (fig. 4.2.3).

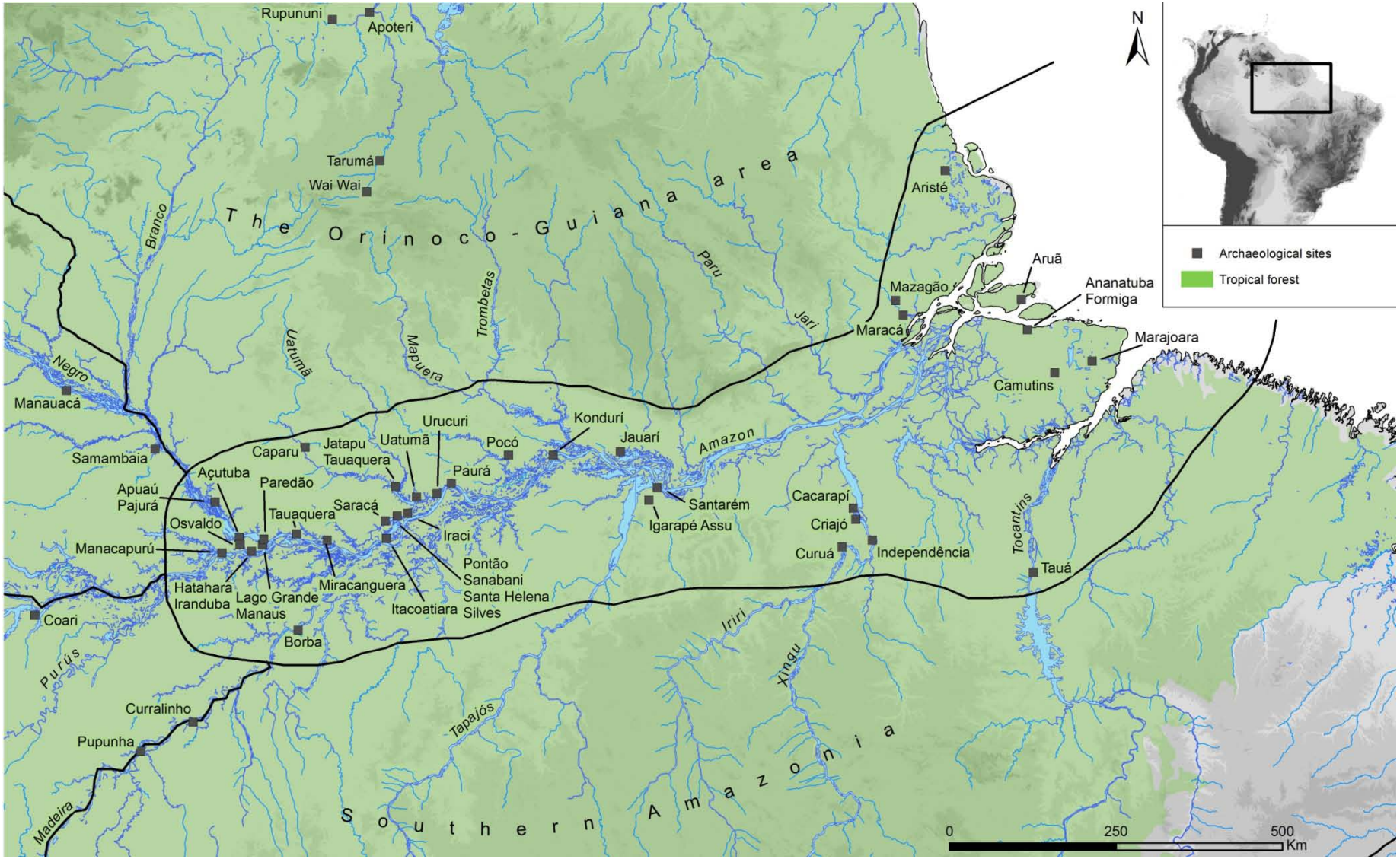

Figure 4.2.2. Archaeological sites of the agricultural period.

Slightly later in time (AD 200 – 500) is the Silves phase of the Barrancoid series, located along the middle Amazon River close to the discharge of the Madeira River (Simões and Araujo-Costa 1978:73f; Simões and Machado 1987) (fig. 4.2.2). At this point (ca. AD 200 – 600) the similarities between the different phases of the Barrancoid tradition were greatest. From the Caribbean islands in the north, through the Orinoco Valley, down to the middle and lower Amazon region, and further on into southern Amazonia and the upper Amazon, ceramic traits were shared to the point where the same *adornos* and general vessel shapes were used, indicating frequent long-distance interaction between these areas (Petersen et al. 2004:16). After this period, ca. AD 600 – 800, the geographically distant components of the Barrancoid series developed in separate directions, making the internal differences within the tradition greater.

It is at this point in time that we find the Paredão phase, dating between AD 700 – 1200, located close to the confluence between the Negro and Amazon Rivers (Hilbert 1968; Heckenberger et al. 1999; Neves and Petersen 2006; Rebellato et al. 2009) (fig. 4.2.2). Previously thought to belong to the Barrancoid series (Hilbert 1968), Paredão is now considered a local complex (Lathrap 1970:159; Heckenberger et al. 1999; Neves and Petersen 2006) not descending from the previous Barrancoid material in the region, although it shares certain elements with both the Barrancoid and the subsequent Guarita subtradition of the Amazonian Polychrome tradition (Neves et al. 2004:16-18).

Myers (2004:75f) adds two later components to the Barrancoid series of the middle and lower Amazon: Curralinho[109] (AD 900 – 1200) along the lower Madeira River, and Jatapu[110] (AD 900 – 1100) close to the sites of the Silves phase mentioned above (fig. 4.2.2). By this time, the Barrancoid material of the middle and lower Amazon had developed marked differences in relation to its ancestral ceramics in the Orinoco Valley, prompting the investigators of this material to doubt its affiliation with the Barrancoid series (see footnotes 6 and 7).

During the latter half of the first millennium BC, the time of the establishment of the Barrancoid series in the middle and lower Amazon region, there is a radical shift in subsistence strategies toward high-intensity landscape management documented throughout Amazonia. This phenomenon is visible in the middle and lower Amazon region through the formation of *terra preta* soils (Petersen et al. 2001:100; Neves and Petersen 2006:290; Rebellato et al. 2009:20) and water management systems on Marajó Island (Schaan 2008; Schaan et al. 2009:130).

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[109] This phase was originally interpreted as part of a regional tradition (Simões 1983) and later reinterpreted as a component of the Incised Punctated tradition (Simões and Lopes 1987).

[110] This phase was originally interpreted as a component of the Incised Punctated tradition (Simões and Corrêa 1987).

Terra preta, *terras pretas do índio*, or Amazonian Dark Earths (ADE)[111] are different terms used to designate the dark, fertile soils, rich in carbon and pottery fragments, that occur at pre-Columbian sites throughout Amazonia and the Caribbean. These anthrosols vary in depth from a few centimeters to up to two meters and may extend over hundreds of hectares. Together they comprise only 0,1-0,3% of the total land area of Amazonia, but their importance for agricultural productivity vastly exceeds that of their size (Woods and Denevan 2009:1). *Terra preta* soils are associated with pre-Columbian settlement sites and have retained their fertility until the present, mainly due to high carbon content and microbial activity (ibid.).[112]

The role of humans in the creation of *terra preta* in Amazonia has been extensively debated. Following the shift in perspective from environmental determinism to historical ecology since the late 1980s, a growing number of scholars now view these soils as anthrosols, and not simply generated as a by-product of human activity, but consciously created and maintained in order to increase food productivity on previously poor soils (Woods and Denevan 2009:1). This goal was most likely achieved by a combination of near-surface burning and adding ashes, pottery, microscopic bone fragments, and other kinds of organic components to the soil (Arroyo-Kalin 2009:53; Arroyo-Kalin et al. 2009:119; Woods and Denevan 2009:1). Once *terras pretas* were created, the chemical composition and microbial activity allowed them to function as self-sustaining, high-yielding agricultural soils, permitting intensive farming without the extensive fallow periods characteristic of traditional slash-and-burn agriculture known from the historical period over much of Amazonia (Woods and Denevan 2009:1). Interestingly, the ability of *terra preta* soils to become self-sustaining in terms of nutrients despite intensive agricultural use rests on a principle totally different from that underlying slash-and-burn agriculture and the nutrient cycle in the tropical rain forest itself; while in the rain forest the majority of the nutrients are stored in the vegetation, a circumstance utilized in slash-and-burn agriculture where the nutrients are quickly released by rapid burning of the vegetation, *terra preta* seem to function more as an imitation of temperate climate soils where most of the available nutrients are stored in the soil instead of in the vegetation.

In addition to *terra preta*, another anthrosol called *terra mulata* also occurs at pre-Columbian sites along the middle and lower Amazon. *Terra mulata* is a brown-colored soil , less clearly associated with settlement sites, which seems to have been a purely agricultural phenomenon generated by near-surface burning and the supply of organic material to the soil, allowing it to

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[111] Given its dominance in the literature, the term *terra preta* is used here.

[112] The chemical composition of *terra preta* is a complex matter and all details of the chemistry of these soils are not relevant to reiterate here. Readers interested in the soil chemistry of *terra preta* are advised to consult the following references: Lehmann et al. 2003; Glaser and Woods 2004; Woods et al. 2009.

support intensive or semi-intensive agricultural activities (Arroyo-Kalin 2009:75; Woods and Denevan 2009:1).

Although the origin of the *terra preta* and *terra mulata* technologies is far from clear, they seem to have spread throughout Amazonia parallel to the spread of the Saladoid and Barrancoid ceramic series. At Barrancas on the lower Orinoco, one of the principal sites of the Barrancoid series, the earliest *terra preta* is dated to 900 BC (Oliver 2008:211). The earliest *terra preta* site in the middle and lower Amazon region dates to 450 BC (the Paredão site) and belongs to the Manacapurú phase,[113] but its earliest component, the Açutuba phase, does not seem to be associated with the formation of *terra preta* (Hilbert 1968; Heckenberger et al. 1999; Petersen et al. 2001:100; Petersen et al. 2004; Arroyo-Kalin 2009:54).

At Hatahara and Lago Grande, two of the sites excavated by the Central Amazon Project, *terra preta* formation began during the Manacapurú phase at about AD 1 and was intensified during the following Paredão phase (Arroyo-Kalin 2009:77) (fig. 4.2.2). The occurrence of large tracts of *terra preta* at these sites indicates the presence of increasingly sedentary agriculturalists in the region at about AD 500 (ibid., 78).

The technique of adding ashes as a soil fertilizer in the process of creating *terra preta* and *terra mulata* suggests a cultural parallel to the use of *caraipé* (tree-bark-ash) tempering in the Barrancoid ceramics of the Manacapurú phase. This new ceramic technology dates to the transition between the Açutuba and Manacapurú phases and correlates with the appearance of *terra preta* (Arroyo-Kalin 2009:119). As we shall see further on, the cosmological significance of smoke and ash may have been a central cultural theme of these early societies of the Amazon.

At the end of the Barrancoid sequence in the middle and lower Amazon region another ceramic tradition that would come to acquire a geographical distribution second only to the Barrancoid tradition series had begun to develop out of the Barrancoid ceramics along the middle Amazon River. However, the origin of the Amazonian Polychrome tradition is rather complex and the development of its many phases and their internal relationships far from fully investigated.

Lathrap (1970:155) divided the Amazonian Polychrome tradition into two subtraditions, Guarita and Miracanguera, each containing several phases. In addition to Lathrap's two subtraditions, a third one, Saracá, was added through the works of Mario Simões and his associates in the PRONAPA and PRONAPABA projects (Simões and Corrêa 1987; Simões and Machado 1987). More recent publications by Heckenberger et al. (1998) and Boomert (2004) have disqualified Lathrap's suggestion concerning these two subtraditions, arguing that

[113] The Paredão site contains multiple ceramic components.

such a distinction cannot be made based on the archaeological material available. Boomert (ibid., 259), on the other hand, considers the Marajoara complex as sufficiently unique to distinguish it from all other Polychrome complexes. He also accepts Guarita and Saracá as valid subtraditions, and adds the Napo complex (including all polychrome phases in eastern Peru, Ecuador, and Colombia) as a separate subtradition.

The earliest dated component of the Amazonian Polychrome tradition is the Marajoara phase (AD 300 – 1200) of Marajó Island (Meggers and Evans 1957; Roosevelt 1991; Schaan 2001).[114] It is also in the Marajoara material that the polychrome painting characteristic of this tradition is most elaborately developed.[115] Boomert (2004:258) even considers Marajoara as such a prominent member of the Polychrome tradition that he sometimes refers to the whole tradition as Marajoaroid. Apart from Marajoara, the region around the mouth of the Amazon contains multiple polychrome complexes. The Aruã phase (AD 1400 – 1700) is located on the islands of Marajó, Mexicana, and Caviana and on the mainland northwest of these islands. It is considered by Brochado and Lathrap (1982:53) as a late, undecorated variant of Marajoara (Boomert 1987:41, 2004:266). On the mainland northwest of Marajó Island, the Mazagão phase (AD 1100 – 1650) is represented by at least fifteen sites (Meggers and Evans 1957; Simões and Araujo-Costa 1978:66ff; Rostain 1994:13; Williams 2003:367), and further north the Aristé phase is represented at numerous sites along the coast of Brazilian Guyana up to the border of French Guyana. Mazagão and Aristé were previously considered part of the Incised Punctated tradition dating between AD 1000 – 1700 (Simões 1983), but their early components are now considered related to the Polychrome tradition (Boomert 2004:258). Early Mazagão and early Aristé are further regarded as the link between the Koriabo phase (AD 750 – 1500) of the Guianas, previously considered as a member of the Incised Punctated tradition, and the ceramic complexes of the Amazonian Polychrome tradition in the Amazon Valley. Boomert (2004:258) thus considers Koriabo as a member of the Polychrome tradition – a claim that surely will be disputed given its long inclusion in the Incised Punctated tradition.

West of Marajó Island is where the Maracá phase (AD 1000 – 1600) has been discovered (Guapindaia 2001, 2008). This complex is closely related to the Marajoara material, but also to the Miracanguera and Pirapitinga phases located further up the Amazon. This relationship was the basis for Lathrap's (1970:157) definition of a Miracanguera subtradition (Heckenberger et al. 1998; Boomert 2004).

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[114] The Pocó phase located along the lower Trombetas and Nhamundá Rivers has recently been assigned to the Amazonian Polychrome tradition (Boomert 2004:266) and may date back to AD 1, but the date and affiliation of this phase is still a matter of dispute.

[115] Brochado and Lathrap (1982:51) at one point describe Marajoara as "one of the most complex art styles of the world."

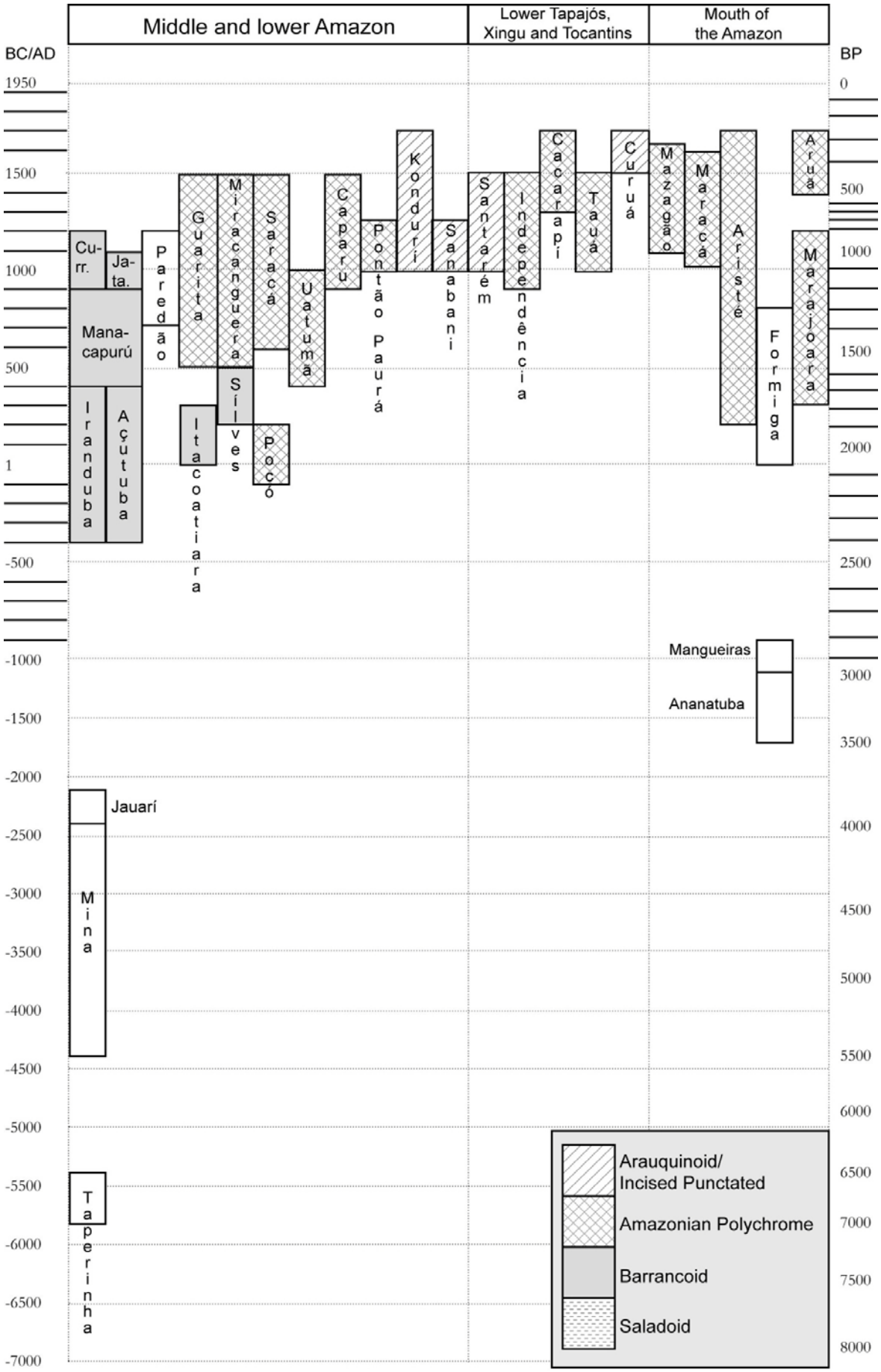
Middle and lower Amazon
Lower Tapajós, Xingu and Tocantins
Mouth of the Amazon
BC/AD
BP
1950
1500
1000
500
1
-500
-1000
-1500
-2000
-2500
-3000
-3500
-4000
-4500
-5000
-5500
-6000
-6500
-7000
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
6500
7000
7500
8000
Cu-rr.
Ja-ta.
Mana-capurú
Irandubа
Açutuba
Paredão
Guarita
Itacoatiara
Miracanguera
Silves
Saracá
Poção
Uatumã
Caparu
Pontão Paurá
Kondurí
Sanabani
Santarém
Independência
Cacarapi
Tauá
Curuá
Mazagão
Maracá
Aristé
Formiga
Aruã
Marajoara
Mangueiras
Ananatuba
Jauarí
Mina
Taperinha
Arauquinoid/ Incised Punctated
Amazonian Polychrome
Barrancoid
Saladoid

Figure 4.2.3. Chronological chart of the archaeological phases of the middle and lower Amazon. Abbreviations: Curr. Curralinho; Jata. Jatapu.

South of Marajó Island, ceramics from the Tauá phase have been found at five sites along the lower Tocantins River. This phase remains undated but is probably related to the Polychrome phases of the nearby lower Xingu River, thereby dating to approximately AD 1000 – 1500. Numerous sites along the lower Xingu contain pottery from three Polychrome phases: Independência, approximately AD 900 – 1500 (Perota 1992:212); Cacarapí[116] (AD 1300 – 1700) occurring in at least five sites (Simões and Araujo-Costa 1978:83f; Perota 1992:213; Boomert 2004:266); and Criajó, an undated Polychrome complex from the same area (Simões and Araujo-Costa 1978:84; Perota 1992:213) (fig. 4.2.3). Boomert (2004:266) also classifies the (undated) Igarapé Assu phase of the lower Tapajós River as belonging to the Amazonian Polychrome tradition, together with the phases from the lower Xingu and Tocantins Rivers.

The area between the mouths of the Uatumã and Trombetas Rivers, on the north side of the Amazon, has the westernmost located sites of the Saracá subtradition. Along the lower Trombetas and Nhamundá Rivers there are two sites of the Pocó phase,[117] which contain the oldest ceramics of the Saracá subtradition, dating between AD 1 and 400 (Hilbert and Hilbert 1980:9). This is also the area of the Uatumã (AD 400 – 1000) (Simões and Corrêa 1987), Iraci (undated) (Simões and Machado 1987), and the Saracá[118] phase (undated, but probably ranging between AD 400 and 1500; Simões and Araujo-Costa 1978:74; Simões and Machado 1987). Northwest of these sites, along the upper Uatumã River, are sites of the Caparu phase (AD 900 – 1500), which links the Apoteri Incised phase of the Apoteri site along the upper Essequibo with Marajoara (Miller 1992a:20; Williams 2003:422) (fig. 4.2.2).

Near the sites of the Iraci and Saracá phases on the lower Sanabani River, close to its discharge into Lago Saracá, are two sites: Pontão (AM-IT-6), and Santa Helena (AM-IT-7), classified by

[116] Cacarapí was previously considered a member of the Incised Punctated tradition (Simões and Araujo-Costa 1978:83f).

[117] The affiliation of the Pocó phase remains disputed. It is older than all other Polychrome phases and even if the earliest dates from around 3000 BP are disregarded, it still dates around AD 1 – almost half a millennium before any affiliated phases. Brochado and Lathrap (1982:25) suggests affiliations to Saladoid material, while Boomert (2004:266) associates it with the Saracá subtradition of the Amazonian Polychrome tradition. Hilbert and Hilbert (1980), who excavated the two Pocó phase sites, emphasize links to Tauaquera of the Guarita subtradition (spelled Taquara in Eden et al. [1984]) and to Barrancoid material. None of these conclusions needs to be wrong, since Saladoid and Barrancoid ceramics are closely related and the Guarita style (which in turn is related to the Saracá subtradition) seems to have developed out of Barrancoid material in the middle and lower Amazon region.

[118] Note that the Saracá phase carries the same name as the Saracá subtradition (of which it is included in).

Simões (1983:83) as belonging to the Pontão phase (AD 1000 – 1250) (Simões and Araujo-Costa 1978:73; Simões and Machado 1987). To Simões, this phase belongs to the Incised Punctated tradition and Simões and Machado (1987:54) include the Pontão site in the Sanabani phase, while Santa Helena has been reclassified as belonging to the (undated) Garbe phase, both belonging to the Incised Punctated tradition. Boomert (2004:266), on the other hand, continues to reclassify phases from Incised Punctated to Polychrome (e.g. Aristé, Cacarapí, Koriabo, and Mazagão) and maintains Pontão as an independent phase belonging to the Amazonian Polychrome tradition. Two more phases, Paurá and Tauaquera, located further west along the Amazon, are further listed by Boomert (ibid.) as members of the Amazonian Polychrome tradition. Simões (1983:26, 46) mentions two sites named Tauaquera, and Boomert is apparently referring to the one coded AM-IT-22. Nimuendajú (2004:163) visited this site and collected polychrome pottery from it in 1926.

On the northern shore of the Amazon River, between the mouths of the Uatumã and Negro Rivers, lies Miracanguera (undated, but probably ranging between AD 500 and 1500), the type site of Lathrap´s (1970:155) subtradition with the same name. Its significance is lesser now, when it is no longer considered as the type site of a subtradition, but rather a phase of the Amazonian Polychrome tradition (Boomert 2004:266).

The area around the lower Madeira and Negro Rivers is also the center of the Guarita subtradition. Guarita has been recognized as a separate subtradition since the early work of Hilbert (1968). It formed an important component in Lathrap´s (1970) population expansion model, where central Amazonia was represented as the center of ceramic innovation and population growth. Its validity as a subtradition of the Amazonian Polychrome tradition has been confirmed by recent excavations of the Central Amazon Project (Heckenberger et al. 1999; Petersen et al. 2001; Neves et al. 2003; Petersen et al. 2004; Neves 2008).

The Guarita subtradition began to develop out of Barrancoid ceramics along the middle Amazon from about AD 500 – 600 (Lathrap 1970:155-157; Petersen et al. 2004:9) and flowered as a subtradition between AD 900 and 1550. It includes one ceremonial component decorated with the characteristic polychrome painting and one less decorated or undecorated component probably manufactured for everyday use (Petersen et al. 2001:97). The Guarita subtradition includes the following phases located at sites along the middle and lower Amazon and the lower Negro: Apuaú (Simões and Araujo-Costa 1978:77f; Simões 1983:34; Simões and Kalkmann 1987; Heckenberger et al. 1999:357), Pajurá (Simões and Araujo-Costa 1978:77; Simões 1983:2; Simões and Kalkmann 1987)[119], Samambaia (Simões 1983:16, 17, 34, 78; Simões and Kalkmann 1987) and Manauacá along the lower Río Negro (Simões

[119] Simões (1983:2) at one point considered Apuaú and Pajurá as one single phase (Apuaú) (qtd. in Heckenberger et al. 2001: footnote 5; see also Meggers 2001).

1983:17ff; Simões and Kalkmann 1987), Borba on the lower Madeira River (Simões 1983; Simões and Lopes 1987; Kern et al. 2003:55), Guarita in the area around the city of Manaus (Simões and Araujo-Costa 1978:71ff; Heckenberger et al. 1999), and Japurá[120] on the middle course of the river with the same name (Hilbert 1968:225; Simões and Araujo-Costa 1978:75; Neves 2008:366) (fig. 4.2.2, 6.2.2). Finally, Tauaquera[121] on the lower Uatumã River also belongs to the Guarita subtradition (Simões 1983:46).

Guarita phases outside of the middle and lower Amazon include the Catuá (Hilbert 1968:40; Boomert 2004:266) and Coarí (Hilbert 1968:256, 262; Boomert 2004:266) phases located on the southern shore of the Amazon, west of the mouth of the Purús River (fig. 6.2.2), Pupunha[122] of the middle Madeira River (Simões 1983:34ff), Lago Amaná close to the left bank of the lower Japurá River, near its discharge into the Amazon (Evans and Meggers 1968:98; Boomert 2004:266), Tefé, on the southern shore of the Amazon, slightly downriver from the mouth of the Japurá (Hilbert 1968:165ff; Simões 1972:69f; Simões and Araujo-Costa 1978:81), and São Joaquim close to the discharge of the Putumayo River into the Amazon (Hilbert 1968:173ff, 239ff; Simões 1972:65f; Simões and Araujo-Costa 1978:70) (fig. 6.2.2). Ituxi of the middle Purús River is also included in the Guarita subtradition (Perota 1979, qtd. in Kern et al. 2003:56; Simões 1983:33) (fig. 2.2.2).

During the life span of the Guarita phase, a change in settlement patterns has been noticed by the excavators of the Central Amazon Project. At AD 900 – 1000 there is a change from a circular village pattern to a linear layout at Hatahara (Rebellato et al. 2009:22). This transformation of the physical structure of the village is correlated with the shift from Paredão phase ceramics to Guarita, and it is interpreted by Rebellato et al. (2009:22, 29) as the result of a military conflict over the *terra preta* soils that had been formed during the Paredão phase. Furthermore, the linear village layout completely lacks defensive structures such as enclosures or palisades, and this has been interpreted as a sign of a sense of "overwhelming strength" among the new occupants of the site (Rebellato et al. 2009:22).

As a result of the great amount of archaeological research recently invested in the middle and lower Amazon region through the projects on Marajó and in the Manaus area, a picture of

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[120] Boomert (2004:266) refers to this phase as "Macuripi", which is a misspelling of "Macupirí", the name of the site (AM-JP-01) where the Japurá phase has been excavated (Hilbert 1968:227). Although Macupirí might be a more appropriate name for this phase due to its more exact geographical location (in contrast to the long Japurá River from which its name is borrowed), Japurá is preferred here due to its dominance in the literature (Hilbert 1968; Simões and Araujo-Costa 1978; Neves 2008).

[121] This Tauaquera site (AM-IT-14) is not to be confused with the AM-IT-22 site carrying the same name.

[122] Boomert (2004:266) also considers the Pupunha phase as part of the Amazonian Polychrome tradition, but does not specify it as part of the Guarita subtradition.

ceramic continuity between the different traditions is slowly emerging. As mentioned above, it is now increasingly clear that the Guarita subtradition developed out of the previous Barrancoid material in the region, sharing its tempering (*cauixí* – in early Guarita), decorative traits, and vessel shapes (Lathrap 1970:155-157; Petersen et al. 2004:9f). Interestingly, there are also indicative traits such as the use of finger punctate decoration pointing toward a connection between Guarita and the Incised Punctated tradition (Santarém), or "Arauquinoid" as it is referred to in the Guianas and Venezuela (Petersen et al. 2004:21f). This connection is supported by the result of Boomert's (2004) recent investigation of the linkages between the Amazonian Polychrome tradition and the Koriabo phase of the Incised Punctated tradition, which leads him to reclassify Koriabo as belonging to the Amazonian Polychrome tradition.

Given the historical connections, the sharing of tempering and decorative traits, and the proximity in time and space between the Amazonian Polychrome and Incised Punctate traditions (even occurring at the same sites), the question that must be posed is: why did the makers of these ceramics choose to emphasize their difference? Petersen et al. (2004:22) suggest that Incised Punctated may have been what they call a "true trade ware", that is, items manufactured somewhere else and imported into, for instance, the Manaus region. However, although the exchange of trade goods in the middle and lower Amazon region is well documented from various periods (see section 4.4), it is more likely that the production of two different but interrelated pottery styles in close proximity to each other was a means of expressing distinct ethnic identities. Given the information about the formation of political alliances based on ethnicity in the historical period, it seems clear that these patterns had prehistoric antecedents and that they were sometimes reflected in material culture.

Within the Amazonian Polychrome tradition, the Napo complex (AD 600 – 1500), discussed in chapter 2, includes the following phases: Pirapitinga (AD 600 – 1300) upriver from the confluence of the Putumayo and Amazon Rivers (Hilbert 1968:185ff; Simões 1972:62), Zebu (AD 1000 – 1500) from the Finca Riviera site on the northern shore of the Amazon River in Colombia (Bolian 1975:3; Eden et al. 1984:127; Boomert 2004:266), Nofurei[123] (AD 800 – 1600) excavated at Peña Roja on the middle Caquetá River in the Colombian Amazon (Herrera et al. 1980/81; Eden et al. 1984; Herrera et al. 1992:102), Napo (AD 1100 – 1500) of the Ecuadorian Amazon (Evans and Meggers 1968; Hilbert 1968:262; Lathrap 1970:151),

[123] José Oliver (2008:199) claims that the Nofurei phase is part of the Guarita subtradition. Although this might be possible based on stylistic comparisons, the geographical position of Nofurei close to the Napo complex leads me to follow Boomert´s (2004:266) classification and assign it to the Napo complex. It is evident, however, that all of these late polychrome phases are more or less related due to frequent interaction along the Amazon River in late prehistoric times.

and finally Caimito (AD 1200 – 1500) of the upper to middle Ucayali and Huallaga Rivers of eastern Peru (Lathrap 1968:67, 72; Lathrap 1970) (fig. 2.2.2).

Finally, the pottery of the Mound Velarde and Mound Hernmarck phases of the Llanos de Mojos is also related to the Amazonian Polychrome tradition (Howard 1947:72) (fig. 3.2.2). These phases, together with the pottery of the historical Arawak-speaking Guaná of the Pantanal Savanna, form the southernmost extension of the Amazonian Polychrome tradition.

The final major ceramic tradition in the chronological sequence of the middle and lower Amazon Valley is the Incised Punctated tradition. Its distribution encompasses the Guiana Highlands in the north, east, and south with the majority of the sites located on the north side of the highlands, facing the Atlantic Ocean. The literature on the Incised Punctated tradition indicates that this ceramic style originated in the Guiana Highlands and spread east and south fairly rapidly. In the middle and lower Amazon region, the Incised Punctated tradition spans about AD 1000 – 1700, placing it just after the termination of the final Barrancoid phases, and making it contemporary with the Amazonian Polychrome tradition in the same region.

Originally, a large number of phases in the middle and lower Amazon region and the Orinoco-Guiana region were assigned to the Incised Punctated tradition (see e.g. Meggers and Evans 1957; Simões and Araujo-Costa 1978; Simões 1983). Recently, Boomert (2004) has reconsidered the Koriabo phase of the Guiana region, reaching the conclusion that this material is related to the Amazonian Polychrome tradition and that it should be classified as a Polychrome subtradition. Following the reclassification of the Koriabo phase, a number of other phases previously thought to represent the Incised Punctated tradition in the middle and lower Amazon region have also now been reclassified as belonging to the Polychrome series. These are: the Cacarapí phase (AD 1300 – 1700), well represented from at least 5 sites (Simões and Araujo-Costa 1978:83f; Perota 1992a:213), the Mazagão phase (AD 1100 – 1650), represented by at least fifteen sites located on the mainland northwest of Marajó Island (Meggers and Evans 1957; Simões and Araujo-Costa 1978:66ff; Rostain 1994:13; Williams 2003:367) (fig. 4.2.2), and finally Aristé and the Koriabo[124] phase mentioned above (fig. 5.2.2).

Boomert´s reclassification of the above-mentioned phases previously thought to belong to the Incised Punctated tradition leads to the conclusion that the whole complex of phases assigned to this tradition may now need to be recognized as belonging to the Amazonian Polychrome tradition.[125] This would also include the following phases not mentioned by Boomert, but

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[124] Stephen Rostain´s (1994) classification of Aristé and Koriabo as members of the Incised Punctated tradition is dismissed by Boomert (2004:258) as "untenable."

[125] It also prompts us to consider whether the entire project of assigning ceramic styles to "traditions" has been misconceived. Instead of discussing whether a particular style belongs to this or that tradition,

classified as Incised Punctated by others: Sanabani (AD 1000 – 1250), present in a handful of sites opposite to the Madeira River discharge into the Amazon (Simões and Araujo-Costa 1978:72f; Simões and Machado 1987:55), Kondurí (AD 1000 – 1700), located north of the Amazon close to the mouth of the Trombetas River (Hilbert and Hilbert 1980:9) (fig. 4.2.2), the Curuá phase (AD 1500 – 1700) along the lower Xingu River, represented in a number of sites dating from the period of European colonization (Simões and Araujo-Costa 1978:83, 85; Perota 1992a:214f),[126] Garbe (undated) at the Santa Helena site in the Lago Saracá region (Simões and Araujo-Costa 1978:78; Simões and Machado 1987), and finally Urucuri[127] (undated) on the lower Uatumã River (Simões 1983:47; Simões and Corrêa 1987) (fig. 4.2.2).

Since Boomert's (2004) reclassification of several phases of the Incised Punctated tradition is so recent, other positions will surely follow in this debate. Since the present author has not studied the ceramic material himself, no suggestions about correct affiliations will be offered here. However, one conclusion that can be drawn from these deliberations about the relationship between the Amazonian Polychrome and Incised Punctated traditions is that they are related, and thus that there must have been some kind of relationship between the makers of these two styles.

Finally, one phase that should be discussed in relation to the Incised Punctated and Amazonian Polychrome traditions is Santarém. Excavated around the mouth of the Tapajós River and dated to AD 1000 – 1500, Santarém pottery is perhaps the most remarkable ceramics in Amazonia when it comes to vessel shapes and plastic decoration. The rich decoration and elaborate vessel shapes are joined into perfection in the so called caryatid vessels decorated with small figurines (caryatids – a name borrowed from an element in classic Greek architecture) standing on a hollow base supporting an elaborately decorated bowl above them. Although Santarém pottery in the words of Denise Gomes (2001:134) "is at first sight quite unlike any other known style from the Amazon," it shares elements with both the Incised Punctated and Amazonian Polychrome traditions. Brochado and Lathrap (1982:8, 31) place it, together with Kondurí, in the Incised Punctated tradition, a classification partly based on the occurrence of *cauixí* temper in both phases. Gomes (2001:138, 143) points to the similarities between the seated figurines of Santarém and those of the Maracá phase of the

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it may be more pertinent to identify stylistic influences from various areas. Thus, for instance, the Koriabo phase evidently shows influences from the Amazonian Polychrome tradition, even though it belongs to another, recognizably coherent tradition conventionally referred to as Incised Punctated.

[126] On the upper Xingu River, there is also the Diauarum phase of the Incised Punctated tradition (Simões 1972; Simões and Araujo-Costa 1978; Becquelin 1993, 2000).

[127] This style should not be confused with the Urucuri phase of the Jamari River, which Miller (1992a:33) classifies as belonging to the Amazonian Polychrome tradition.

Amazonian Polychrome tradition, leading her to the conclusion that although Santarém ceramic material is indeed distinct, some stylistic traits are undoubtedly shared with the surrounding ceramic traditions, indicating that Santarém was part of the interaction network established in the middle and lower Amazon region in late pre-Columbian times. The role of the Tapajó, the ethnic group who manufactured the Santarém ceramics, in this interaction network during late pre-Columbian and early historic times will be further discussed in section 4.4.

4.3 Historical Linguistics

The area adjacent to the middle and lower Amazon River was perhaps the single area in Amazonia most heavily affected by the initial contact with Europeans. The discrepancies in population estimates between the initial expedition of Francisco Orellana in 1542 and later explorers are huge, and given the virtual emptiness of extended stretches of particularly the northern shore, a reasonable conclusion is that an unprecedented demographic collapse hit these areas during the latter half of the 1500s. Even in the Handbook of South American Indians (Steward 1946-50), whose authors have managed to fill their maps and descriptions of other parts of Amazonia with indigenous tribes, the area between the Amazon and the Guiana highlands seems virtually unknown. In the words of Gillin (1948:801), this area "is so incompletely known that its culture type cannot be accurately described." This lack of knowledge about pre-Columbian societies of the region has encouraged speculations about its ethno-linguistic composition at time of contact. The following review seeks to capture general trends and more firmly established conclusions in attempts to reconstruct the distribution of groups originally inhabiting the area.

At the time of contact, the middle and lower course of the Amazon River seems to have functioned as a barrier, separating the Carib[128] and Arawak languages on the northern shore from mainly Tupi- and possibly some Macro-Ge-speaking groups on the southern side of the river (fig. 4.3.1). As a consequence of the gap in knowledge about the pre-Columbian demographic situation in this region, large areas along the Amazon are left more or less unclassified in most linguistic reconstructions for the contact period (Mason 1950; Loukotka 1968; Nimuendajú 1987; Kaufman 2007) (fig. 4.3.1). Most of the groups inhabiting the banks of the main river were probably devastated by European-introduced diseases following the first European expedition through the continent in 1542. The subsequent expansions of Múra- and Tupi-speaking groups into the deserted areas and the increased hostilities following

[128] Some Carib groups such as the Arára were also distributed in small patches south of the Amazon (Gordon 2005) (fig. 4.3.1)

the Portuguese slave raids also contribute to the difficulties of reconstructing the ethno-linguistic situation along this section of the Amazon in pre-Columbian times.

What we do know from historical documentation is that the westernmost part of the northern shore, adjacent to the lower Río Negro, was dominated by the now extinct Arawak-speaking Arauakí and Manao,[129] and that these groups were closely connected to the large Arawak-speaking cluster in the northwest Amazon (Nimuendajú 1987; Kaufman 2007) (see also chapter 6). Near the Manao lived speakers of the unclassified Tarumá language,[130] who also occupied an area in the Guiana Highlands (fig. 4.3.1). Further east along the northern shore of the Amazon, between the outlets of the Paru and Trombetas Rivers, another Arawak-speaking group known simply as "Arawak" was encountered in 1620 (Nimuendajú 1987). These Arawaks share their name with the Arawak-speaking Lokono of the Guyana coastline, but there were also several other groups simply called "Arawak" with a patchy distribution along the Atlantic coast north of the mouth of the Amazon. Considering the similarities in name and language between these "Arawak" and the Arauakí and Araquiz, their relatively close proximity along the lower Amazon, and the fact that the area between these Arawak groups is linguistically unknown, it is likely that Arawak languages once formed a more or less continuous zone surrounding the Carib-speaking groups of the Guyana highlands. This hypothesis is further strengthened by the evidence suggesting an Arawak regional exchange system documented through archaeology and ethnohistory and discussed in section 7.4. At the mouth of the Amazon River, the Arawak-speaking Aruã inhabited Marajó Island and north of them, along the Atlantic coastline, lived their linguistic relatives the Marawá and Palikúr (Aikhenvald 1999:66ff).

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[129] The Manao comprised a number of groups speaking several different Arawak languages. The Manao groups inhabiting the lower Río Negro were known as Caboquena (Landar 1977:448; Nimuendajú 1987) and Anibá (Nimuendajú 1987; Payne 1991:364; Campbell 1997:180). Both were contacted in the 1600s and soon thereafter became extinct.

[130] Tarumá was previously classified as an Arawak language related to Wapishana (Gordon 2000), but is now left unclassified (Carlin 2006:316; Kaufman 2007).

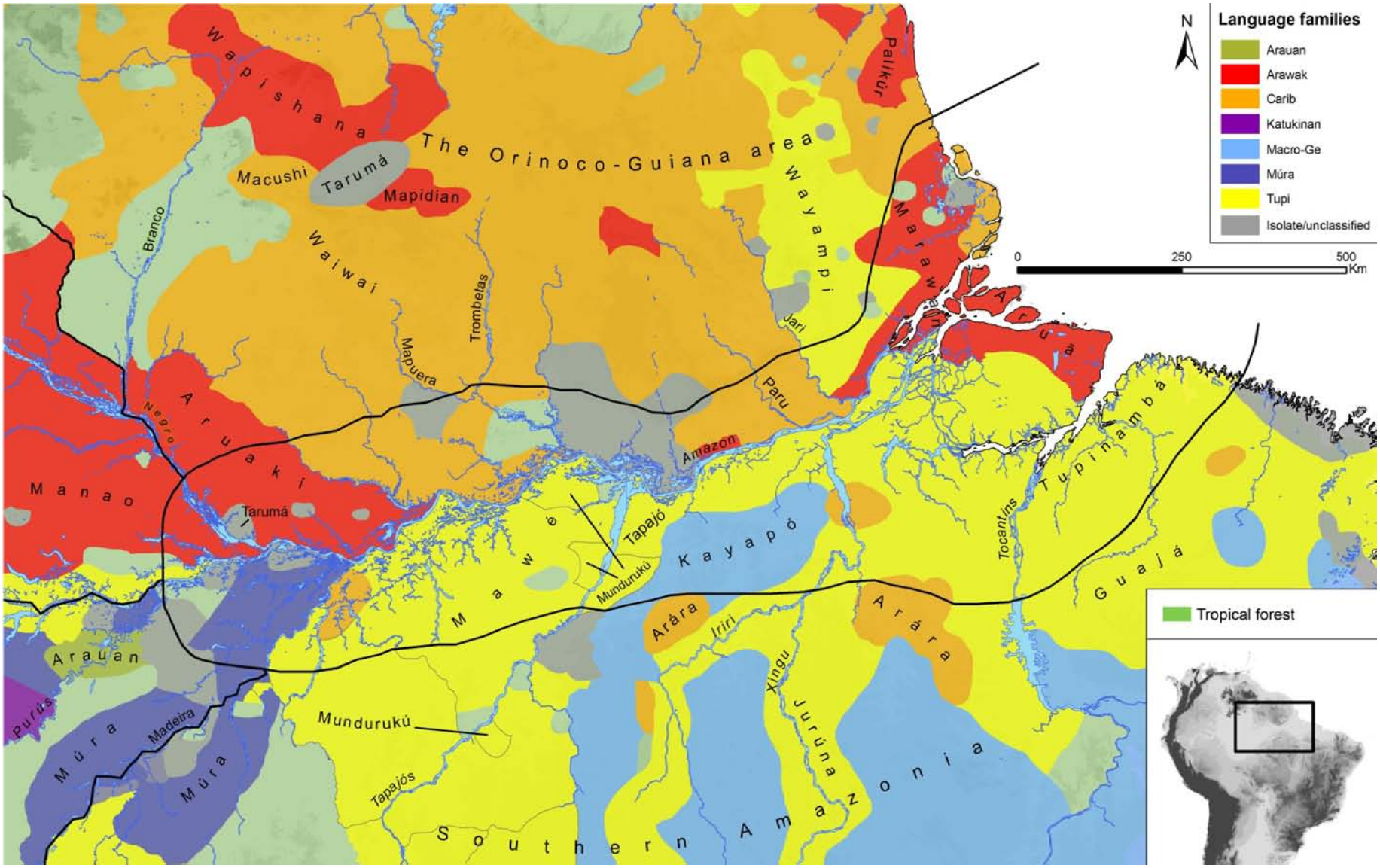

Figure 4.3.1. Ethno-linguistic groups of southern Amazonia at the time of contact.

On the south side of the Amazon River, Tupian groups appear to have been dominant at the time of contact. The current consensus in historical linguistics is that southern Amazonia, and more particularly Rondônia, was the place of origin for the Tupian language family (Rodrigues 1964), but the Tupian dominance along the southern shore of the central and lower Amazon at the time of contact was probably a result of their massive expansion during the thirteenth and fourteenth centuries. Among the many Tupian languages of the southern shore of the Amazon, some of the most important were Mundurukú and Mawé in the east, Jurúna on the lower Xingu River, and Tupinambá along the southern Atlantic coast (Nimuendajú 1987; Kaufman 2007). Both Nimuendajú and Kaufman mention the presence of Macro-Ge-speaking Northern Kayapó groups in this area, but these appear to have penetrated the region from their original homeland in the Brazilian highlands at a very late date. Nimuendajú (1987) dates the encounters with these groups to 1939 and 1940.

4.4 Ethnohistory

This section takes as its point of departure the ethno-linguistic situation at the time of contact described in section 4.3. It discusses the different forms of exchange taking place among the indigenous groups of the area, and with indigenous groups of surrounding areas, and it describes the relationship between native groups and the Europeans. Focus is on the regional exchange system and particularly the network of trade routes inherited from pre-Columbian times. As in chapter 2 and 3, trade is considered the number one factor when it comes to distributing ideas and material culture, both between and within regions. By mapping the trade routes and correlating them with the prehistoric distribution of artifacts and the positions of indigenous groups derived from historical sources, we can reach new conclusions about the nature of the exchange system in the middle and lower Amazon region.

As explained in section 4.3, the distribution of indigenous groups and language families in the middle and lower Amazon region at the time of contact is very difficult to determine due to rapid population losses following the introduction of European diseases. For two reasons this region may have been one of the most heavily affected by early epidemics: a) the indigenous communities consisted of large, almost continuous settlements along the main river, facilitating the rapid spread of diseases within these contiguous populations , and b) the different indigenous groups were tightly integrated into a regional exchange system that facilitated rapid distribution of not only ideas and trade goods, but also epidemics, even between distant settlements along the river.

Rather than talking about the time of contact as the moment when European colonizers first came into physical contact with the indigenous groups by actually entering the region, it should be conceived as the time when the first signs of the Europeans appeared in the region in the form of diseases and trade goods. “Time of contact” thus here means approximately AD

1500, rather than some decades later, when the Europeans actually penetrated into the region, first via Orellana´s downriver expedition in 1542 and later via Portuguese expeditions from the opposite direction. Trade goods from the earliest Spanish and Portuguese expeditions along the coast reached as far inland as the lower Río Negro via indigenous trade networks long before any Europeans had visited the area, and diseases would have been brought along by the carriers of these goods (Wright 1999:364).

The demographic collapse caused by the new diseases prompted some indigenous groups (e.g. the Múra) to expand their territories in the sixteenth and seventeenth centuries, but another shift in the ethno-linguistic composition of the region had occurred in late prehistory. During the thirteenth and fourteenth centuries, the rapid westward expansion of Tupian languages from their territories along the Atlantic coast and south of the Amazon River quickly changed the previous ethno-linguistic situation in the area. As we have seen in sections 2.2 and 4.2, the Tupian expansion is clearly visible in the archaeological material from the upper, middle, and lower Amazon regions. Chapters 2 and 3 provide indications about the nature of this process, for instance the expansion of the Tupian Omagua, Cocama, and Cocamilla languages through the middle Amazon region, finally reaching the upper parts of the river. Connected with this expansion is the characteristic pottery of the Amazonian Polychrome tradition visible in the archaeological material from the eastern parts of Peru and Ecuador and in the present-day pottery manufactured by the Panoan-speaking Shipibo and Conibo of the Ucayali River (chapter 2). In southern Amazonia, the Tupian expansion is also clearly indicated, for instance by the Chiriguano conquest of the Arawak-speaking Chané and Guaná of the northern Chaco (chapter 3).

The Amazon River is, of course, one of the oldest and most important routes of transportation in greater Amazonia. Considering the ancient C^{14} dates from Pedra Pintada, humans may have utilized the river for transportation since the initial colonization of this part of South America (fig. 4.2.1). The river has many advantages for transportation, including the vast territorial reach of its tributaries, its strategic position in the center of the continent, and its easily navigated course running uninterrupted by rapids for thousands of kilometers. The Amazon also offers plentiful food resources, facilitating both habitation and long-distance travel along its course.

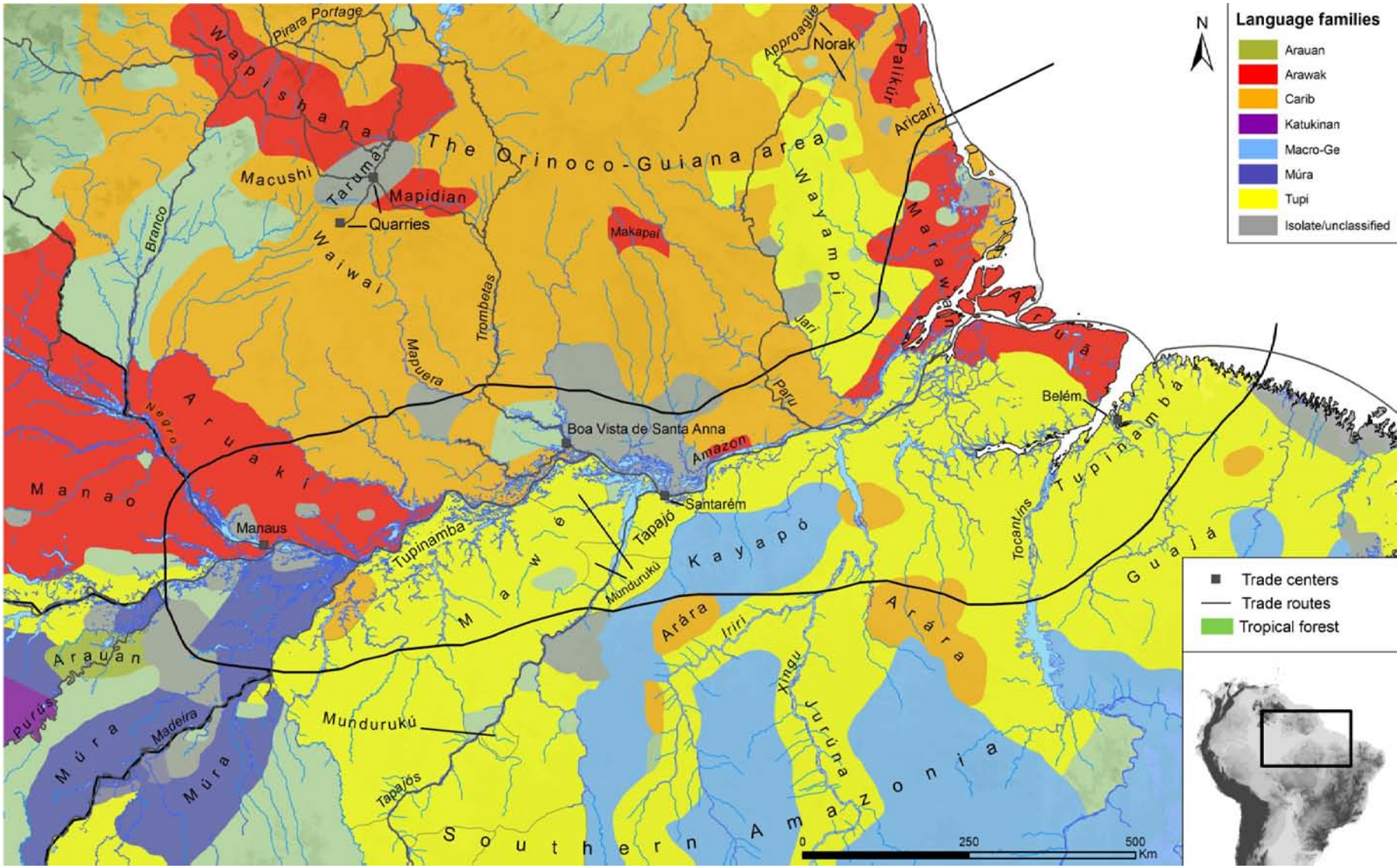

Figure 4.4.1. Ethno-linguistic groups, trade routes and archaeological sites mentioned in the text.

According to Santos-Granero (1992:29), two of the four most important prehistoric trade routes in Amazonia emanate from the middle Amazon.[131] The first one crosses the continent, reaching highland Ecuador via the Napo River, connecting lowland Amazonia with the Andean societies and their highland economies. The second one connects the Amazon with the Orinoco River through the Río Casiquiare[132] and reaches the Guiana coastline east of the Orinoco Delta. As in the case of dating the first human use of the Amazon for transportation, there is no way of knowing when these extensive routes were first utilized for human transport and trade, but given the distribution of early ceramics of the Barrancoid series along parts of these routes of communication, it is safe to say that they have been used throughout the entire time period reviewed in this thesis.

Apart from these two important routes to the west and north, a number of other routes were utilized to connect more remote areas of northern and southern Amazonia with the middle and lower Amazon. One far-reaching route connected the San Agustín[133] culture of the Colombian Andes with the area around the Nhamundá and Trombetas Rivers via the Japurá, transferring a specific design of stone figurines with feline alter-egos, or at least the knowledge of them, from the highlands to the lowlands or vice versa (Preuss 1974[1929]:203, qtd. in Aires Ataíde da Fonseca 2004:30; Torres 1987:52, 85f). These stone figurines occurred at Sacurujú[134] (Gillin 1948:824) and Boa Vista de Santa Anna close to the Trombetas River, and they are also mentioned as having been held in a special house by a Carib-speaking tribe near the headwaters of the Oyapock River. They may also have been used by the Tapajó (ibid.) (fig. 4.4.1).

During Classic Mabaruma (ca. AD 600 – 1100), the area around the lower Nhamundá and Trombetas Rivers was also connected to the Guiana highlands via the upper Trombetas, and to the Guiana coastline via the Corentyne River (Williams 2003:342). The connection

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[131] The other two are located in western Amazonia and are described in chapter 2.

[132] Río Casiquiare is often referred to as the Casiquiare Canal. Since it is clearly a river, flowing southwest from the Guiana Highlands to the Río Negro, it is somewhat misleading to use the term "canal" since it implies some kind of human construction, or at least non-flowing water connecting two separate hydrological entities. Although early authors such as Nordenskiöld (qtd. in Denevan 2009:211) suspected that part of the river actually was a human-made canal, such claims have not been possible to substantiate. The river's important function as a route connecting the Amazon with the Orinoco is not disputed, of course.

[133] The most famous tombs and stone figurines of the San Agustín culture on the upper Magdalena River in southern Colombia belong to the Regional Classic Period (AD 1 – 900) in the local chronology (Drennan 2008:383).

[134] There is also a site named "Sucurijú" located in Brazilian Guyana. This site is affiliated with the Aruã phase of the Amazonian Polychrome tradition (Meggers and Evans 1957:42; Simões and Araujo-Costa 1978:64; Rostain 1994:13; Williams 2003:36; Nimuendajú 2004:36).

between the Amazon River and the Guianas was also maintained further east via the Approuague River (Boomert 2000:426), and further upstream via the Río Branco, which empties into the Negro. The route from the Amazon, via the Negro and Branco Rivers, was connected to the Essequibo River in Guyana and was being used as a trade route by Arawak traders in 1553 (Boomert 2000:426) (fig. 4.4.1). Almost a century later, in 1639, the Arawak-speaking Manao[135] used the Negro and Branco to trade gold, manioc graters, vermillion, hammocks, shields, and clubs between their homeland along the Río Negro and the Guiana highlands (Myers 1981:22). This route was also part of the Arawak *Kúwai* routes described by Vidal (2000).[136]

The Manao is described by Wright (1999:364) as "very enterprising traders, traveling and carrying goods from the Uaupés to the Solimões and to the Guyanas." As mentioned above, the Arawak groups of the lower Río Negro, including the Manao, had become familiar with European trade goods long before the Europeans themselves entered the region. When the Europeans did enter the area, the Tarumá and later the Manao quickly engaged in commercial relations with the Dutch, who were the most frequent European visitors in that area during the seventeenth and eighteenth centuries (ibid.). The relationship with the Europeans would later prove to be fatal for both these indigenous groups.

The "commercial relationship" between the Tarumá and Manao and the Dutch and Portuguese was initially based on a slave trade in which the Tarumá supplied the Portuguese with slaves by raiding their upriver neighbors. When this source of labor was exhausted, the Tarumá themselves became the victims of the Portuguese raids. By the end of the seventeenth century, the Tarumá population had diminished to such a level that they could no longer satisfy the Portuguese demand for forced human labor (Wright 1999:364). At that point, the Manao increased their influence in the slave trade, and by 1720 they were exporting slaves to both the Portuguese and the Dutch (ibid.). A century earlier the Manao had been engaged in trade with locally manufactured goods, but as these items had been replaced by slaves the Manao were about to face the same situation as the Tarumá before them, viz. the transformation from slave traders to slaves. In the 1730s the middle Río Negro was largely depopulated and by the middle of the century the Manao had ceased to exist (Wright ibid.).

At about the same time as the beginning of the Tarumá decline, around 1690, the Carib-speaking Norak are documented as having traded along the Approuague River from their homeland on the modern border between Brazil and French Guiana (Landar 1977:490;

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[135] The Manao also used this route to raid and trade among the Caribs of the Guiana Highlands (Edmundson 1904:16).

[136] The *Kúwai* routes represent a widespread transport network in the northwest Amazon, reaching as far east at the Trombetas river (see section 4.5 and chapter 6 for further details on these routes).

Boomert 2000:426) (fig. 4.4.1). The Norak soon faced the same destiny as the Tarumá and Manao. Their inland route was complemented by a coastal route from the mouth of the Amazon to the Guiana coastline, used by both Carib- and Arawak-speakers (Boomert 2000:433). In 1690, the Carib-speaking Kaliña[137] and Aricari[138] used this route to transport greenstones manufactured in the Guianas to the mouth of the Amazon, and the Arawak-speaking Aruã used the same route to interact with the Aristé culture in late prehistoric and early historic times (ibid.) (fig. 4.4.1).

The trade in greenstones in the Guianas and along the Amazon seems to have been one of the most far-reaching trade networks in the region during late prehistory. Greenstone amulets were also manufactured and traded in the Caribbean, but on the mainland the greenstone economy seems to have radiated from manufacturing centers in the Guiana Highlands with trade routes reaching out in all directions. The majority of the greenstone amulets recovered from archaeological contexts in Amazonia comes from the area around the mouths of the Nhamundá, Trombetas, and Tapajós Rivers. In this region numerous sites containing greenstones have been excavated. At two sites, remains from the actual production of amulets have been discovered (Boomert 1987:41). Given the local absence of raw material for this type of manufacture, the greenstone must have been imported to the area, presumably from the Guiana Highlands. One site known to contain the raw material is Serra Preguica on the border between Venezuela and Brazil (Myers 1981:30) (fig. 5.4.1). From this site, greenstone was exported to the Tapajós-Trombetas region, the mouth of the Amazon, and beyond (Myers 1981:21; Boomert 1987:42). In the historical period (seventeenth and eighteenth centuries) the Tapajó[139] are known to have traded greenstones along the Tapajós, Nhamundá, and Trombetas Rivers (Myers 1981:22). According to Myers (ibid.) this southern trade in greenstone reached all the way along the Atlantic coastline to the San Francisco River. In Myers' view, the southern part of the network was controlled by Tupi-speakers, which seems to be a reasonable conclusion, at least after the expansion of Tupian languages along the Amazon River and the Brazilian coastline in the thirteenth and fourteenth centuries. The northern parts of the greenstone trade network, on the other hand, would have been controlled by Arawak-speakers, who dominated trade along the Río Negro, along the Guiana

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[137] Kaliña (Cariña) is a Carib language still spoken along the northern coast of South America from Brazil to Venezuela. Together with the many Carib languages that formerly distinguished ethnic groups along the Guiana coastline it is now classified as one single Carib language: "Carib" (Gordon 2005).

[138] Aricari denotes a now extinct Carib-speaking group formerly inhabiting the area around Cayenne (Landar 1977:442; Nimuendajú 1987).

[139] The Tapajó were a powerful group occupying extensive *terra preta* settlements along the lower Tapajós River. They are believed to have been Tupi-speakers but were extinguished in the early colonial period (Landar 1977:509; Nimuendajú 1987).

coastline, and into the Caribbean. It is known from historical sources that the Arawak-speaking Araquiz, inhabiting the area between the Madeira and Tapajós Rivers, traded pottery and greenstone amulets as far away as the Orinoco, further indicating the importance of Arawak trade networks in the region (Gillin 1948:824). It is also noteworthy that greenstone amulets have been discovered in the Venezuelan llanos at the site of El Cedral (Gassón 1999:76; Gassón 2002:259f) and at Corozal on the Orinoco River (Roosevelt 1980), areas known to have been inhabited by Arawak-speakers (Nimuendajú 1987; Kaufman 2007), suggesting that Arawak *caciques* may have controlled the trade of this precious commodity in northern South America during late prehistory (see chapter 6 for further discussion of the Venezuelan material).

The Tapajó were one of the most influential groups of the lower Amazon during late pre-Columbian and early historic times. They are described as chiefdom societies with elaborate material culture, farming large tracts of *terra preta* fields around the mouth of the Tapajós River and controlling the trade on both the Amazon and Tapajós Rivers (Palmatary 1960; Gomes 2001).

The importance of the Tapajó in the middle and lower Amazon region during late prehistory can be compared to that of the Manao or the Tupinambá. Historical descriptions of the characteristics of Tapajó society are similar to those for Tupian groups along the middle and lower Amazon during early historical times, and the language of the Tapajó is suspected to have been Tupian, although reservations should be made here due to the few remnants of the language that have been preserved following European colonization (Landar 1977:509).[140] The Tapajó exerted great influence over their neighbors and Wright (1999:355) compares it to that of the Tupinambá who "Tupinized" neighboring groups during their expansion along the Amazon in the thirteenth and fourteenth centuries.

The items traded by the Tapajó included pottery, hammocks, and greenstone amulets shaped into *muiraquitas*[141] (Palmatary 1960:17; Gomes 2001). They are also reported to have traded ducks, chickens, nets, fish, flour, and fruit to the Europeans in the seventeenth century (Gomes 2001:136). The Tapajó also served as slave hunters for the Portuguese (Palmatary 1960:12). Although the Tapajó had previously practiced small-scale slavery, using prisoners of war (Palmatary 1960:16; Wright 1999:359), the Europeans' appetite for forced human labor would eventually turn against the Tapajó, offering them the same final destiny as the Manao, Tarumá, and many other indigenous slave hunting groups: extinction.

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[140] Macdonald (1972, qtd. in Gomes 2001: note 62) suggests a Carib origin for the Tapajó, based on correlations between Santarém iconography and Carib myths. This hypothesis is yet to be confirmed.

[141] These animal-(generally frog-)shaped amulets appear to have been related to the iconography of ceramic decoration among the Tapajó (Gomes 2001:141)

The Tapajó kept sacred trumpets and women were not allowed to watch the religious ceremonies in which these were used (Palmatary 1960:14f). This custom is well known throughout Amazonia and particularly among Arawak societies of the northwest Amazon, where the *Yurupari* festivals play an important role (see chapter 6). Similar customs are also documented in the upper Xingu region (Heckenberger 2005). Several other groups of the middle and lower Amazon region also used bark trumpets. As mentioned in the previous chapter, bark trumpets originally spread as a component of a religious package dispersed via the Arawak regional exchange system. This system also influenced non-Arawak-speakers such as the Tarumá and Múra who lived in close proximity to Arawak-speaking groups, and in the middle and lower Amazon region it is precisely among these two groups that we find the historical use of bark trumpets (Izikowitz 1935:247). In this region, bark trumpets were also present among the Carib-speaking Waiwai[142] and among the Tupi-speaking Jurúna of the lower Xingu River. The Arawak-speaking Wapishana, who migrated north into the Guiana Highlands from the lower Río Negro in late prehistoric times, also had bark trumpets (Izikowitz 1935; Gillin 1948:849).

The Jurúna also used complex trumpets, and as we have seen in section 3.4, these instruments were dispersed over Amazonia in two waves, the initial one attributed to the Arawak regional exchange system, and the second to the Tupi expansion in late prehistoric times (Izikowitz 1935:243). During the second wave, the Tupian groups changed the design of the instrument, from end-blown to side-blown, and Izikowitz (ibid., 239) concludes that "the side-blown trumpet is a relatively late phenomenon which in all probability originated in the territory around the lower Amazon and from there spread via the Tupi people." In southern Amazonia complex trumpets are found almost exclusively among Tupi-speakers, strengthening Izikowitz's conclusion. The only Tupian groups who retained end-blown complex trumpets were the Chiriguano, Jurúna, and Tupinambá (ibid., 238).

An interesting correlation is also found between the distribution of so-called simple trumpets made of two longitudinal wooden halves and Tupi-speakers on the middle and lower Amazon and in southern Amazonia. The only occurrences of such instruments among non-Tupian groups are the Anckuteres, more commonly known as the Secoya, a Tucanoan group of the Putumayo River, and the Macro-Ge-speaking Apinayé (Izikowitz 1935). However, both these groups were in contact with Tupi-speakers, the Apinayé in the lower Tocantins region and the Secoya via the raiding and trading expeditions of the Omagua in late prehistory.

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[142] The Waiwai expanded down to the main river in the turbulent situation at the time of contact, but their original homeland was located in the Guiana Highlands (Nimuendajú 1987; Kaufman 2007).

5. The Orinoco-Guiana area

5.1 Physical geography

The area here called "Orinoco-Guiana" is composed of the Guiana Shield and its surrounding lowland areas including the Orinoco Valley. The area is delimited in the north by the Caribbean Sea, in the south and east by the lowlands of Amazonia, in the west by the Orinoco River, and in the extreme northwest by the Andean Cordillera. The southwestern border is tentatively drawn between the Orinoco and Negro Rivers on the basis of the historical distribution of Arawak- and Carib-speaking groups, marking the border between these two linguistic entities at the edge of the Guiana Shield (fig. 5.1.1).

Together with the Brazilian or Guaporé Shield, the Guiana Shield is the oldest geological formation in South America. Formed during the pre-Cambrian period, it is significantly older than the Andean mountain range, making the ecology of the Guiana Shield significantly different from the area drained by the rivers of the Andes, including the Amazon River itself. The great age of the geological formations of the Guianas has led to deep weathering of the bedrock, producing low levels of available nutrients in the river system and soils of the region. This situation explains the so-called black-water rivers: dark, nutrient-poor, acid rivers, such as the Negro and Trombetas, draining south from the Guiana Shield, eventually emptying in the Amazon (Furley 2007:138). The Orinoco receives most of its water from the rivers flowing from the Andes across the llanos, thus making it a white-water river.

Given the geological history of the Guianas, the river systems of the region are quite different from those draining from the Andes in terms of appearance and nutrient content. This has of course affected the pre-Columbian populations of the region, and indeed the Negro has been termed "the river of hunger" due to its seasonal shortage in food supply (Hill 1989:16). However, there are great variations in terms of the geology of the region. All along the northern coast, known as the Guiana Littoral, quaternary sediments have been deposited, and in the llanos of Venezuela the east-flowing rivers of the Andes have left nutrient-rich sediments along their courses. Included in this northern belt of quaternary sediments is also the Orinoco Delta, partly composed of sediments deposited by the Orinoco, and partly by material transported north along the coast from the mouth of the Amazon. In the northern part of the region, the soils are high in available nutrients but low in oxygen, making the problem of cultivation one of water management rather than of nutrient content. This challenge has been met by the prehistoric populations in the form of advanced agricultural drainage systems of

extensive geographical distribution that are widespread in the llanos of Venezuela (and Colombia) and all along the Guiana Littoral.

Moist tropical forest dominates the vegetation of the region, even in the highlands reaching above 3000 masl. It is only in the center of the highlands, in the area where the Trombetas River originates, and in smaller pockets to the east, that dry savanna vegetation dominates over tropical forest. Another example of dryer climate is found in northern Venezuela, where shrublands dominate. South of these shrublands, the wet, annually flooded savannas of the llanos of Venezuela and Colombia form an extensive belt of flat lowlands drained by rivers such as Apure, Meta, and Guaviare, flowing east from the Andes and eventually emptying in the Orinoco.

According to paleoecological studies, it is likely that the savanna regions of the Guianas remaining today are the remains of a more continuous savanna belt that once stretched all across northern South America up until the late Pleistocene (Gassón 2002:284; Plew 2005a:10; Rostain 2008a:279). The changing climate at the end of the Pleistocene and the early Holocene brought about fundamental changes in vegetation and the rising sea levels flooded much of the low-lying areas along the northern coast that had been dry land since the Last Glacial Maximum. In the millennia following the end of the Pleistocene, up to 100 kilometers of land was lost to the rising sea along the Caribbean coast. The climate changes and the consequences it had for prehistoric populations will be further described in the next section.

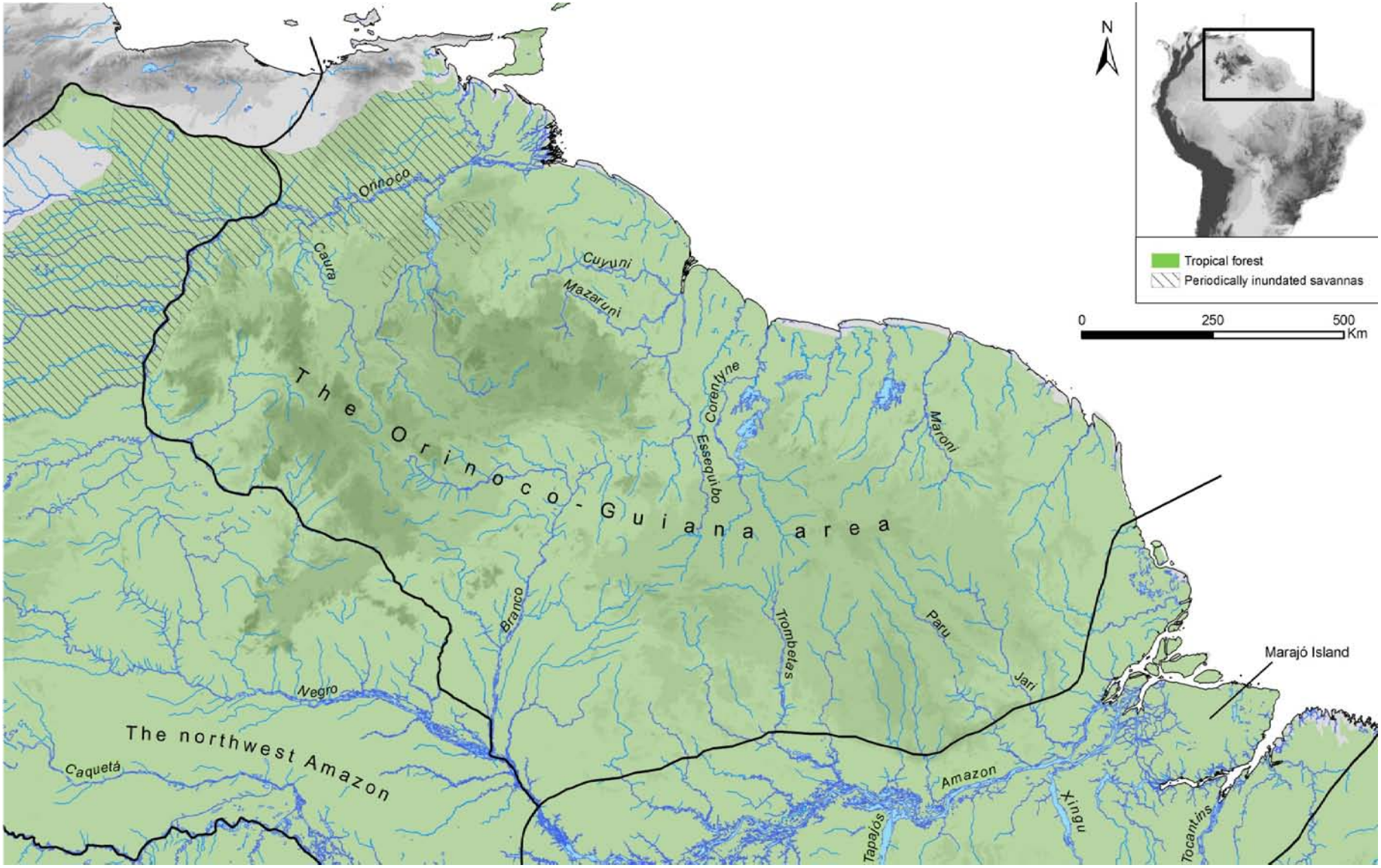

Figure 5.1.1. The physical geography of the Orinoco-Guiana area.

5.2 Archaeology

This section will be based on the chronological sequence of the Guiana region divided into three different stages, following modern interpretations of the archaeological material by scholars such as e.g. Boomert (2000), Gassón (2002), Williams (2003), Plew (2005a), Rostain (2008b), and Versteeg (2008). The first pre-historic period, labeled Paleo-Indian, covers the time period from the initial human population up to 7200 BP (6000 BC) and is characterized by hunting-gathering-fishing societies. The second period, labeled Archaic, stretches between Paleo-Indian times and 3350 BP (1500 BC) and is characterized by subsistence strategies focused on marine gathering, resulting in massive accumulation of shell mounds along the coastline. The final pre-historic period, the horticultural one, is initiated about 3350 BP and extends up to the time of contact. This period is further subdivided into several different phases and stages that are accounted for in section 5.2.2.

The depth of the prehistoric chronology of the region is extensive, with indications of human populations dating back to 11000 BC (Rostain 2008b:279). The amount of pre-agricultural archaeological material is substantial and differs widely from e.g. that of the middle and lower Amazon region, mainly due to the fact that various complexes of stone tools have left more substantial traces in the Orinoco-Guiana area as a result of the rich availability of raw material for stone tool production. Another important factor affecting the pre-Columbian populations of the area is the relatively well documented changes in vegetation and sea level since the last ice age. Following the first traces of human occupation from about 11000 BC, there are several cycles of wetter and dryer climate and a constantly rising sea level resulting in successive shifts of occupation sites by archaic populations sustaining themselves on a marine subsistence strategy (Williams 2003:55). The changing climate also affected the salinity of near-ocean hydrological systems, resulting in an incursion of fresh water in previous salt waters containing economically important shell fish species at about 3350 BP. This major ecological change resulted in shifts in subsistence strategies of populations that had sustained themselves on marine gathering for millennia.

In the late Pleistocene (a period ending about 6000 BC), the savannas of central Guiana extended over much larger areas than today, due to climatic factors in the wake of the last ice age. It is likely that a continuous savanna belt extended from the western Venezuelan coast to the central Guianas, where a savanna ecosystem is still present today (Gassón 2002:284; Plew 2005a:10; Rostain 2008b:279). The Paleolithic population contributed to the expansion of the savannas by burning the vegetation, thus initiating the first major anthropogenic influence on the landscapes of the region (Boomert 2000:52; Rostain 2008b:282).

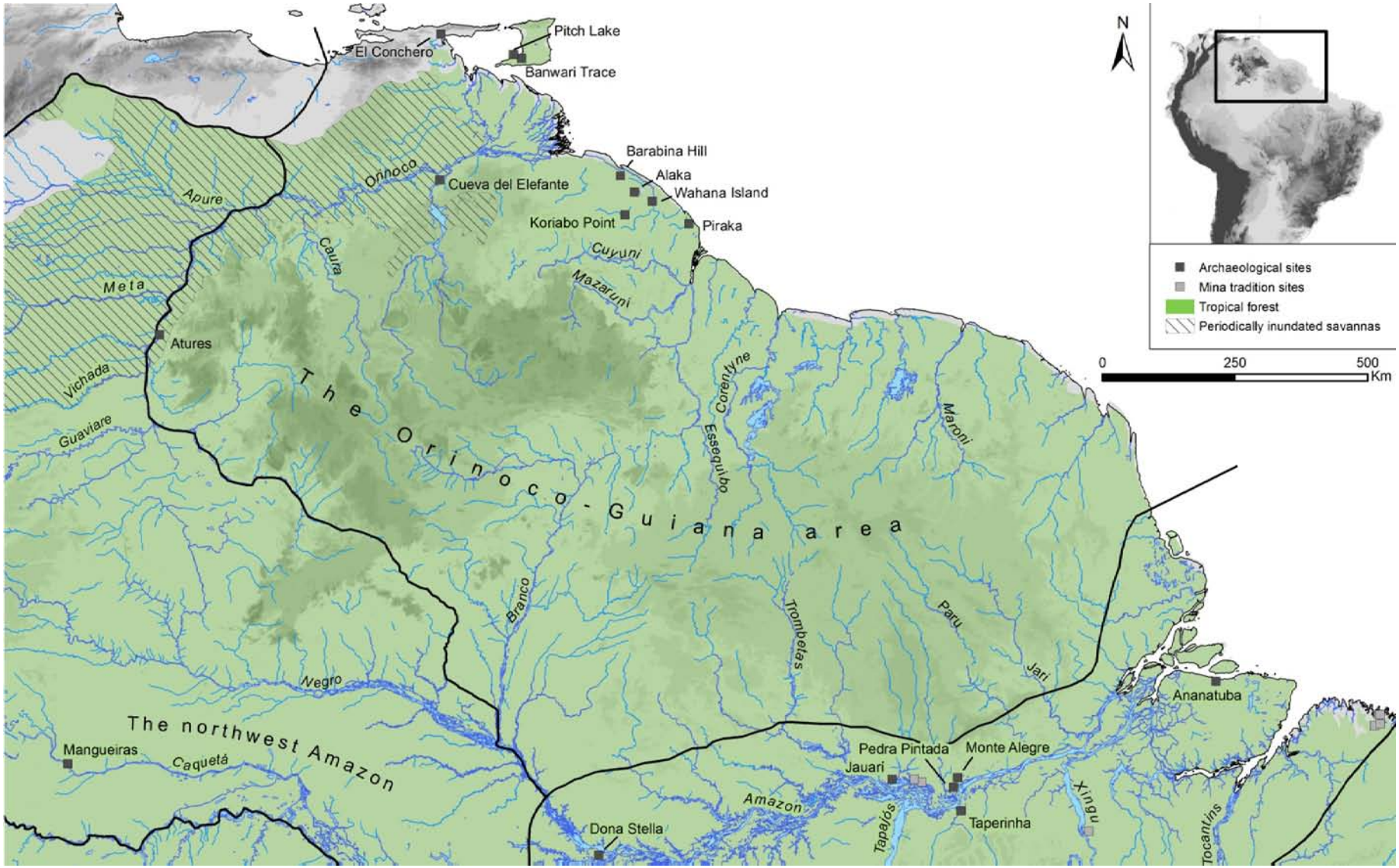

Figure 5.2.1. Archaeological sites of the pre-agricultural period.

Evidence of early human occupation in the Orinoco-Guiana area begins around 11000 BC (Rostain 2008b). Bones of late Pleistocene megafauna have been recovered at western Venezuelan sites such as Taima-Taima and Muaco, and at Pitch Lake on Trinidad[143] (Boomert 2000:49; Williams 2003:69), but in the Guianas neither megafaunal bone remains, nor stone tools manufactured for big game hunting have been recovered, leading archaeologists to the conclusion that big game hunting was never part of the subsistence strategies of the earliest inhabitants of the highlands (Williams 2003:70; Plew 2005a:11). Stone tools in the form of large bifacial points, previously interpreted as used in big game hunting, have been recovered from upland sites in the Guianas such as the upper Caroní River (Gassón 2002:284). These have now been re-interpreted as points used in fish spear hunting, suggesting a broad-spectrum diet with fish as a substantial source of protein (Williams 2003:74; Plew 2005a:12). In the upper Orinoco region, the Atures 1 (9200 – 7000 BP) and Atures 2 (7000 – 4000 BP) complexes are also associated with a broad-spectrum economy including hunting, fishing, and collecting (Gassón 2002:266) (fig. 5.2.1). According to Barse (1995), the origin of the Atures tradition should be sought in archaic complexes from the Bogotá plateau, suggesting that areas as far apart as the Andes and the Guiana Highlands were interconnected already during the Late Pleistocene.

The diversity in subsistence strategies within the Atures complexes also point to the antiquity of the exploitation of different ecological zones, and the complementarity between highland and lowland areas (Gassón 2002:266). The distribution of stone tools in the lowlands manufactured from specific raw material sources in the highlands also suggests an early interdependence between the highlands and the surrounding lowlands of the Orinoco Valley and the Guiana Littoral already by 7700 BP (Williams 2003:71). This system of interdependence would later develop into one of the most complex interaction spheres in South America, including the exchange of numerous types of raw materials and artefacts.

The archaic period began about 7200 BP when occupation was initiated in the Early Alaka phase at the Piraka shell mound (dated to 7230±100 BP [Beta-27055]) in northwestern Guyana and in the Early Banwari phase at Banwari Trace (dated to 7180±80 BP [IVIC-888] in southern Trinidad (Boomert 2000:57; Williams 2003:76) (fig. 5.2.1). Since Trinidad at this point in time was still connected to the mainland (see footnote 136), these cultures should be considered part of the same cultural tradition that extended widely along the northern coast of South America. Boomert (2000:68, 74) thus groups Early and Late Banwari together with early Alaka into a complex labeled the Banwarian subseries, included in the wider Ortoiroid series (fig. 5.2.1). Early Alaka (ca. 7200 – 5250 BP), Early Banwari (ca. 7200 – 6200 BP), and

[143] Trinidad was part of mainland South America until rising sea levels separated it from the continent around 5150 BC (Boomert 2000:57).

Late Banwari (ca. 6200 – 5250 BP) are partly contemporary with two other Banwarian complexes, Early and Late El Conchero of the Paria Peninsula, dated to ca. 6100 – 5250 BP and ca. 5250 – 4450 BP respectively (Boomert 2000:54, fig. 7) (fig. 5.2.1).

In the lower Orinoco area, two archaic complexes, Caroní and Guayana, have been discovered (Gassón 2002:285). Caroní shares similarities with the Itaparica tradition from Mato Grosso, and with the archaic findings from Monte Alegre. The Guayana tradition is closely associated with the Atures complexes, and with the Umbu tradition of southern Brazil (Sanoja and Vargas 1999:117-122, qtd. in Gassón 2002:285). In the Cueva del Elefante rock shelter, artefacts comparable to those recovered at Banwari Trace in Trinidad have been found (Gassón 2002:285) (fig. 5.2.1), indicating that this site should be included in the Banwarian subseries of the Ortoiroid series.

The characteristic lithic assemblage and the rapid accumulation of shell mounds typical of the Ortoiroid series has been recovered from sites further west in Venezuela and Colombia, and similarities with sites in Panama and even Ecuador have also been noted (Boomert 2000:74). The latter geographical areas are beyond the topic of the present study, but more relevant for this investigation is to note the similarities between the Banwarian subseries and the Taperinha and Paituna[144] complexes of the lower Amazon (see chapter 4) (fig. 5.2.1). The Taperinha shell mound is dated to ca. 7000 – 6500 BP and contains the earliest pottery in Amazonia, in fact in the whole New World (Roosevelt et al. 1996). Its affiliation to the Banwarian subseries, and particularly to the Late Alaka phase (ca. 5250 – 3300 BP), is noteworthy given that Late Alaka marks the first appearance of pottery on the north coast of South America. Late Alaka shares technological similarities with Taperinha and Paituna, both regarding ceramics and lithic technology (Boomert 2000:81), and it is probable that the art of ceramic manufacture spread from the lower Amazon to the Guiana coastline sometime between 6500 – 5250 BP. In the lower Amazon region, the Mina phase, characterized by shell mounds and a crude pottery assemblage, spans the time period between 5500 – 4000 BP (Simões and Araujo-Costa 1978; Roosevelt 1995). This phase is partly contemporary with Late Alaka, and these two complexes, both associated with a subsistence strategy focused on marine gathering, are clearly affiliated to each other (Boomert 2000:81; Williams 2003:146; Rostain 2008b:283).[145]

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[144] The Paituna complex was unearthed at the Monte Alegre site (Roosevelt et al. 1996).

[145] The association of these two complexes touches upon an enigmatic issue in terms of cultural history, namely that of the origin of the Warao ethno-linguistic group. Williams (2003:147-149) asserts that the Warao are remnants of the archaic population of the northern Guiana coastline, implying that their subsistence strategies, social structures, and language has changed very little since the archaic period. Boomert (2000:90) notes that the Warao traditional subsistence strategies are indeed very similar to those of the archaic groups, and he adds another crucial piece of information, namely that according to Warao oral tradition there was a time when a land-bridge connected Trinidad to the mainland, making

The archaic population of the Orinoco-Guiana area expanded widely across the region at about 7000 BP and established early interaction systems between different parts of the area (Williams 2003:99). One of the region's advantages when it comes to reconstructing the pre-historic exchange system is the traceability of materials through time, particularly lithic materials, where points of origin and directions of early trade routes can be reconstructed on the basis of archaeological findings. The most important type of exchange of the region has traditionally linked the highlands and the adjacent lowlands and coast. Raw material for stone tool manufacture was exported from the highlands to Koriabo Point already at 6500 BP, where it was reworked into tools used in woodwork, and minerals such as steatite, later used as a tempering agent in ceramic production, was exported from the upper Barama River[146] via Koriabo Point to Barabina at this time (ibid., 111) (fig. 5.2.1).

Between 6000 and 5000 BP, lithic material was traded widely across the Guianas, reaching the shell mound settlements on the coast. Later in time, this raw material was processed into stone tools utilized in the early manufacture of dugout canoes, initiated about 3300 BC (Williams 2003:111, 136-145). The corresponding goods that were traded back into the highlands at this time were no doubt of perishable nature, the most obvious artifact exported being the

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travels to Trinidad by foot possible. As has been described above, this land-bridge ceased to exist as a consequence of the rising sea level at about 6200 BP, implying that Warao oral tradition may extend more than 6000 years back in time. Williams (2003:83) also relates the Warao to the occupations at the Piraka and Barabina shell mounds, both dated well in advance of the culmination of the sea level rise that eventually flooded the land-bridge to Trinidad (fig. 5.2.1). Also lending support to the claim that Trinidad was included in the mainland economy at this point is the recovery of artifacts manufactured from greenstone originating in the Guiana Highlands at the Banwari Trace shell mound dated to 7180±80 BP (ibid., 88).

There is also information suggesting that the Aricari (Arwao) and Pirao (Piriu, Parawea, Apurui), now extinct but formerly inhabiting the area of what is today eastern French Guiana, once spoke a Warao language (Keymis 1904[1599]:490f, qtd. in Boomert 2000:90, footnote 37), suggesting that the Warao once populated the entire Guiana coastline (fig. 5.4.3). Both the Aricari and Pirao are extinct and their languages remain insufficiently documented, but they have both been classified as Carib based on the scanty information available (Gillin 1948:804; Landar 1977:442, 499). There are also indications that the Guaiqueri (Guayqueri), the native inhabitants of Margarita, whose language remains unclassified, originally spoke Warao, and later adopted a Carib tongue through their trading contacts with the Carib tribes of the mainland coast (Heinen and García-Castro 2000:574). According to historical sources cited by Heinen and García-Castro (2000:570), the Warao territory once included areas west of the Orinoco Delta, making their former sphere of influence even greater. To conclude, there are several indications that the Warao territory may once have extended over a much larger area than what has been documented from the historical period, but at present there is no way to corroborate the claims by various authors that the Warao are remnants of the archaic population of the area. For now, these suggestions are best viewed as interesting indications of their long and complex cultural history.

[146] The Barama River is not to be confused with the nearby Barima River.

dugouts themselves. Koriabo Point, Wahana Island, and Barabina were all important sites for the early canoe industry, which was totally dependent on the import of lithic raw material for tool manufacture, and thus needed to maintain good relations with the groups in political control of the quarries (Williams 2003:141) (fig. 5.2.1). The development of canoe manufacture along the lower reaches of the rivers emptying into the Caribbean Sea coincides with the transformation of the lower parts of the rivers into fresh-water environments as a consequence of the so called freshwater climax taking place at approximately 4700 BP. The freshwater climax occurred as a consequence of the end of the eustatic sea level[147] rise that had continued since the Last Glacial Maximum (LGM) and reached its culmination at about 4000 BC. After this event, the lower parts of the river systems of the Guiana Littoral experienced a gradually freshening environment, causing many of the marine shellfish species that had been the basis of the marine gathering among the local cultures of the area to disappear. As a response to these shifting environmental conditions, the dugout canoe now gained importance as a crucial element in local subsistence, but the technology to manufacture such vessels was probably known much earlier in time. Indications of trade bringing raw material for stone wood-working tools can be traced back to at least 6500 BP, and dugouts would also have been the natural choice for transporting the heavy loads of lithic material downstream from the highlands. Thus, we can probably assume an even earlier initiation date for canoe manufacture than 4700 BP, as suggested by Williams (ibid., 111).

Another important technological achievement by the littoral populations at the time of the freshwater climax was the construction of transportation channels (*itabos*), connecting the Waini and Barima Rivers (Williams 2003:132). The phenomenon of connecting rivers by constructing canals is well known from other areas in Amazonia (e.g., Llanos de Mojos [see chapter 3], around Manaus [see chapter 4], and in the llanos of Venezuela and Colombia [see chapter 6]), but this is one of the earliest indications of such constructions in Amazonia, highlighting the importance of maintaining efficient transportation networks for trade and communication well before sedentary agricultural settlements had been established in the region.

Late archaic complexes of the Orinoco-Guiana region include the Manicuaroid subseries of the Ortoiroid series, developed out of the El Conchero complexes of the Paria Peninsula (fig. 5.2.1). The Manicuaroid subseries are thought to have been initiated at about 3000 BC, not ending until AD 1, and sites belonging to this complex also display tool kits for canoe manufacture (Boomert 2000:82f). Further to the east, Late Alaka (ca. 5250 – 3300 BP) forms

[147] The eustatic sea level is the global (as opposed to local) sea level that is fluctuating depending on the volume of water available in the world oceans and the volume of the ocean basins themselves (Wikipedia 2011-02-15).

the final archaic complex, and for the first time in the history of the area this complex includes ceramic material (Evans and Meggers 1960; Roosevelt 1997:360; Plew 2005a:13). At the point of emergence of the Late Alaka complex, knowledge of ceramic manufacture was widely spread from the lower Amazon and the Atlantic coastline to the shell mound sites of the Late Alaka complex on the northern coast of the continent (fig. 5.2.1).[148] Little is known about the late archaic cultures of the Guiana Highlands, but these groups may have been a key factor in distributing the art of ceramic manufacture between the lower Amazon and the Guiana Littoral, possibly via the route along the Branco and Essequibo Rivers, using the so called Pirara Portage to bridge the two rivers systems (Boomert 2000:81; Williams 2003:204). An alternative interpretation of the diffusion of pottery technology to the north could be that it spread along the coastline. This hypothesis is strengthened by the marine orientation of these cultures, but is not sustained by the investigations of shell mound sites affiliated with these cultures in e.g. Suriname, French Guiana, or Brazilian Amapá.

Another alternative is that ceramic technology spread from the Santarém region via the lower Trombetas continuing along the Mapuera and into the upper Essequibo. This route would have entailed relatively small differences in altitude and its usage is strengthened by the occurrence of a large number of archaeological sites and particularly a large number of petroglyph sites along the upper Essequibo and the nearby Kassikaityu River. Indeed, Williams (2003:147) suggests that this route was used to transfer the tool kit of the Mina tradition from the lower Amazon to the Guiana Littoral, and he explicitly refers to the archaic petroglyphs along this route as indicators of an ancient route of transportation. To Williams, the petroglyphs of the Guianas can be divided into chronological subgroups, containing images reflecting different subsistence strategies through time. The Enumerative type is classified as the most ancient type, followed by the Fish Trap type, both belonging to the archaic period. The final petroglyph complex, Timehri, is assigned to the horticultural period (Williams 2003:156). The classification by Williams is rather crude and it is sometimes not easy to identify the different stylistic aspects leading him to include a certain figure into one of his three categories. The functional interpretations of the categories of petroglyphs classified by Williams can also be put into question. For example, Williams (2003:171) asserts that the Fish Trap type, which is composed of a variety of figures, many of them with slight resemblance to actual fish traps, was carved simply to indicate which type of fish traps should be used in a particular drainage so as not to exhaust the stock of certain fish species. Although there is no way of reconstructing the context in which these figures was carved and the original meaning

[148] Interestingly, early ceramic production appears to have diffused easily and with great speed from the lower Amazon to the Guyana Littoral, but never seems to have reached nearby Trinidad, nor the Paria Peninsula. This may indicate an early differentiation in terms of identity and material culture in a region intensely interconnected by millennia of trade.

invested in them, analogies from other petroglyph assemblages suggest that ceremonial aspects were always vital in the creation of these figures. We may also assume that these carvings can have functioned as a very visible way of expressing and maintaining cultural identity vis-à-vis other groups.

The distribution of Fish Trap petroglyphs along the upper Essequibo River is perhaps best understood as indications that indigenous populations from very early on invested meaning into the landscapes which they travelled through, lived in, and gained their subsistence from. Given the large number of petroglyphs in this area, and the regular distance at which the carvings are distributed e.g. along the Mapuera River, it is clear that this route from the lower Amazon into the Essequibo drainage has been familiar to local populations for a substantial amount of time. The distribution of certain stylistic elements over large areas also lends support to the proposal that local populations were integrated into vast interaction spheres already during the archaic period. Indeed, a stone tool used in the carving of Fish Trap petroglyphs at Wahana Island on the upper Waini River was dated to 4570±80 BP (Williams 2003:174) (fig. 5.2.1).

The transformation from the late archaic subsistence strategy focused on marine resources towards early horticulture is not an uncomplicated one. As in many parts of the world, the transformation is marked by a gradual decrease in the importance of pre-horticultural subsistence strategies in favor of domesticated plants. As has been noted above, the archaic coastal settlements in the Guianas contained several elements typically associated with agricultural societies, including a high degree of sedentary occupation and the knowledge of ceramic manufacture. To these two elements can be added a third, viz. the trading component, including an ancient knowledge of dugout canoe manufacture and established trade relations with neighboring groups dating millennia back in time. Viewed together, these elements suggest a relatively undramatic transformation of subsistence strategies at the end of the archaic period. Williams (2003:261, 265) observes that it is likely that the Warao transformation to manioc farming simply consisted of a shift from the Moriche Palm (*Mauritia flexuosa*) to manioc as the main source of carbohydrates, while the complex socio-economic system involving trade with neighboring groups, established during the archaic, remained in place. It is thus likely that knowledge of domesticated plants existed in the late archaic period (ibid., 247), but that there was yet no reason to abandon the successful ancient subsistence strategy focused on marine resources.

There are indications that small-scale horticulture was under way in the Aruka River (a tributary of the Barima River) region by 2400 BC (Gassón 2002:286). Given the archaic exchange in lithic and ceramic technology between this region and the lower Amazon, where traces of forest clearing interpreted as a sign of early agricultural experimentation from 7000 BP has been unearthed (Petersen et al. 2004:4), it is not surprising to find the first indications of agriculture in the Guianas at this location. This may be the first signs of a slow

transformation towards fully agricultural societies. At about 2000 BC an arid climatic interval resulted in diminishing aquatic resources at the coastal settlements in the Guianas (Gassón 2002:287; Williams 2003:207). This event stimulated the transition to food production among the coastal mound societies. As mentioned above, it is likely that these societies already possessed enough knowledge about edible roots suitable for cultivation so as to make the transformation to horticulture relatively smooth. By interacting with groups in the Orinoco Delta (whose transition to horticulture probably just consisted of a replacement of palm starch with edible tubers) this process could have been accomplished without significant altering of settlement patterns or social organization. According to Williams (2003:232), the transformation from the archaic to the horticultural period lasted approximately 400 years, resulting in the establishment of more or less fully agricultural societies in the Guiana region by about 1600 BC. This date correlates well with the establishment of the pottery-producing Ananatuba culture at the mouth of the Amazon (ibid., 257), and the nature of the process also matches the gradual change in subsistence strategies observed from Monte Alegre on the lower Amazon (Roosevelt et al. 1996).

However, great controversies exist over the initiation date of the first formative ceramic series (Saladoid and Barrancoid) in the Orinoco Valley. The position has been divided between proponents of a ceramic chronology beginning about 2400 BC (the so called "long chronology") and proponents of a more compressed chronology initiated at about 2600 BP (600 BC) (the so called "short chronology"). A third alternative, with an initiation date of the Saladoid series of about 900 BC, has been suggested by Zucchi (Zucchi et al. 1984). This third alternative has more in common with the short chronology than with the long one. Extensive reviews of this chronological controversy have failed to reach a consensus about the initiation date of the Saladoid series (Boomert 2000; Gassón 2002).

Initially, Rouse (1978) suggested that the primary Saladoid phase of the middle Orinoco (La Gruta) extended between 4450 – 3550 BP, followed by Ronquín (3550 – 3250 BP), and Ronquín Sombra (3250 – 2950 BP). Roosevelt (1980, 1997) adjusted these dates on the basis of her own excavations at the Parmana site, reaching the conclusion that La Gruta was initiated at about 4050 BP, Ronquín at 3550 BP, Ronquín Sombra at 3050 BP, and Corozal at 2750 BP (see fig. 5.2.2 for the locations of the type sites of these phases).

Rouse's and Roosevelt's long chronology immediately received strong criticism from Sanoja and Vargas (1983), who claimed that the long chronology included extensive gaps for which no archaeological data were available, and that the C^{14} dated samples of Rouse and Roosevelt had been contaminated by minute lignite particles, resulting in abnormally old dates. As the mineral lignite does occur naturally in the soils of the Orinoco Basin (Boomert 2000:110), this claim was not uncalled for, especially since many of the dates obtained by Rouse and Roosevelt certainly were too old to fit into any chronological proposal and had thus been discarded by them. On the other hand, more than half of the dates published by Rouse and Roosevelt were

unacceptably young, suggesting that they were contaminated by recent charcoal (Roosevelt 1997, table 8; Boomert 2000:111). On the basis of their own excavations at Ronquín, Camoruco, La Gruta, and Parmana, and an extensive review of the dates published by Rouse and Roosevelt, Sanoja and Vargas (1983) proposed a short chronology with an initiation date for the Saladoid series at about 2600 BP (600 BC) (Gassón 2002:277) (fig. 5.2.2). Sanoja and Vargas' (1983:220) chronology excluded the ceramic variation observed by Rouse and Roosevelt, claiming that the middle Orinoco sequence was made up of only two Saladoid phases: Ronquín (600 BC – AD 400) and Corozal (AD 400 – 1500). By excluding the dates they felt were too old (in the same manner as Rouse and Roosevelt had excluded C^{14} samples that in their opinion were too recent) Sanoja and Vargas produced a chronology with no significant gaps that won acceptance among some archaeologists working in the area (cf. Gassón 2002; Zucchi 2002; Navarette 2008).

When reviewing this chronological controversy Gassón (2002:278) reached the conclusion that the short chronology without significant gaps was most in line with the archaeological material, while Boomert (2000:112) did not see any reason to exclude the old dates of the La Gruta component. Apart from the date of 4050 BP for La Gruta, however, Boomert (ibid.) rejects the chronology by Rouse and Roosevelt, claiming that it unnecessarily shortens the duration of the Saladoid series in the middle Orinoco. Instead, Boomert extends the Ronquín and Ronquín Sombra phases to a time span between 1500 BC and AD 400 on the basis of stylistic similarities between the Ronquín Sombra and Los Barrancos phases. This shortens the duration of the Corozal phase, which forms a transitional component between the Saladoid and Arauquinoid traditions, and suggests concurrency between the Saladoid material of the middle Orinoco in the form of the Ronquín and Ronquín Sombra phases and the Barrancoid material of the upper and lower Orinoco (the Isla Barrancas, Barrancas, and Los Barrancos phases). Great stylistic similarities exist between these late Saladoid and early Barrancoid components, making Boomert's conclusion acceptable, although the exact dates of the phases are still uncertain.

A conclusion from this complex chronological debate is that since all combatants are forced to exclude about half of the available C^{14} dates, more excavations and sampling in secure archaeological contexts are definitely needed. In the meantime, there can be no certain answer to the question of how the earliest Saladoid assemblages in the middle Orinoco Valley should be dated. On the other hand, the chronology of the Barrancoid series is much less controversial. Almost all authors date the first dated Barrancoid components in the Orinoco Valley (Isla Barrancas[149] and Barrancas) between 1000 and 700 BC (Cruxent and Rouse 1958,

[149] The Isla Barrancas phase was identified at the site of Rabo de Cochino, an island in the upper Orinoco, and at the nearby Casa Vieja site on the eastern bank of the river by Barse (1989) (fig. 5.2.2).

1959; Sanoja 1979; Sanoja and Vargas 1983; Barse 1989; Oliver 1989; Roosevelt 1997; Boomert 2000; Gassón 2002). This is highly interesting since it is precisely during Barrancoid times that we can posit the expansion of an Arawak regional exchange system over much of Amazonia. In the present investigation, we shall thus focus on the Barrancoid period and the various examples of material and non-material culture associated with it.

Although events during the second millennium BC lie somewhat outside of the main focus of the present investigation, it may be relevant to discuss them here since they relate to the general question of the origin of the Barrancoid series. As has been mentioned in previous chapters, an assumption of this thesis is that the Barrancoid series expanded out of the lower Orinoco region as an early component of the Arawak cultural matrix from about 900 BC, a date on which most agree, even among the contenders of the infected debate on Orinoco archaeological chronology. Although the chronological controversy regarding the Orinoco River region may seem complex and confusing, some points of convergence unite the combatants:

1. In the lower Orinoco region Saladoid material (i.e., the Saladero phase, initiated about 1300 BC (Roosevelt 1997; Boomert 2000), predates the Barrancoid tradition (the Barrancas phase, initiated around 900 BC). After 900 BC, Saladoid material ceased to exist along the lower Orinoco, but continued to flourish along the middle and upper Orinoco, in the Antilles, and in the Guianas.
2. In the middle Orinoco Valley the Saladoid series dominated until Arauquinoid times (AD 600 – 800), and Barrancoid material was never present here, perhaps with the exception of the relatively recent Guarguapo phase (ca. AD 500 – 800).
3. In the upper Orinoco region the Barrancoid Isla Barrancas phase was the first advanced ceramic series, initiated at about 900 BC. It was not predated by Saladoid material, which entered the upper Orinoco after the demise of the Isla Barrancas phase.

Moving into the Guianas, the Barrancoid period, or more specifically the millennium between 1600 and 600 BC, is subject to some chronological uncertainty. Boomert (2000:121) refuses to accept Williams' dates of 1600 BC for the agricultural component of the Hosororo complex, marking the initiation of the Mabaruma phase of the Barrancoid series (fig. 5.2.2). Pointing to the mechanical admixture of material occurring at Hosororo, the occurrence of Late Alaka material in the lower sections of the mound, the inconsistency of radiocarbon dates in relation to the stratigraphic order of the samples, and the uncertain chronological relationship between this Barrancoid component and its affiliated sister phases of the Orinoco River, Boomert (ibid.) instead suggests that Early Mabaruma is contemporaneous with the Barrancas phase (800 – 1 BC) of the lower Orinoco River.

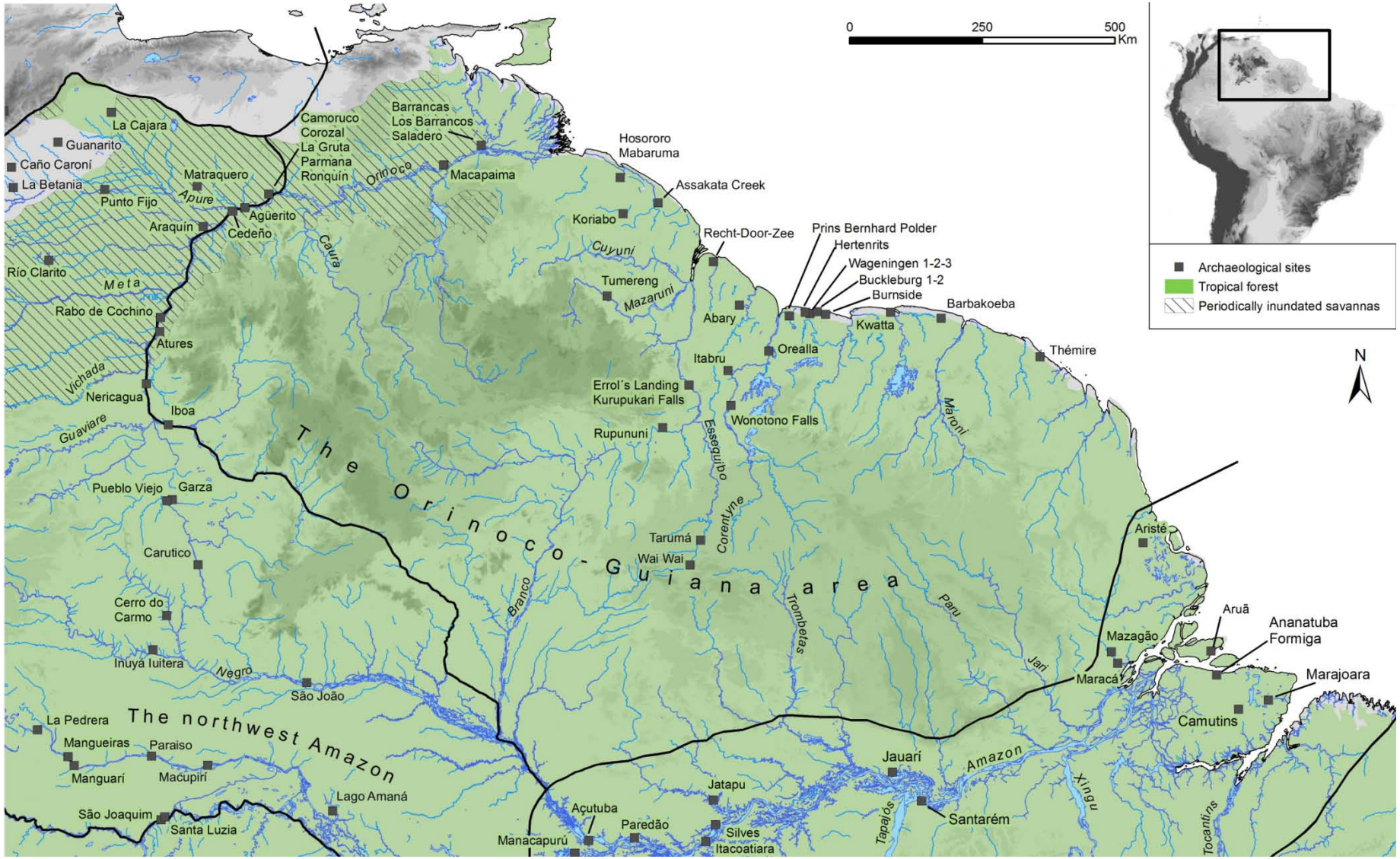

Figure 5.2.2. Archaeological sites of the agricultural period.

The debate on the chronological position of the Mabaruma phase dates back to the archaeological excavations by Evans and Meggers (1960), who used the so-called Ford seriation method (Ford 1949)[150] to reach the conclusion that the Early Mabaruma phase was derived from Los Barrancos and thus would have been initiated at about AD 500. Given the lack of C^{14} datings from the archaeological material at this point in time, seriation methodology and cross-comparison with affiliated ceramic complexes became crucial methods in dating the complex, and Lathrap (1964) was quick to point out the similarities between the Early Mabaruma and Barrancas phases, suggesting a date for Early Mabaruma of about 850 BC. Viewed from the perspective of current archaeological knowledge of Amazonia, the debate between Evans and Meggers on one side and Lathrap on the other was clearly a battle between theoretical positions, in which Evans and Meggers were arguing for short prehistoric chronologies and small-scale societies similar to the historically encountered semi-nomadic groups of Amazonia, while Lathrap was favoring large-scale, complex societies, although he lacked the archaeological evidence to prove their existence.

Perhaps more interesting than the seriation battle between Evans and Meggers and Lathrap is Lathrap's motivation for being interested in the Mabaruma phase, viz. its possible affiliation with the Hupa-iya phase of the Ucayali River (Lathrap 1962) (fig. 2.2.2). The obvious focal point of this debate therefore is the origin of the Barrancoid series itself. Interestingly, neither Lathrap nor Williams (who has been the main proponent of an initiation date of 1600 BC for the Mabaruma phase) proposes that the Mabaruma phase represents the origin of the Barrancoid series. While Lathrap consistently looks toward the upper Amazon in search of the earliest Barrancoid components of Amazonia, Williams (2003:237, 246, 257, 268) considers the Mabaruma phase a local ceramic development originating in the ceramic technology of the Mina phase, which predates the Mabaruma phase in coastal Guiana.[151] However, a careful examination of Williams' (ibid., 282) work reveals that he considers the *in situ* development of the Mabaruma phase to a certain extent influenced by the Barrancoid ceramics of the lower Orinoco. Furthermore, Williams considers this influence to have taken place in two separate waves, the initial one transferring incised decoration at about 1600 BC (a point in time when there actually exists no Barrancoid complexes in the Orinoco Valley to transfer ceramic traits from), and the second one transferring Incised and Modeled decoration (or as it is known in the middle and lower Amazon region: Modeled-Incised or Incised Rim [Heckenberger 2008:948; Neves 2008:365]) and large biomorphic *adornos* during the early centuries AD.

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[150] The Ford seriation method put an emphasis on seriating ceramic sequences according to pottery type percentages occurring in the archaeological material.

[151] Other authors excavating in the area have reached opposite conclusions, namely that the relationship between Mabaruma and Mina was limited to trade contacts, and that they did not share a common heritage (Meggers and Evans 1955).

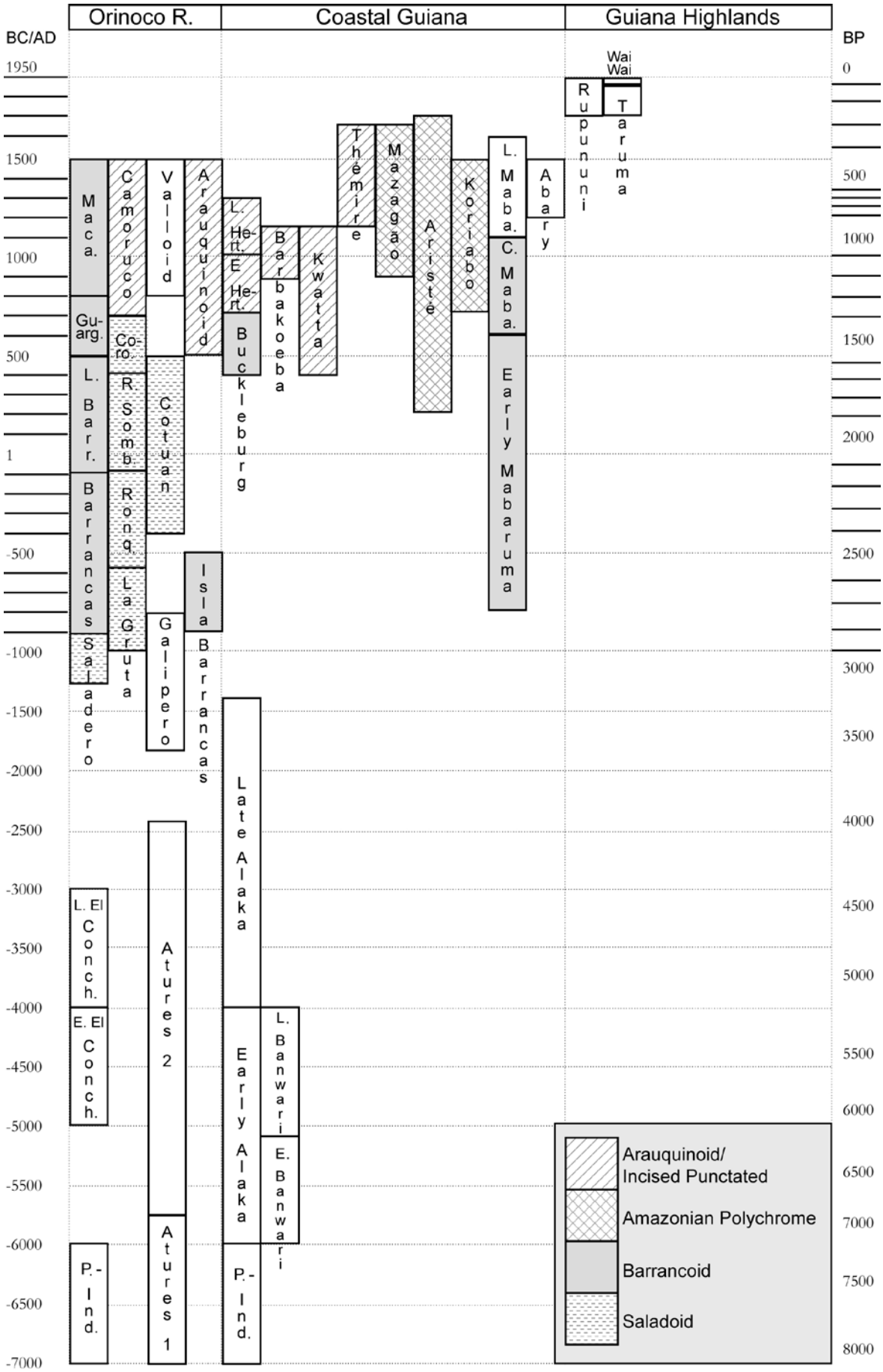
Orinoco R.
Coastal Guiana
Guiana Highlands
BC/AD
BP
1950
1500
1000
500
1
-500
-1000
-1500
-2000
-2500
-3000
-3500
-4000
-4500
-5000
-5500
-6000
-6500
-7000
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
6500
7000
7500
8000
Wai Wai
Rupununi
Taruma
Maca.
Guarg.
L. Barr.
Barrancas
Saladero
Camoruco
Coro.
R. Somb.
Rong.
La Gruta
Valloid
Cotuan
Galipero
Arauquinoid
Isla
Barrancas
L. Hert.
E. Hert.
Buckleburg
Barbakoeba
Kwattta
Thémire
Mazagão
Aristé
Koriabo
L. Maba.
C. Maba.
Early Mabaruma
Abary
L. El Conch.
E. El Conch.
P.-Ind.
Atures 2
Atures 1
Late Alaka
Early Alaka
P.-Ind.
L. Banwari
E. Banwari
Arauquinoid/
Incised Punctated
Amazonian Polychrome
Barrancoid
Saladoid

Figure 5.2.3. Chronological chart of the archaeological phases of the Orinoco-Guiana area. Abbreviations: C. Maba. Classic Mabaruma; Coro. Corozal; E. Banwari. Early Banwari; E. El Conch. Early El Conchero; E. Hert. Early Hertenrits; Guarg. Guarguapo; L. Banwari. Late Banwari; L. El Conch. Late El Conchero; L. Barr. Los Barrancos; L. Hert. Late Hertenrits; L. Maba. Late Mabaruma. Maca. Macapaima; P.- Ind. Paleo-indian; R. Somb. Ronquín Sombra; Ronq. Ronquín.

Since it is precisely the Modeled-Incised decoration and large biomorphic *adornos* that are among the most characteristic traits of the Barrancoid series during its vast expansion over Amazonia AD 500 – 1000, it is the second development described by Williams that should be in focus here. Given the contested dates of the early components of the Mabaruma phase, the fact that it is the late development of the complex that share characteristic Barrancoid traits with neighboring complexes, and Williams' (2003:283f) observation that it is at AD 500 rather than at 1600 BC that a more complex social structure is indicated in the archaeological material, it is this part of the Mabaruma complex, dating from 800 BC and represented by agricultural mound societies from about AD 300 along the Guiana Littoral, that will be in focus in the remainder of this chapter.

Considering that there are serious chronological issues remaining to be solved concerning the C^{14} dates of the Mabaruma phase, and the fact that there are no stylistic aspects of this Barrancoid component that make it a likely ancestor of the Barrancoid phases of the Orinoco River, we must therefore focus on other areas in our search for the origin of the Barrancoid series. In Boomert's (2000:124) view the origin of this series should be sought along the eastern slopes of the Andes, from which it spread across the llanos of Venezuela and Colombia to the Orinoco River. From there it spread further on to coastal Guiana, across the Guiana Highlands, via the so called Pirara Portage connecting the Essequibo and Branco Rivers to the middle and lower Amazon, up the Madeira reaching the Llanos de Mojos and further on to the upper Xingu region. With smaller chronological adjustments of the various Barrancoid phases of Amazonia, this interpretation can be made consistent with the datings of the archaeological material. In this context, we will simply conclude that the Mabaruma phase is a member of the Barrancoid series affiliated to the other Barrancoid phases of the Orinoco River, but that there are no indications that it was the ancestor of the Barrancoid series at 1600 BC.

Given the confusion regarding the chronology of the Barrancoid series, the time period between 1600 BC and AD 300 presents some uncertainties in terms of the dating of archaeological material from the early agricultural period in the Guianas. It should be noted that the Barrancoid presence in the Guianas exhibits great uniformity through the Mabaruma phase. Unlike the later Arauquinoid complexes that are divided into many different phases, Mabaruma remained the only Barrancoid complex in the region. This fact fits nicely with the observation that it is between AD 200 and 600 that the Barrancoid interaction sphere appears to be most intensively interconnected, with great stylistic similarities in ceramic decoration

and vessel shape between areas as far apart as the Antilles and the lower Amazon (Petersen et al. 2004:16).

At AD 300, conclusive evidence for typical Barrancoid agricultural settlements is available from the Buckleburg mounds in Suriname (figs. 5.2.2, 5.2.3) (Rostain and Versteeg 2004:234; Rostain 2008b:284; Versteeg 2008:307). At this point in time sedentary agricultural societies along the Guiana coastline had developed many of the attributes characteristic of other participants in the Arawak regional exchange system, including settled villages relying on permanent agricultural systems in well defined political territories, and higher social complexity including social hierarchies, advanced religious ceremonies, specialized craft production, and long-distance exchange of prestige goods (Rostain 2008b:284).

Buckleburg 1, later followed by the nearby Buckleburg 2 mound, is the earliest mound so far known to be constructed with the intention of settlement on the Guiana coastal plain. One incentive for mound horticulture in the Suriname section of the coastline may have been that shellfish are largely absent along this part of the coast, excluding subsistence strategies based on this resource (Versteeg 2008:305). The Young Coastal Plain of the Guianas is composed of marine clays deposited by ocean currents transporting sediments from the Amazon River north along the coastline. These sediments are rich in available nutrients, but lack sufficient drainage as a result of the flat topography. The primary solution to the problem of drainage used by the original agricultural cultures was therefore to build settlements on mounds and surround them with elevated agricultural plots in the form of raised fields. The raised fields can be compared to artificial *várzeas* that are subjected to controlled inundation, bringing nutrient-rich sediments to the elevated surfaces during parts of the year (ibid., 306).

As described previously in this study raised fields did occur in many wetland contexts in northern South America during the first millennium AD, including the Llanos de Mojos, the Titicaca Basin, coastal Ecuador, Marajó Island, and the llanos of Venezuela and Colombia. The vast interaction sphere we have referred to as the Arawak regional exchange system, established in Amazonia during the first millennium AD, suggests a means by which the idea and technology of raised field agriculture was quickly diffused to new areas where such agricultural techniques could be made useful. Indeed, Versteeg (2008:308) specifically suggests that the direction of the spread of raised field technology as a way of constructing artificial *várzeas*[152] was north from central Amazonia via the Casiquiare and Orinoco Rivers into coastal Guianas.[153] In this context it is interesting to observe the almost perfect chronological correlation between the Marajoara culture of Marajó Island, which after AD 300 employed a

[152] Raised fields are not known to occur on the natural *várzea* areas along the major rivers of Amazonia.

[153] Williams (2003:318) points to the geophysical similarities between the eastern Guiana coastline and the *várzea* landscape along the Amazon River (see also Lathrap 1970:29f, 39, 160f).

subsistence strategy based on mound settlements surrounded by raised fields, and the Barrancoid settlements at the Buckleburg mounds, also constructed around AD 300, indicating a continuation of the ancient interaction between these areas (see section 7.3.4 for an extended discussion of this topic).

As regards the crops cultivated on the raised fields, we know that in general maize and manioc were the most important cultigens in Amazonia (Rostain 2008a:224). In the Orinoco-Guiana area maize does not seem to have been introduced until about AD 700, judging from the evidence from eastern Venezuela (Roosevelt 1980; qtd. in Rostain and Versteeg 2004:235). These datings suggest that manioc was the main crop cultivated on the raised fields of the initial Barrancoid Buckleburg occupation, while maize may have gained importance in the Arauquinoid period.

During Mabaruma times, Barrancoid material also spread to several inland sites, including Tumereng and Quartz Island along the Mazaruni River, Kurupukari Falls along the Essequibo River, and Wonotono Falls[154] along the Corentyne River (fig. 5.2.2). Williams (2003:410) interprets these inland Barrancoid sites as signs that Barrancoid ceramics spread east from the Orinoco via the Caroní River into the Mazaruni, and not along the coastline where most Mabaruma phase sites are found. The validity of this claim remains uncertain. After the Barrancoid period, the most frequently found ceramic style in the inland region is the Koriabo phase (AD 750 – 1500). The Koriabo phase has long been considered a member of the Arauquinoid or Incised Punctated tradition, but a recent study by Boomert (2004) offers a new interpretation of the Koriabo material, linking it instead to the Amazonian Polychrome tradition. This reclassification of the Koriabo phase may seem more dramatic than it actually is, considered that several phases of the Incised Punctated and Amazonian Polychrome traditions share many stylistic attributes, particularly in the region around the mouth of the Amazon. Both Aristé and Mazagão, located in this region, have similarly been reclassified by Boomert (fig. 5.2.2).

The earliest dated Arauquinoid components of the Orinoco-Guiana region have been recovered in the Orinoco Valley. In the lower Orinoco region, Boomert (2000:113) considers the Macapaima phase the first Arauquinoid component, dated to AD 500, while Sanoja and Vargas (1983) classify it as part of the Barrancoid series (fig. 5.2.2). Although there are different opinions regarding which phases in the lower Orinoco region should be classified as Barrancoid and Arauquinoid, respectively, it is quite clear that it is around AD 600 that the Arauquinoid tradition first appears along the Orinoco River (Oliver 1989; Roosevelt 1980; Boomert 2000).

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[154] Wonotono Falls has also yielded a Saladoid component (Boomert 1983).

Returning to the Buckleburg mounds, their expansion continued for about 400 years, representing the easternmost expansion of the Barrancoid series in the Guianas. At AD 700, new mound settlements surrounded by raised fields were being established further east. At the sites of Hertenrits, Wageningen-1, -2, -3, and Burnside, new agricultural societies manufacturing Arauquinoid ceramics labeled Hertenrits were now being established (Boomert 1980; Rostain 1994; Versteeg 2008) (fig. 5.2.2). These sites belong to the early Hertenrits period extending from AD 700 to 1000. In the topmost layers at the Hertenrits site and at Prins Bernard Polder, late Hertenrits material dating to AD 1000 – 1250 has been discovered (Rostain 1994:447) (fig. 5.2.2). Although considerable continuity and stylistic similarities exist between early and late Hertenrits, late Hertenrits pottery is generally more elaborately decorated with a wide variety of *adornos* and free-standing figurines, always depicting women (Versteeg 2008:312). Also affiliated to the late Hertenrits phase is the Orealla complex, located on both sides of the lower Corentyne River (fig. 5.2.2). Orealla is clearly related to late Hertenrits through decoration and vessel shapes, but distinguishes itself by the wide array of tempering materials used in the manufacturing process. It also shares decorative elements with Santarém, Koriabo, and Mabaruma, further distinguishing it from its Hertenrits relative (Williams 2003:340).

In the Guianas, the Arauquinoid tradition is represented by at least four phases. The already mentioned Hertenrits phase (divided into an early and a late component) is complemented by the Barbakoeba phase, dating from ca. AD 1050 – 1150[155] (Boomert and Kroonenberg 1977:13; Rostain 1994:24; Williams 2003:327, 392), Kwatta phase, dating from AD 600 – 1150 (Boomert and Kroonenberg 1977:13; Boomert 1987:43; Rostain 1994:24), and Thémire phase, dating from AD 1150 – 1600 (Rostain 1994:24; Williams 2003:324, 331), all located in Suriname and French Guiana (fig. 5.2.2). In addition to these four phases three other ceramic complexes, Aristé (AD 200 – 1700) in Brazilian Amapá, Mazagão[156] (AD 1100 – 1650) northwest of Marajó Island, and Koriabo (AD 750 – 1500) in both inland and coastal locations all over the Guianas, are phases closely related to both the Arauquinoid and Amazonian Polychrome traditions (Rostain 2008b:288) (fig. 5.2.2). The Aristé, Mazagão, and Koriabo phases have been extensively discussed by Boomert (2004), who claims that these phases are more closely related to Amazonian Polychrome material than to the Arauquinoid tradition. The most important arguments from Boomert's investigation have been reviewed in chapter 4. Apart from the four clearly Arauquinoid phases, the Abary phase, thought to have

[155] The Barbakoeba phase contains only one C^{14} sample (GrN-7936) dating it to 975±50 (uncalibrated). It is likely that the complex emerged earlier, perhaps dating as early as AD 650 (Williams 2003:392).

[156] Mazagão has its main distribution outside of the region in focus in this chapter and is more extensively discussed in chapter 4.

been initiated AD 1200 – 1300 on the basis of Mabaruma material occurring at Abary phase sites, is affiliated with both Mabaruma and Hertenrits material (Plew 2005a:23) (fig. 5.2.2). It seems as if the Abary phase forms an intermediate component, closely related to both Barrancoid and Arauquinoid material, and it should be viewed as an indication of the close interaction between indigenous groups in the region established since archaic times. Similar conditions of close cultural interaction resulted in other intermediate phases such as Aristé, Mazagão, and Koriabo in late prehistory.

In contrast to the Barrancoid series, represented only by the single Mabaruma phase in the Guianas, the ceramic variation of the Arauquinoid tradition is wider, although all of the phases mentioned are clearly related (Versteeg 2008:316). It seems as if the Arauquinoid villages established in the region from AD 700 represent an expansion of Barrancoid settlements into new areas. Most likely, the advanced agricultural systems constructed by the Barrancoid mound builders of the Mabaruma phase had proven successful enough to encourage their expansion further east along the coast. The variation within the ceramic material, reflected in the various Arauquinoid phases of the region, corresponds to variation of other types of material culture found in settlements representing the six phases (Rostain and Versteeg 2004:237; Rostain 2008b:289). The different Arauquinoid villages specialized in different types of crafts, producing particular items circulated in the regional system established since Mabaruma times. Villages belonging to the Kwatta phase acquired lithic material from interior non-Arauquinoid groups of the Brownsberg complex through trade, and reworked it into *muiraquitas*, frog-shaped greenstone amulets, which were redistributed in the regional exchange system (Rostain 2008b:292). The Kwatta settlements did not have raised fields, probably because they were located on well-drained land where raised fields were not necessary in order to maintain agricultural production (Rostain and Versteeg 2004:237). This may have contributed to their focus on specialized craft production. Some sites specialized in griddle manufacture (Rostain 2008a:226), while other settlements were more oriented toward farming activities, trading their surplus for manufactured artefacts. Yet other sites, e.g., Prins Bernard Polder, were purely ceremonial (Rostain and Versteeg 2004:236; Versteeg 2008:312).

During the Arauquinoid period, sites continued to grow along with increased agricultural production on the expanding areas of raised fields. At this point in time, large areas of the eastern Guiana Littoral came under perennial cultivation for the first time in history (Williams 2003:319). Major mound sites such as Hertenrits developed satellite communities around them, indicating an increased importance of some sites and the birth of more clearly expressed socio-economic hierarchies (Versteeg 2008:312). Similar settlement patterns indicating hierarchical structures from the same time period are known from the llanos in Venezuela (Spencer 1998; Redmond et al. 1999; Gassón 2002), upper Xingu (Heckenberger et al. 2008), and Marajó Island (Schaan 2008). There is no doubt that many groups in Amazonia and the Caribbean, including the Arauquinoid settlements of the Guiana coastline, at this point in

time had evolved into chiefdom societies[157] (Petersen et al. 2004:29; Rostain 2008:231; Schaan 2008:343; Versteeg 2008:312). Social stratification is also visible in material culture in the form of human representations on Arauquinoid vessels, at the Corozal site interpreted as a cult of ancestor chiefs (Roosevelt 1997, qtd. in Rostain and Versteeg 2004:236f).

The similarities between the Arauquinoid groups of the Guianas and the contemporaneous societies of Marajó Island, the upper Xingu, and the llanos in Venezuela, Colombia, and Bolivia are striking. Many aspects of these widely separated communities are clearly similar, including subsistence strategies, material culture, and socio-religious patterns (Williams 2003:334). The specialization and variation in manufactures between different sites was characteristic of both the Guiana and upper Xingu societies during late prehistory (Rostain and Versteeg 2004:237). Almost every date for the earliest occurrence of raised field agriculture in South America are from the first millennium AD (Rostain 2008a:217), and Petersen et al. (2004:29) notice that this period in time is characterized by many shared commonalities of cultural development in Amazonia and the Caribbean.

The inhabitants of the Orinoco-Guiana region continued to construct earthworks for settlement and agriculture as well as for transportation, requiring substantial and well-organized work forces. These facts have inspired high population estimates for the Arauquinoid societies of the region (Rostain and Versteeg 2004:235; Rostain 2008a:230). Elevated causeways were erected in order to facilitate transportation between the communities and maintain easy access to strategic natural resources, such as those available along the coastal shore (Rostain 2008a:227), or between raised fields (Williams 2003:328), or for water-management purposes (Rostain and Versteeg 2004:238).

In the interior of the Guiana Highlands, the character of indigenous societies during Arauquinoid times was somewhat different both in terms of subsistence strategies, material culture, and socio-religious features. First, the environment of the highlands did not require raised mounds, neither for settlement nor for agriculture. The inland groups therefore lacked an incentive to concentrate population into dense settlements, and the rapid increase in population size and agricultural production obvious in the littoral zone did not occur in the highlands. Our knowledge of the inland societies is relatively limited, compared to coastal sites, due to the lack of archaeological excavations in the area and to the nature of the sites, making them less easy to identify. Nevertheless, a number of sites have been identified and the archaeological material classified since the initial work of Meggers and Evans (1960) in the

[157] According to Williams (2003:325) social differentiation did occur at the Arauquinoid settlements, but not to the point of qualifying as chiefdoms. Rostain and Versteeg (2004:239) also express some doubt about the level of social complexity, but Rostain seems to have abandoned this position four years later (Rostain 2008a:231).

region. Recent work by Plew (2005a, 2005b) has expanded the prehistoric sample and revised some of the initial conclusions offered by Meggers and Evans.

Already in the archaic period, the societies of the Guiana Highlands were an essential component in the regional exchange system by exporting lithic raw materials for the tools used in canoe manufacturing, and they continued to interact with the costal societies during the Barrancoid and Arauquinoid periods. Following the previously described Koriabo phase in the Guiana Highlands are the Tarumá, Rupununi, and Wai Wai phases (fig. 5.2.2). The Tarumá phase (ca. AD 1700 – 1825) is named after the now extinct Tarumá,[158] an ethno-linguistic group inhabiting the upper Essequibo River when the Europeans first arrived in the area (fig. 5.3.1). At Itabru, excavations by Williams (1978) recovered Koriabo phase sherds together with Tarumá material, leading Boomert (qtd. in Plew 2005a:27) to the conclusion that the Koriabo and Tarumá phases were contemporaneous (figs. 5.2.2). Given that Koriabo and Tarumá share geographical territory, and that they have general features such as *caraipé* temper and Red-on-White painting in common, it is likely that the Tarumá phase forms a continuation of the Koriabo phase in the southern highlands (Boomert 2000:254; Plew 2005a:27).

In the Rupununi savanna area, the Rupununi phase is the ceramic style of the historical period (Evans and Meggers 1960). Dating from the end of the 18th century to about 1900, the Rupununi phase sites are often associated with European artefacts. An interesting feature of the Rupununi area are stone alignments composed of grouped or single standing stones lined up in different formations by the former inhabitants of the sites. Such stone alignments have also been reported from Amapá, where the structures are associated with the Aruã phase of the Amazonian Polychrome tradition (Meggers and Evans 1957; Nimuendajú 2004:15-41; Plew 2005a:36). Similar structures are also found in eastern Venezuela, Suriname, and French Guiana (Plew 2005a:36), suggesting a cultural feature shared across much of the Guiana region in late prehistory.

The final ceramic phase in the interior is the Wai Wai style, borrowing its name from the Carib-speaking group with which it is associated (fig. 5.3.1).[159] Wai Wai style pottery dating

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[158] The Tarumá language remains unclassified (Carlin 2006:316). Grimes (2000) include it in the Aruma dialect of the Wapishana (Arawak) language, but that affiliation has been deleted in more recent editions of *Ethnologue* (Gordon 2005; Lewis 2009). The group suffered a major population decline in the 1600s and 1700s due to their involvement in the slave trade. The Tarumá delivered slaves to the Dutch, but were later themselves exposed to slave raids by the Portuguese, after which the Manao took over the role as deliverers of slaves to the Dutch (fig. 5.3.1). It is likely that the Manao even delivered some of the remaining Tarumá to their former Dutch employees, following a pattern well known throughout Amazonia during the 1600s and 1700s.

[159] To avoid confusion between the ethnic group and the ceramic phase, the ceramic style is labeled Wai Wai, while the ethno-linguistic group is referred to as the Waiwai.

from about AD 1900 and found along the upper Essequibo River, is known to have been introduced into the area by the Waiwai following its abandonment by the Tarumá (Plew 2005a:29). The Wai Wai phase is associated with European artefacts and the geographical extension of the phase is believed to reflect the distribution pattern of the historical Waiwai population (ibid., 30).

5.3 Historical linguistics

Linguistically, the Orinoco-Guiana area is relatively homogenous, at least when measured in Amazonian terms. It is also one of the best known areas in terms of our understanding of the ethno-linguistic map at the time of contact, although significant knowledge gaps still exist. Two areas are not so well known: a long section of the Río Branco in the southern part of the region, and a large part of what is today northern Suriname. These two areas have been left blank in figure 5.3.1.

The most striking feature of the linguistic map is the dominance of Carib languages in the region. At the time of contact, Carib languages were dominant in the upland areas, interrupted by pockets of Arawak-, Yanomam-, and Tupi-speakers. The Tupian languages in the region, mainly represented by the Wayampi in the southeastern section of the area, are included in most maps reconstructing the time-of-contact situation, but may have entered the region following the first major extinction shortly after the arrival of European microbes. Alternatively, the Tupian languages entered the area, their northernmost position in Amazonia, during their last major expansion starting around AD 1200.

The northern Venezuelan Cordillera and the northernmost part of the llanos were inhabited by the Arawak-speaking Caquetío and Achagua at the time of contact. Along the Caribbean coastline, the Carib-speaking Mapoyo, Cumanagoto, and Chaima were neighbors with a number of unclassified and poorly documented groups living next to the Orinoco River. In the Orinoco Delta, the linguistic isolate Warao dominated at the time of contact. Warao was probably also spoken in two small pockets further east in Guyana and Suriname, perhaps reflecting a geographical distribution of Warao-speakers that was once more widespread (see section 5.2.1 for a discussion of Warao prehistory).

South of the Orinoco, Carib languages were dominant except for a small area along the upper part of the river inhabited by speakers of Sáliba and Piaroa of the Salivan family. In the southwestern part of the region, languages of the Yanomam family still form a continuous block. These groups are sometimes classified as different dialects within a single isolate, i.e., Ninam, Yanomamö, Yanomámi, and Sanumá (Aikhenvald and Dixon 1999:343), or as separate languages forming the Yanomam family (Lewis 2009). According to Wright (1999:367), the Yanomam-speakers previously inhabited only the northern part of their present territory, the Parima mountain range northeast of the Río Branco. In Wright's

opinion, the Yanomam-speakers expanded south following the demographic decline of their southern neighbors, a pattern similar to the expansion of the Múra and various Tupian groups along the Amazon River in early post-contact times. Adjacent to the Yanomam-speakers were three small groups of Arutani and Sapé, forming the small Arutani-Sapé family.

In the center of the region, along the upper sections of the Branco and Essequibo Rivers, there was a pocket of Arawak-speaking groups, Atoraí, Mapidian, and Wapishana. It is likely that these languages spread into this area via the Río Branco from the large block of Arawak languages along the Río Negro, and also that they were once in contact with the Lokono (Arawak)[160] of the Guiana Littoral zone via the frequently used trade routes of the Essequibo and Corentyne Rivers. The contact between these three northern blocks of Arawak-speakers was probably broken up by the expansion of Carib languages some time after AD 1000. Adjacent to the Arawak groups in the center of the region were also the Tarumá, a linguistic isolate (fig. 5.3.1). This group was previously considered as belonging to Wapishana (Arawak) (Grimes 2000), but is now left unclassified (Carlin 2006:316).

The southern margin of the region consists of Carib languages interspersed with a number of unclassified and poorly documented groups living on the northern shore of the Amazon River. As mentioned in chapter 4, this area is one of the least known in terms of time-of-contact distribution of indigenous languages, but fortunately the situation is somewhat better in the Orinoco-Guiana area than in the middle and lower Amazon region.

Finally, in the eastern part of the region Carib, Tupi, and Arawak languages form a mosaic of groups that most likely is the result of close cultural interaction during late prehistory and in the early days of the colonial period. As previously mentioned, it is possible that the Tupian languages of this area did not arrive until large amounts of land had been made available as a consequence of the first major extinction following the impact of European microbes. Otherwise, the Tupian languages probably reached the area during their major expansion in the period AD 1200 – 1500. The Arawak groups of this area, the Palikúr along the Atlantic coast, and a number of poorly documented groups adjacent to them were connected with their linguistic relatives the Aruã, living around the mouth of the Amazon, and with the Lokono of the northern coast. As was the case with connections between the Arawaks of the Negro, the Wapishana-speaking groups of the highlands, and the Lokono along the Guiana Littoral, the interaction between the Palikúr and Lokono gradually diminished after AD 1200 as a consequence of the fragmentation of the Arawak regional exchange system.

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[160] The Lokono are also known as the Arawak, but in order to avoid confusion with the Arawak language family they are hereafter referred to as the Lokono.

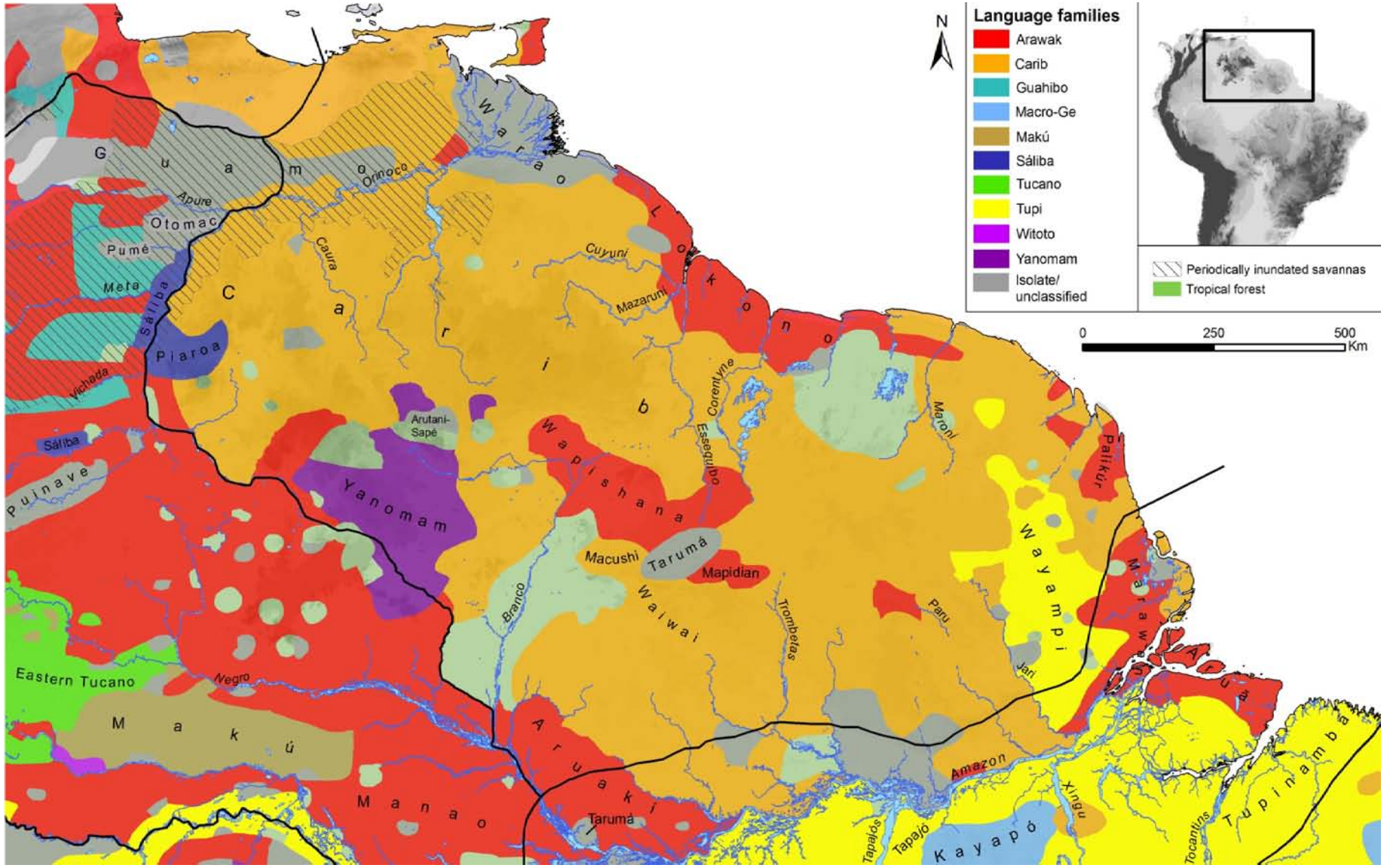

Figure 5.3.1. Ethno-linguistic groups of the Orinoco-Guiana area at the time of contact.

5.4 Ethnohistory

One of the most illustrative studies of the frequent interaction between the various Carib-speaking groups of the Guiana highland is Butt-Colson's (1973) work on the Akawaio trade relations carried out in the 1950s. Although the study was undertaken in the mid-1900s, it may still serve to illustrate the intensity of pre-colonial trade relations in the region, as there is no reason to believe that trade in interior Guiana was less intensive in the late prehistoric and early historic period.[161]

Central to the study are the Akawaio,[162] a set of Carib-speaking groups with traditional territories in upland Guyana, once distributed in an irregular belt along the highlands stretching from the Venamu River on the present border of Venezuela and Guyana to the central parts of Suriname (fig. 5.4.1). The Akawaio had trade relations with many neighboring Carib-speaking groups, but also received items from more distant Carib-speakers such as the Yekuana,[163] and from non-Carib groups in the region (fig. 5.4.1).

The Mainggong, close neighbors of the Yekuana, were frequent long-distance traders, visiting not only the Akawaio but also continuing their eastward expeditions all the way to Georgetown in order to obtain steel axes. This journey was undertaken via the Casiquiare, Negro, and Branco Rivers, into the Essequibo drainage via the Pirara portage passing the Macushi of the central Guiana area (Roth 1924:634; Butt-Colson 1973:10) (fig. 5.4.1). The Yekuana also travelled north, exchanging tobacco, quartz crystals, and *caraña* resin (*Protium heptaphyllum*) with the Warao of the Orinoco Delta (Boomert 2000:424). Their upland position allowed the Yekuana to act as middlemen between their eastern neighbors participating in the trade networks of the Guiana Highlands and the lowland groups that traded along the Orinoco, Casiquiare, and Negro Rivers. This middleman position was utilized in the trade in glass beads,[164] which were conveyed between the Piaroa of the Orinoco

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[161] Many of the historical references to trade routes in the Orinoco-Guiana region come from Boomert's (2000) dissertation. Readers interested in complete references to all the historical accounts are advised to consult Boomert (2000).

[162] The Akawaio (Akawai) are also referred to as Waika, Kapong, and Ingariko (Butt-Colson 1973:19).

[163] The Yekuana are referred to as the Pawana, "those who sell", by the Akawaio (Butt-Colson 1973:16). They are also known as the Maionggong or Maquiritari, the latter also being the name of the language spoken by many of the eastern Carib groups of the Yekuana area (Lewis 2009). Mainggong (Mayongong) and Maquiritari (Macirinavi) can also refer to two specific ethnic groups of Maquiritari-speakers north of the Yekuana (fig. 5.4.1). All of these groups speak languages belonging to the Carib family. When possible to identify, their individual ethno-linguistic names will be specified in the text.

[164] The glass beads possessed by the Piaroa had travelled south from the Spanish in Caracas. From Caracas they were brought across the central llanos of Venezuela to the middle Orinoco area, where the Piaroa could obtain them. Glass beads also arrived in the Guiana Highlands from the east, being brought in by Dutch and French traders settled along the eastern Guiana Littoral. Still in the late

River and the Pemon[165] of the Guiana Highlands (Coppens 1971:37, qtd. in Gassón 2000:596f). Through this trade, the Yekuana were able to accumulate substantial wealth in the form of *mostacillas*, a form of shell beads that functioned as a medium of exchange in northern South America (Gassón 2000).

South of the block of Maquiritari-speaking Caribs stretching east from the upper Orinoco River towards the central Guiana Highlands were the Arawak-speaking Guinaú, famous "for their hammocks, cassava graters, aprons, girdles of human hair, and feather decorations" (Roth 1924:635). This group controlled a very strategic position at the junction of the Orinoco and Casiquiare Rivers (fig. 5.4.2), enabling them to trade with the Yekuana and the other Carib-speaking tribes of the Maquiritari block in the north. The Guinaú are reported to have been wearing large amounts of shell beads, some of which they exported to the Taulipang and Macushi, who also decorated themselves with heavy loads of shell beads (Koch-Grünberg 1979, qtd. in Gassón 2000:597) (fig. 5.4.1). Among the trade routes following the Casiquiare and upper Orinoco Rivers was the route from the Japurá River, bringing *quirípas* to the Guianas during the colonial period (Boomert 2000:434). The route spanning the Amazon, Negro, Casiquiare, and Orinoco Rivers, continuing into the Guianas, was one of the four most important trade routes in Amazonia, according to Santos-Granero (1992:29). During the 1600s it brought food such as turtle oil and smoked fish into the upper Negro in exchange for local products such as *curare* poison and resins (Morey and Morey 1975, qtd. in Hill 1996a:149f). At the time of contact, the Casiquiare was controlled by the massive block of Arawak-speakers of the northwest Amazon (fig. 5.3.1). The Guinaú were the northernmost outpost of this block, mediating contacts with the central Guiana tribes.

East of the Guinaú were the Yanomámi. Completely surrounded by Arawak- and Carib-speakers on all sides, the Yanomámi began to receive iron tools from groups who had established trade relations with the Europeans, which the Yanomámi themselves did not have. The Arawaks and Caribs also brought new cultigens such as the banana to the Yanomámi, which completely altered their basic subsistence strategy (Wright 1999:367).

1900s, glass beads formed one of the major elements of intertribal trade in southeastern Venezuela (Gassón 2000:596).

[165] Pemon is a widespread Carib language of the Guiana Highlands (fig. 5.4.1). It is spoken by groups such as the Arekuna, Taulipang, Kamarakotó, and many of the groups with names ending with -goto/-kotó (Lewis 2009). It is sometimes used to designate a particular ethnic group, the "Pemon", as in the example above, but the exact location of that group is difficult to derive from the ethnohistorical material. It is likely that the group referred to by Coppens is the Arekuna or Kamarakotó, widely known Pemon-speaking traders of this region.

The Mainggong traded blowpipes to the Kamarakotó, a Pemon-speaking Carib group centrally positioned in the highlands (fig. 5.4.1). Associated with the blowgun trade was the trade in *curare* poison and canoes, which also involved the Mainggong (Salazar 1970, qtd. in Butt-Colson 1973:17). Although the eastern Carib-speaking groups of the highlands such as the Akawaio were not aware of it, the *curare* poison traded to them from the Mainggong was not manufactured by the Mainggong themselves, but imported from the Saliva-speaking Piaroa of the eastern bank of the upper Orinoco. In return for *curare*, the Piaroa received blowguns from the Yekuana (Coppens 1971, qtd. in Butt-Colson 1973:58) (fig. 5.4.2). The single most important manufacturer of curare along the Orinoco were said to have been the Caverre[166] of the middle Orinoco River, and other tribes travelled long distances to obtain *curare* from them (Roth 1924:635f).

According to the Akawaio, the Mainggong brought not only blowpipes and *curare* poison to them across the central Guiana savanna, but also quivers, hammocks, and cassava graters. South of the Akawaio, the Macushi were also well known for their *curare* poison (Roth 1924:635). The Macushi exported their *curare* to the Arekuna in exchange for finished blowguns or sometimes only the inner reed made of *Arundinaria schomburgkii*, which the Arekuna obtained from the Mainggong (ibid.).

The Arekuna,[167] Pemon-speaking Caribs like the Kamarakotó, served as middlemen in the relay trade in blowguns and products associated with them (Butt-Colson 1973:17). The Arekuna not only provided the Akawaio with *curare* poison, but also with manioc graters, hammocks,[168] ceramics, hunting dogs, canoes,[169] and certain shells used as ornaments, and they were well known for their own cotton and blowpipes (Roth 1924:635; Butt-Colson

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[166] The Caverre (Caberre, Cabere, Cabre, Cávere) were located in two widely separated areas during the historical period, one part of the group being settled along the middle Orinoco, and the other on the northern side of the upper Guaviare River in the southern Colombian llanos (Nimuendajú 1987). In time-of-contact maps, however, only the Caverre of Guaviare are depicted. Perhaps the middle Orinoco Caverre moved into their territory later, or their position at the time of contact may have been unknown.

[167] During the 1900s the Arekuna lived on the savanna southwest of the Akawaio, east of the Caroní River. Their time-of-contact position, however, was on the western side of the Caroní. The maps in this chapter depict the time-of-contact position of the Arekuna (fig. 5.4.1).

[168] In general, the trade in hammocks in the highlands seems to have been limited. Each group manufactured their own hammocks, characterized by distinctive groupings of the terminal loops (Butt-Colson 1973:52).

[169] According to Butt-Colson (1973:55, note 76) the Arekuna were educated in the art of canoe manufacture by coastal Arawaks imported by missionaries for the purpose of establishing local production of canoes. The coastal Arawaks (Lokono) themselves also undertook long trading expeditions to obtain superior canoes from the Warao of the Orinoco Delta area, long recognized for their excellence in this type of manufacture (Roth 1924:633ff.).

1973:55). According to Butt-Colson (1973:18) the Akawaio, as recipients of goods deriving from the Mainggong, had no clear understanding of the full trading chain bringing the goods to them; they were mainly in contact with Kamarakotó and Arekuna middlemen, but lacked knowledge about the Mainggong or Pawana. Another example of such an exchange chain is the relay trade in blowguns between Arekuna and Akawaio on the Kamarang River, close to today's border between Venezuela and Guyana. The blowguns had travelled east from their original source, the Yekuana (ibid., 23f) (fig. 5.4.1). Another product that was brought by the Arekuna to the Akawaio during the post-colonial period was cow horn derived from the cattle industry in the savanna region east of the Akawaio (Butt-Colson 1973:44).[170]

One import on which the Akawaio seem to have been totally dependent was the manioc grater. These were imported from two main sources, the Maquiritari, close to the Yekuana and Mainggong, and the Waiwai[171], southern neighbors of the Macushi, once inhabiting a belt stretching from the southern Guyanese border to the Amazon River (Butt-Colson 1973:27f) (fig. 5.4.2). Some graters were passed on to the Akawaio by the Taulipang, who also distributed gourds as part of the same trading chain (ibid., 55). Graters coming from the Waiwai passed through a complex multilingual trading chain starting with the Carib-speaking Waiwai, who traded the graters to the Tarumá, who passed them on to the Arawak-speaking Wapishana. The Wapishana bartered the graters to the Carib-speaking Macushi, who traded them to the Patamona, who finally passed the graters on to the Akawaio. In some instances, the Macushi also imported graters from the Taulipang, who received them from their western neighbors the Mainggong[172], and these graters were also bartered into what is today Suriname by the eastern neighbors of the Rupununi River Macushi, the Carib[173] (Roth 1924:636; Butt-Colson 1973:30f). One source suggests that the Wapishana component in this trading chain was actually the Atoraí (Atorada, Atolaio), an Arawak-speaking group speaking the Wapishana language. The Atoraí, who merged with the Wapishana into a single ethno-linguistic group (Roth 1924:633; Butt-Colson 1973:31), are said to have obtained the graters from the Tarumá (fig. 5.4.2). As in the trade in blowguns, the Akawaio knew little of the original

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[170] During the 1950-60s, a reverse trading chain moved guns from east to west, from the Taulipang at the Venezuelan-Brazilian border via the Arekuna to the Maquiritari (Coppens 1971:48, qtd. in Butt-Colson 1973:32).

[171] The Waiwai were also well known for their manufacture of *tucum* and *kuraua* fibers for export (Roth 1924:635).

[172] In the early 1900s, the Mainggong still carried on a lively trade in manioc graters between the Orinoco and upper Río Branco (Roth 1924:636).

[173] "Carib" (Karib) here is simultaneously the name of the ethnic group, the language, and the language family. In this context it signifies a particular ethno-linguistic group on the Rupununi River.

sources of their manioc graters, which were passed on to them via the Arekuna and Patamona as final links in a long trading chain.

The Wapishana acquired hunting dogs in exchange for canoes, cotton hammocks, and European-made goods such as knives and beads (Im Thurn 1883:283, qtd. in Boomert 2000:422). When the Wapishana traded graters to the Macushi, they also brought hunting dogs, and in exchange for these products the Wapishana received *ourali* dart poison and cotton hammocks from the Macushi. All of these products were also traded by the Macushi to the Arekuna, in exchange for balls of cotton or blowguns. The Macushi also brought *ourali* poison and cotton hammocks to the Carib, who reciprocated with pottery (Im Thurn 1883:283, qtd. in Boomert 2000:422) (fig. 5.4.2).

One reason behind the long-distance trade in manioc graters may be related to the fact that many groups in Amazonia seem to have pursued specializations in specific manufactures as a way of expressing their ethnic identity within interaction spheres at various levels of scale. This phenomenon is well exemplified by indigenous exchange networks on the eastern Andean slopes below Lake Titicaca and by the upper Xingu area (see chapter 3). Another reason for such trade may be the uneven distribution of natural resources in the landscape. In the case of the manioc graters it was the challenge of obtaining the right type of mineral for the grater teeth that was the crucial component in the manufacturing process. Roth (1924:278, 635) writes that it was only in Tarumá country, along the upper Essequibo River, that the quartz porphyry used to manufacture the graters in this region could be obtained, which is why the Tarumá were well known for their graters (fig. 5.4.2). However, the Akawaio never themselves stated that the lack of proper mineral resources was the reason behind their own reliance on imported graters. Instead, the Akawaio claimed that it was the lack of the right type of resin for fixing the stone chips in the board that prevented them from manufacturing their own graters. But the lack of resin does not seem to have been a concern for the Maquiritari, who manufactured graters in an environment not too different from that of the Akawaio. It thus seems as if the trade in manioc graters was at least partly a consequence of the groups' urge to express their ethnic specificity through products traded to neighboring tribes, a conclusion also reached by Butt-Colson (1973:34).

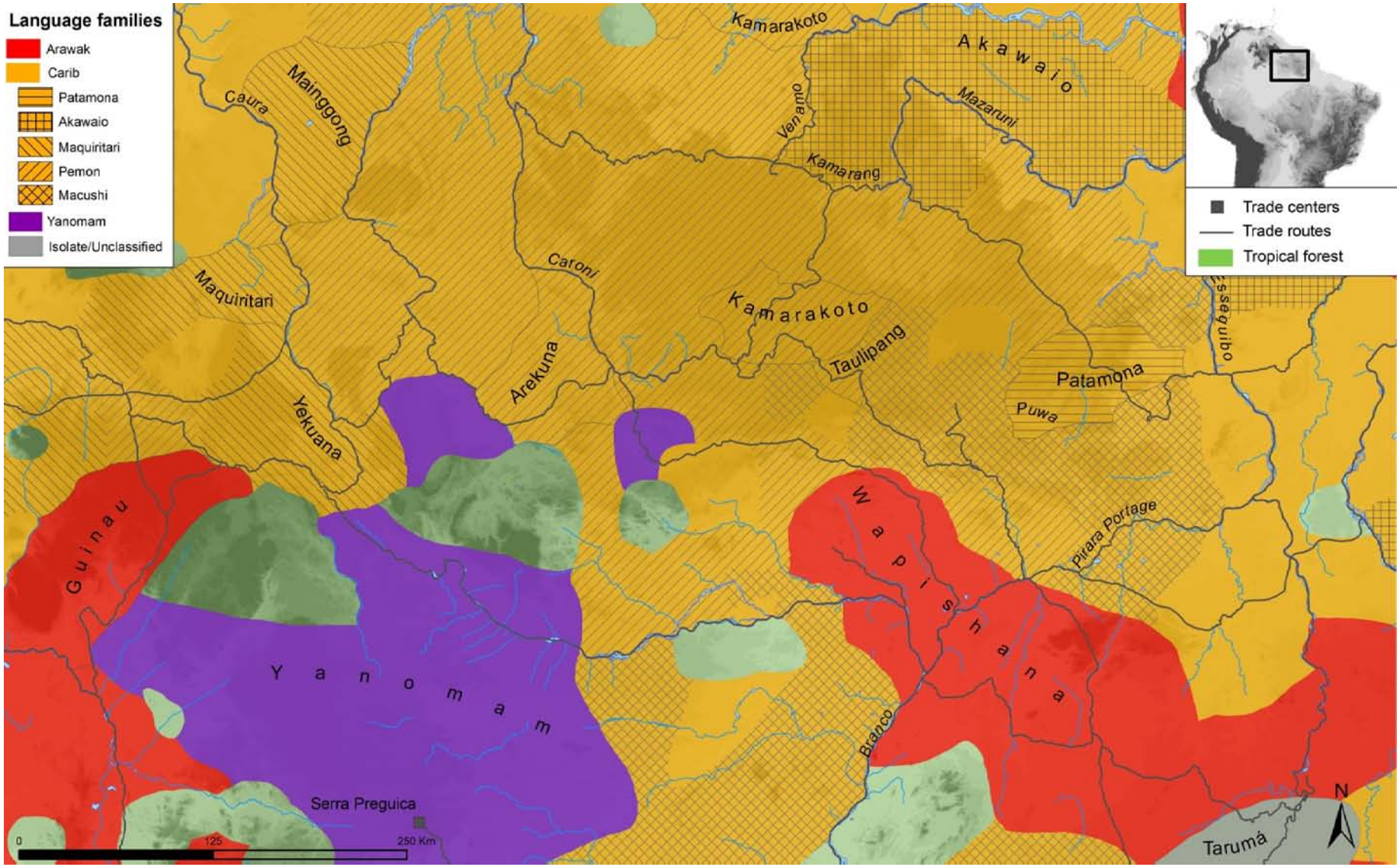

Figure 5.4.1. The Guiana Highland interaction sphere of the historical period.

The Tarumá were also in contact with their eastern neighbors the Carib-speaking Trio. The Tarumá exported European-made glass beads to the Trio, and were also well known as breeders and traders of hunting dogs (Roth 1924:634f). The Mainggong also traded dogs to the Akawaio and Arekuna (Butt-Colson 1973:52). The Akawaio often made long journeys into Colombia and Brazil to obtain good hunting dogs, and some groups also obtained dogs from the French of Cayenne. The Carib of the Ytany[174] River, finally, were also known for their breeding skills (Roth 1924:636) (fig. 5.4.3).

Trade in pottery was also intense in the highlands. Kamarakotó and Arekuna exported ceramics to the Akawaio, and the Kamarakotó ware was in high demand among the Maquiritari, who also derived some of their ceramics from the Pemon (Coppens 1971:48, qtd. in Butt-Colson 1973:37) (fig. 5.4.1). The Akawaio also received ceramics from the Patamona, who brought it along the same route that was used for transporting the manioc graters imported from the Waiwai, Tarumá, and Wapishana in the south (fig. 5.4.2). The Patamona pots, highly valued for their durability, also reached the Taulipang. Overall, the Patamona pots were regarded as superior among the Akawaio, Arekuna, and Taulipang, the reasons given being both the skill of the Patamona female potters and the quality of the clay deposit at the Puwa River in Patamona territory (fig. 5.4.2). Patamona territory also yielded pot smoothing stones (*kwima*), which accompanied the ceramics as an export item to the Akawaio (Butt-Colson 1973:37, 39f). In the middle Orinoco area, the Otomac were well known for their pottery, which was traded along the river (Roth 1924:636; Boomert 2000:110) (fig. 5.4.2).

Another category of items widely traded throughout the Guianas were various types of shamanic equipment. The Akawaio received "spirit stones" (*wata*) from the Mainggong, Kamarakotó, and Atoraí. The Mainggong also produced "tiger tobacco" (*komali kawai*) used in shamanic séances (Butt-Colson 1973:46f; see also Linné 1925:106f; Mansutti 1986, qtd. in Boomert 2000:424) (fig. 5.4.1). The Yekuana also traded tobacco to the creoles during the historical period (Coppens 1971:36, qtd. in Butt-Colson 1973:47). To obtain quartz crystals for use in shamanic rattles, the Warao travelled to Trinidad to collect them at Naparima Hill. During these expeditions they also exchanged "monkeys, beeswax, baskets, parrots, hunting dogs, and hammocks for tobacco, *annatto*, mirrors, and household goods at the market of San Fernando" (Boomert 2000:424) (fig. 5.4.2). Tobacco, essential in Warao shamanic séances, could not be grown in their traditional territory in the Orinoco Delta and was therefore imported from Trinidad in exchange for canoes (Boomert 2000:424; Heinen and García-Castro 2000:573). Judging from archaeological traces of Warao exchange, the trade in canoes and tobacco with the natives of Trinidad may be of great antiquity, and canoes appear to have

[174] The Ytany (Itany, Litani) River is the upper section of the Maroni River that constitutes the modern border between Suriname and French Guiana.

been a specific attribute of the Warao in the eyes of other groups of the region. Some Warao canoes with small cabins on them were exported not only to Trinidad for tobacco, but also to the Guianas in exchange for gold (Heinen and García-Castro 2000:573). The Warao received tobacco and quartz crystals from the north, brought to them by the Yekuana, who travelled long distances to trade along the Caura and Orinoco Rivers (fig. 5.4.2). The Yekuana also brought *caraña* resin (*Protium heptaphyllum*) to the Warao for use in ritual ceremonies (Wilbert 1981, qtd. in Boomert 2000:424, footnote 9). The Warao received not only material goods from the Yekuana, but also adopted a Yekuana fertility rite known as *Wasai Hadi,*[175] suggesting a broader spectrum of interaction, including ceremonial interaction, between these two groups (Heinen and García-Castro 2000:571).

The Akawaio received various types of plants from the Arekuna and Taulipang for use in shamanic rituals. The Akawaio themselves traded caterpillars feeding on the leaves of sacred plants as articles of trade. They also traded *kamakusa* seeds to the Taulipang for use against diarrhea (Butt-Colson 1973:48f).

Groups who did not manufacture their own fish traps claimed that the proper raw materials for traps was lacking in their country. The Taulipang obtained traps made from forest vines from the Akawaio (Butt-Colson 1973:53f) (fig. 5.4.1).

The Akawaio seem to have lacked ethno-specific products that they were identified with by the neighboring tribes. Instead, like the Pemon, they were recognized as middlemen in the central Guiana trade network, particularly in passing on goods from the eastern Maquiritari groups to more westerly groups (Butt-Colson 1973:54f). The Akawaio also carried on a lively trade with the Dutch in the early historical period. Export items listed by Roth (1924:637) includes "Balsam capivi [*Copaifera officinalis*], a balsam called Arrecocerra [*Protium aracouchili*], hai-ari roots, oil of Caraba [*Carapa guianensis*] … different kinds of curious woods, letter wood [*Brosimum*], ducolla-bolla … , ebony, likewise vanilla, annatto [*Bixa orellana*], *Cassia fistularis*, *Canella alba*, wild nutmeg, wild cinnamon, monkeys, parrots, parroquets, etc." The Dutch reciprocated with iron tools and the usual glass beads.

The intense trade of the central Guiana Highlands described above mostly involved relatively short-distance transactions. However, there were also more long-distance trade relations, particularly during the prehistoric and early historic periods. In the northern coastal zone, the trade east of the Orinoco Delta was dominated from west to east by the Warao, the Lokono, and various Carib-speaking groups, respectively (fig. 5.4.2). The Kaliña[176] of French Guiana is

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[175] This ceremony is also known from the Pemon, who refer to it as *Parichara* (Heinen and García-Castro 2000:571).

[176] The Carib-speaking Kaliña (Cariña) lived along the coast in northwestern French Guiana and northeastern Suriname, close to the mouth of the Maroni River. They also inhabited a large area of

known to have travelled 200 leagues[177] or more for trading purposes (Boomert 2000:423). The Kaliña of the lower Maroni River imported red, jaspis-like polishing stones for pottery (*takua*[178]) from the groups of the upper Maroni, Corentyne, and Essequibo Rivers (fig. 5.4.3). In return, the Kaliña exported pottery and storage baskets (ibid., 424f).

West of the Orinoco Delta, Carib-speaking groups dominated the trade routes between the coast and the inland. Among the products derived from the coastal region was salt produced from sea water on the Araya Peninsula. The salt was traded along the coast in both directions, reaching Trinidad and the Lokono east of the delta (fig. 5.4.2). The Lokono brought the salt to inland groups via the Orinoco and Essequibo Rivers,[179] and west of the delta Carib-speaking groups brought the salt in the form of bricks to inland groups. The Lokono were known as long-distance traders along the coast and along the major rivers flowing down from the Guiana Highlands. The Lokono of the Pomeroon River still maintain myths about the time when they had to cross the sea in order to obtain stone axes, most likely from Trinidad (Boomert 2000:425f). From the islands off the coast, Margarita and Cubagua, came pearls that were traded to Trinidad and into the Orinoco Delta. During the 1500s, Arawak-speakers of the lower Orinoco, Coastal Guiana, and Trinidad traded intensively with the Spanish of the pearl islands, exchanging cassava for iron tools (ibid., 426) (fig. 5.4.2). Along this marine route were also conveyed shell trumpets that ended up in the Orinoco Delta, from where they were further transported to the inland groups (ibid., 425). Much of the trade in the Orinoco Delta area was in products deriving from specialized production or from particular ecological niches. Thus, coastal products such as salt, pearls, and various items made out of shells were exported to the inland in exchange for prestige goods of the tropical forest such as jaguar pelts and claws, and feather ornaments, which were brought to Trinidad and to the Island Carib of the Lesser Antilles (ibid., 425f). The Island Carib were also in contact with the Carib-speaking groups of the mainland inhabiting the rivers emptying in the Gulf of Paria, northwest of the

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land along both sides of the middle Corentyne River. In the literature (e.g., Boomert 2000) "Kaliña" is sometimes used to refer to a broader category of ethno-linguistic groups of coastal Guiana, including the Galibí (Carib-speakers of French Guiana) (fig. 5.4.3).

[177] Depending on the type of league used by the French (which is not specified in this calculation), the distance travelled by the Kaliña would have been between 650 and 936 km.

[178] The *takua* would have been the same product known as *kwima* among the Patamona.

[179] Apart from distributing salt to the inland groups of the Guiana Highlands, the Lokono were well known for their hammocks, which can be regarded as their ethno-specific product. The word "hammock" is derived from the Arawak word "*hamaca*", coming from the language spoken by the Taino (Hoffer 2005).

Orinoco Delta, and with the Kaliña of the lower Maroni River (Boomert 2000:425) (figs. 5.4.2, 5.4.3).

The Arawaks in the region seem to have been particularly willing to launch extensive trading expeditions such as the one documented by Martín López (1964, qtd. in Boomert 2000:426) in the 1500s when he accompanied an Arawak-speaking group on an eleven-month trading expedition between Margarita, Trinidad, and the Orinoco Valley. The Arawaks went as far up the Orinoco as the Caura and Patos Rivers before returning to the Essequibo (fig. 5.4.2). From the Essequibo, the Lokono travelled south via the Rupununi, through the Pirara Portage, into the Río Branco and down to the Amazon River (Boomert 2000:426) (fig. 5.4.2). This route was also used by the Arawak-speaking Manao during the 1600s when they traded gold, manioc graters, vermillion, hammocks, shields, and war clubs along the Vaupés, Negro and Branco Rivers, and the same route was part of the *Kúwai* system encompassing most of the northwest Amazon and adjacent regions (Myers 1981:22; Wright 1999:364; Vidal 2000:646; Hill 2007) (see chapter 6).

Much of the produce deriving from the coastal zone and from the Antilles ended up at the site of Aruacay[180] at the southwestern border of the Orinoco Delta. At the time of contact, Aruacay was a multi-ethnic trading center where Carib, Arawak, and Warao met and traded with each other (Boomert 2000:425). Further upriver along the Orinoco, in the area of the confluence of the Apure and Orinoco Rivers, was a similar multi-ethnic meeting point for groups and goods converging from all directions (ibid.) (fig. 5.4.2).[181] In this area, goods arriving from the Andes via the rivers of the llanos were bartered for forest products from the Guiana Highlands, and goods originating in the coastal zone and the Antilles were exchanged for products deriving from the middle Amazon region and brought north via the Negro, Casiquiare, and upper Orinoco Rivers by groups such as the Guinaú and other Arawak traders of this region.

[180] Aruacay appears to have been preceded by the Los Barrancos site as the connection point of the area in prehistoric times (fig. 5.4.2).

[181] A corresponding prehistoric site in this area may have been Agüerito, suggesting a prehistoric connection point where goods from the llanos could be exchanged for products circulated in the wider lower Orinoco region and in the Guiana Highlands (fig. 5.4.2).

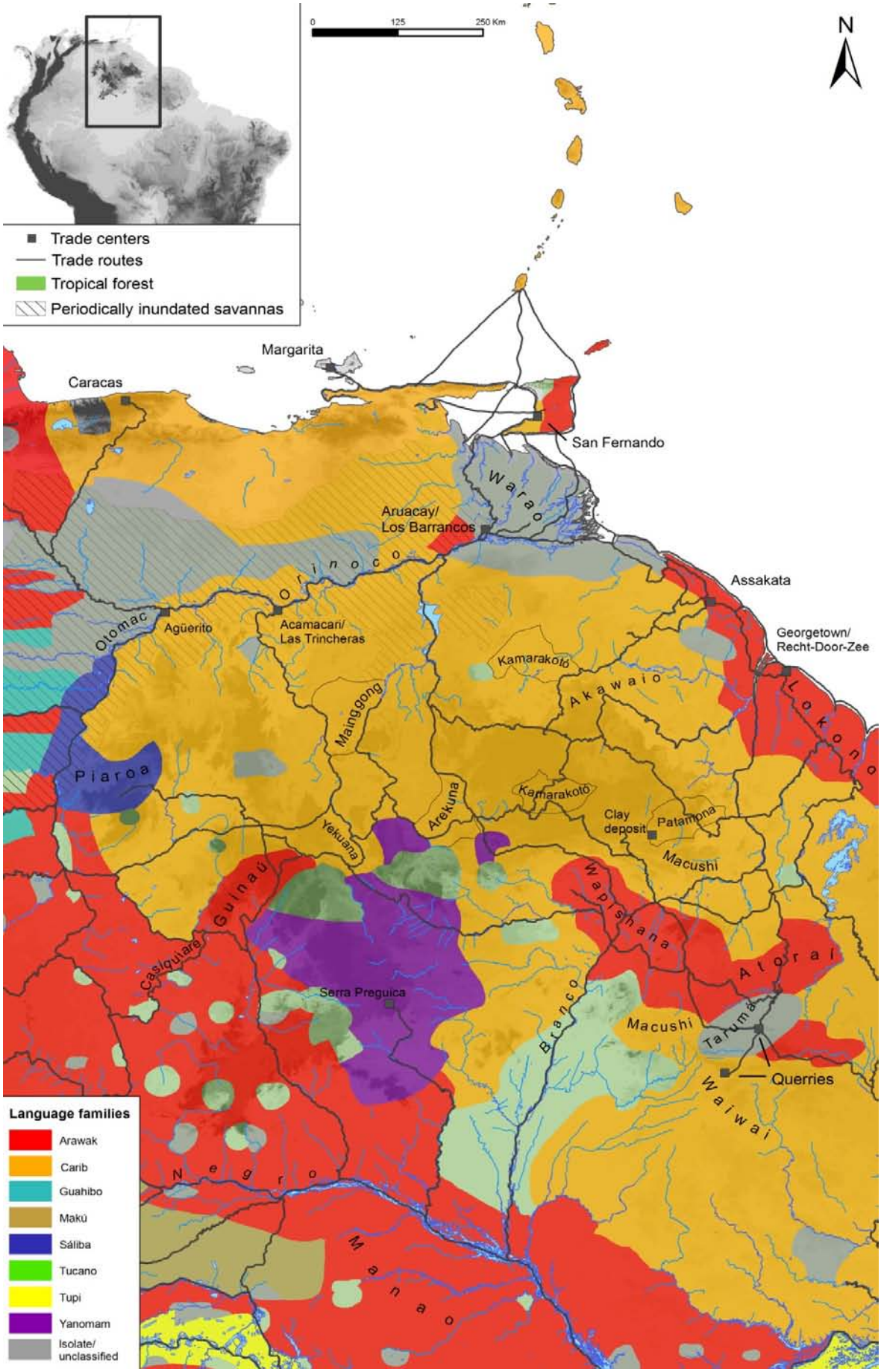
0
125
250 Km
N
Trade centers
Trade routes
Tropical forest
Periodically inundated savannas
Margarita
Caracas
San Fernando
Warao
Aruacay/
Los Barrancos
Orinoco
Assakata
Georgetown/
Recht-Door-Zee
Otomac
Agüerito
Acamacari/
Las Trincheras
Kamarakoto
Akawaio
Lokono
Mainggong
Piaroa
Arekuna
Kamarakoto
Clay
deposit
Patamona
Yekuana
Macushi
Guinaú
Wapishana
Casiquiare
Atorai
Serra Preguica
Branco
Macushi
Taruma
Querries
Waiwai
Negro
Manao
Language families
Arawak
Carib
Guahibo
Makú
Sáliba
Tucano
Tupi
Yanomam
Isolate/
unclassified

Figure 5.4.2. Ethno-linguistic interaction in the western Orinoco-Guiana area during the late prehistoric and early colonial periods.

The Spanish presence in the pearl islands during the 1500s not only opened up new markets for the indigenous traders in the Caribbean, but also gradually changed the type of products exchanged in the trade network. The traditional exchange of ocean-derived products for items originating in the tropical forest was replaced by a new system in which the Spanish gave the indigenous groups iron tools in exchange for an increasing number of slaves taken by the Arawaks from inland groups. A relationship in which the Arawaks provided the Spanish with food and human labor was gradually established, strengthening both Spanish and Arawak power at the expense of other indigenous groups of the region. Together with the Yao and Nepoio,[182] the Lokono established a monopoly on trade with the Spanish of Margarita and Cubagua that stretched from the pearl islands via Trinidad down to Aruacay at the apex of the Orinoco Delta (Boomert 2000:426). From Aruacay, the Nepoio chief Toparimaca is known to have launched trading expeditions to another trade center, Acamacari, located some 400 km up the Orinoco, which is the approximate distance to the mouth of the Caura River.[183] At Acamacari, women, cotton cloth, hammocks, and gold were bartered and brought back to Aruacay (ibid., 427). Further up the Orinoco, along the middle portion of the river, were the so-called turtle beaches where markets were held and a variety of indigenous products traded during the 1700s (Morey and Morey 1975, qtd. in Boomert 2000:427).

A type of prestige objects traded widely in northern South America and in the Caribbean were the *guanín* ornaments, thinly hammered ornaments of gold-copper alloy highly valued throughout the region. *Guanín* ornaments have been reported among the following groups: Taino (Arawak) of the Greater Antilles; Island Carib (Arawak) of the Lesser Antilles; Carinepagoto,[184] Yao, and Nepoio (Arawak) of Trinidad; Kaliña (Carib) and Lokono (Arawak)

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[182] Yao (Yaio, Anacaioury, Caripou-Yao) and Nepoio formed part of the multi-ethnic and multi-lingual interaction sphere of the lower Orinoco during the contact period. Early word lists collected among these groups by the Europeans contain words of both Arawak and Carib derivation (Boomert 2000:428). However, Yao is classified as a Carib language (Gillin 1948:812f; Landar 1977:522; Campbell 1997:203), while Nepoio (Nepoyo, Nepuya) is considered Arawak (Rouse 1948b:546; Landar 1977:490).

[183] At the junction between the Caura and Orinoco Rivers is the archaeological site of Las Trincheras (Cruxent and Rouse 1959:175). It is not clear if this is the same site as Acamacari, but it must have been located in the same area. At this site Barrancoid trade pottery has been discovered, indicating the ancient age of this center (Cruxent and Rouse 1958:207; Boomert 2000:123).

[184] The Carinepagoto inhabited the northwestern part of Trinidad, and their language remains unclassified. Rouse (1948b:546, footnote 26) mentions that they may be an exception from the otherwise Arawak-speaking chiefdoms of this part of Trinidad.

of the Guiana Littoral; Warao of the Orinoco Delta; Cumanagoto (Carib) of the Cariaco Gulf; Guaiana[185] (Carib) south of the Orinoco Delta; Tamanaco[186] (Carib) of the central Venezuelan coastline and the Guaniamo River, a right tributary of the middle Orinoco; and Achagua (Arawak) of the llanos (Boomert 2000:428) (fig. 6.4.2). The *guanín* ornaments were traded from the mainland out into the Antilles. The Taino of the Greater Antilles did not master the technique of manufacturing *guanín* objects, but obtained them from the Island Carib of the Lesser Antilles, who bartered them from the Arawak-speaking groups of Trinidad. These objects arrived in Trinidad from the Paria Peninsula where Carib groups controlled the trade, and from the multi-ethnic lower Orinoco interaction sphere via trading centers such as the above-mentioned Aruacay (ibid., 429). The objects had been brought to the Orinoco across the llanos via major rivers such as Apure and Meta from the Central Andes, where they are known to have been manufactured.[187]

Another type of prestige objects manufactured and traded throughout the Orinoco-Guiana region and adjacent areas of northern South America during late prehistory and in early colonial times are the greenstone[188] ornaments, or *muiraquitas*, as they are known in the Brazilian Amazon. Boomert's (1987) major study of the regional exchange system concentrated on these objects assembles large amounts of information on the manufacture and distribution of such semi-precious stone pendants. Greenstone pendants have been recovered from various archaeological sites and among many indigenous groups of the historical period of the Orinoco-Guiana region.[189] They are known to have existed among the Island Carib, the groups of the lower Orinoco including the Guaiana, the groups of the Corentyne River, the Kaliña of French Guiana, the Arawak-speaking Palikúr and the Carib-speaking Aricari and

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[185] The Guaiana (Guayano, Guayana) of Venezuela are not to be confused with the Guayaná (Wayaná), a Macro-Ge-speaking group of southern Brazil, or with the Guayaná, a Tupi-speaking group of eastern Paraguay (Landar 1977:468; Nimuendajú 1987; Campbell 1997:196).

[186] The Tamanaco spoke the Cariban language Mapoyo (Campbell 1997:203; Lewis 2009).

[187] It is also possible that part of the production of *guanín* ornaments was located in the Guiana Highlands (Whitehead 1990). However, no manufacturing centers from the late prehistoric or early historic periods have been identified in this area (Boomert 2000:429f).

[188] Various names have been applied to this category of prestige items. The Kaliña called them *tacorao*, the Island Carib *tacaoüa* or *tacoúlaoüa*, the Lokono used the word *macuaba*, and in the Brazilian Amazon they are known as *muiraquitas*, based on the Tupian word *uarua-kita,* "moon stone" (Boomert 2000:431, footnote 21). Given the variety of names and the variety of semi-precious minerals used in the manufacture of these items, it should be pointed out that the name applied in this study, "greenstone amulets," includes all variants of this category of prestige items, irrespective of shape or raw material.

[189] For information on the occurrence of greenstone amulets in other parts of Amazonia, see chapter 2-4, 6.

Pirao[190] of Brazilian Amapá, the Arawak-speaking Aruã at the mouth of the Amazon, and various Tupian groups of the lower Amazon, particularly in the area around Santarém, where one of the major manufacturing centers, controlled by the Tapajó,[191] was located (Boomert 2000:431f).

In the Caribbean, the trade in greenstone seems to have followed the same pattern as the trade in *guanín* objects, the Island Carib receiving their amulets from the mainland (Breton 1978:75, qtd. in Boomert 2000:432). The Taino are also said to have possessed green-colored beads resembling South American ones (Boomert 2000:432). On the mainland, the Kaliña of the northern Guiana coast served as middlemen in the greenstone trade along the coast, obtaining their gems from the Amazon River, passing them on to neighboring groups of the coastal Guianas and to the Island Carib of the Lesser Antilles (Boomert 1987:41, 2000:433) (fig. 5.4.2). The Kaliña of Cayenne, also known as the Taira,[192] traveled to the Amazon River to obtain greenstones, either via trade with the groups inhabiting the mouth of the Amazon such as the Arawak-speaking Aruã, or possibly via extended expeditions to the manufacturing centers of the Tapajó on the lower Amazon. Conclusive evidence that the Kaliña went as far as the lower Amazon is still lacking (Boomert 2000:433). What we do know is that the Norak, close neighbors of the Taira, traded along the nearby Approuague River, reaching the lower Amazon via the Yari and Paru Rivers (ibid., 426) (fig. 5.4.3). The Norak could easily have acted as middlemen in the inland greenstone trade network. It is also likely that the inland traders between the Cayenne region and the lower Amazon utilized the Oyapock River for transportation, not least because the inland route would have allowed the Caribs to travel south without encountering the Arawak-speaking Palikúr, known to be one of the most hostile groups of this part of the coast. One group of Norak occupied parts of the right bank of the river and the Tocoyenne occupied a relatively large area between the middle stretches of the Oyapock and Approuague Rivers (fig. 5.4.3).

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[190] As mentioned in section 5.2, Aricari and Pirao may previously have spoken Warao before shifting to a Carib language (Keymis 1904:490f, qtd. in Boomert 2000:90, footnote 37).

[191] For further information on the Tapajó trade network on the lower Amazon, see section 4.4.

[192] Boomert (2000:433) claims that the Taira (Tayra, Teyrou) are the same groups as the Tocoyenne (Tonoyenne), but this appears to be incorrect. The Tocoyenne, divided into two separate groups, one inhabiting the Cayenne area and the other the northern shore of the lower Amazon in the 1700s, are classified as Arawaks, speaking the Marawán-Karipúra language, whereas the Taira spoke Carib (Gillin 1948:811; Landar 1977:508, 512; Campbell 1997:181) (fig. 5.4.3).

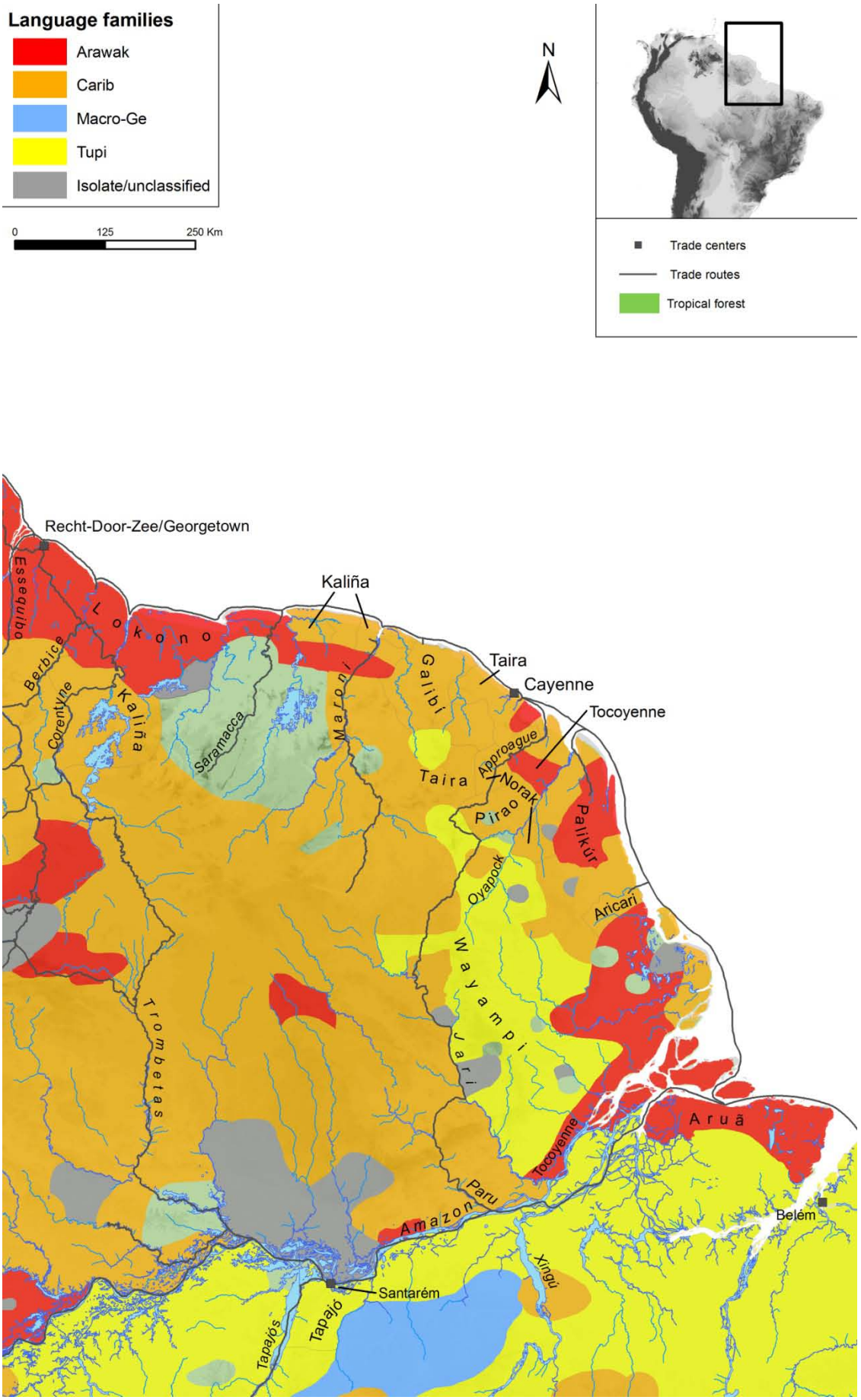
Language families
Arawak
Carib
Macro-Ge
Tupi
Isolate/unclassified
0
125
250 Km
N
Trade centers
Trade routes
Tropical forest
Recht-Door-Zee/Georgetown
Kaliña
Taira
Cayenne
Tocoyenne
Essequibo
Lokono
Berbice
Corentyne
Kaliña
Saramacca
Maroni
Galibi
Approague
Taira
Norak
Pirao
Palikur
Oyapock
Aricari
Wayampi
Jari
Trombetas
Aruã
Tocoyenne
Paru
Amazon
Belém
Xingu
Santarém
Tapajós
Tapajó

Figure 5.4.3. Ethno-linguistic groups, trade routes, and trade centers of the late prehistoric and early colonial periods in the eastern Guianas.

The Kaliña of Cayenne traded greenstones with the Aricari of the middle Amapá coastline, bypassing the hostile Arawak-speaking Palikúr along this route. They also received greenstones from the Aruã of the mouth of the Amazon, who obtained some of them from the lower Amazon, but also manufactured some greenstone amulets themselves (Boomert 2000:433) (fig. 5.4.3). The Tocoyenne of Cayenne are also said to have manufactured greenstone artefacts, indicating that the Tupian groups of the lower Amazon were not the sole manufacturers of the amulets on the mainland, but that at least two Arawak groups were also engaged in this production (ibid.).

A third type of valuable or preciosity widely traded in the early historical period in the llanos of Venezuela and Colombia, along the Caribbean coast and the Orinoco, and to a lesser degree in the Guiana Highlands, were strings of *quirípa*. This valuable consisted of long strings of shell beads manufactured from terrestrial as well as marine shells. They were considered one of the most important local valuables in the early days of colonization and were used as a substitute for money in the Spanish colony of Venezuela, where gold and silver for coins was constantly lacking (Boomert 2000:433f). Other items with similar functions included salt and pearls (Arellano Moreno 1982, qtd. in Gassón 2000:584).

Quirípa beads were traded by the Arawak-speaking Caquetío of the northwestern Venezuelan coastline; their southern neighbors the Arawak-speaking Achagua of the Venezuelan llanos and their linguistic relatives the Caverre (Caberre) of the same area; the Guahibo, of the Guahiban linguistic family, close to the Achagua; the Otomac and Maiba[193] west of the middle Orinoco; the Yaruro[194] close to the Otomac; the Betoi[195] west of the Achagua in the Venezuelan llanos; the Sáliva (Sáliba), of the Salivan family, south of the Otomac along the western bank of the middle to upper Orinoco and along the Guaviare River; the Airico (unclassified) close to the

[193] The Otomac language is incompletely documented and contains words of both Arawak and Carib origin. It is left unclassified at present. Maiba is also known as Otomac (Landar 1977:480, 509; Campbell 1997:177; Alberta Zucchi, pers. com., January 2007).

[194] The Yaruro language is known as Pumé, an unclassified tongue still spoken in the traditional territory of the group (Lewis 2009).

[195] The linguistic affiliation of Betoi is unclear. It has previously been considered a small family consisting of several closely related dialects (Adelaar with Muysken 2004:161). Campbell (1997:173) groups it in his Macro-Páesan family.

Betoi; the Barmiagoto[196]; the Tivitive (a Warao tribe) of the Orinoco Delta; the Lokono of the Guiana coastline; and the Carib (Boomert 2000:433; Gassón 2000:584).

The *quirípa* beads were manufactured from local raw materials available in the llanos, but marine shell was also brought into the area by the Caquetío of the Caribbean coast and the Dutch Antilles via the Portuguesa River (fig. 6.4.1). When a demand for commodity money that could be used in economic transactions developed in early colonial times, specialized craftsmen manufacturing *quirípas* emerged in the llanos (Morey and Morey 1975; Morey 1976, qtd. in Boomert 2000:434). From the llanos, the *quirípas* were traded along major rivers such as the Meta and Orinoco, reaching Arawak-speaking groups of Trinidad and coastal Guianas (Boomert 2000:434; Gassón 2000:584). The Arawaks of the Berbice River are reported to have been wearing fifteen to eighteen pounds of beads around their necks, and together with the Arawaks of the Essequibo they launched trading expeditions to the Otomac of the middle Orinoco in order to obtain *quirípas*, for which they exchanged iron tools obtained from Europeans along the coast (Boomert 2000:434). The Caribs were also involved in the trade in shell beads from the llanos, bartering these from the Arawak-speaking Achagua of the llanos in exchange for iron tools and weapons obtained from the Dutch (Gassón 2000:594). The Achagua both manufactured *quirípas* and procured them from neighboring groups, and they also obtained Andean goods from the Muisca (Chibcha) that they traded to eastern groups at centers in the llanos such as San Salvador del Puerto de Casanare. The coastal Arawaks also visited San Salvador de Casanare, exchanging iron tools and hammocks for *quirípas* in the 1600s (ibid., 593). Roth (1924:414) mentions that the Arawak-speaking Wapishana and the Carib-speaking Akawaio and Macushi had ornaments made out of marine shells that must have been imported from the coast, most likely via the Lokono. It is also reported that the indigenous groups of the Japurá River[197] manufactured shell beads and traded them to the middle Orinoco for iron tools (Edmundson 1904).

The distribution spheres of the two major indigenous preciosities, greenstone amulets and *quirípas*, seem to converge in the Guianas. Boomert (1987:37) notes how the *quirípas* have a northwestern distribution centered in the llanos and in the middle Orinoco area, while much of the greenstone trade originated in the lower Amazon region. These two spheres of long-distance trade in valuables converged at several places: along the Río Casiquiare, at the Pirara

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[196] The Barmiagoto (Parmiagoto) do not occur in any time-of-contact maps, but may be the same group as the "Barinagoto" (Arinagoto), Pemon-speaking Caribs of the Central Guiana Highlands (Landar 1977:446). Interestingly in this context, the southern neighbors of the Barinagoto (also Pemon-speaking Caribs) were referred to as the "Quirioripa" (Landar 1977:502; Campbell 1997:32).

[197] The southern shore of the Japurá was inhabited by Arawak groups such as the Yumana and Kaiwishana at the time of contact, while the groups north of the river mainly spoke Makú.

Portage, and in coastal Guianas, where items deriving from the respective manufacturing centers met and were exchanged.[198]

The trade between the Arawaks along the northern coast and the Spanish settled at Margarita was initially just an ordinary trade agreement, the Spanish bartering from the Arawaks typical trade goods such as valuables, food, and cotton in the 1550s. Soon, however, an Arawak-Spanish pact of mutual assistance developed. The Spanish requested slaves and helped the Arawaks to raid villages of other tribes for human labor, returning the Arawak favors with iron tools and weapons. The Arawaks in the 1570s had strengthened their position among the indigenous groups, now being the foremost ally of the Spanish, raiding their former indigenous trading partners for human labor to be used by Europeans (Gassón 2000:590). As elsewhere, the European-indigenous alliance was dissolved within a couple of centuries as Spanish demand for slaves expanded beyond the Arawak capacity to deliver them, resulting in the capture of Arawaks themselves for human labor, and a hasty deterioration of the Spanish-Arawak relationship (Boomert 1984:155).

The Arawak-Spanish alliance contributed to an intensification of trade in the coastal region at the expense of inland trade centers that had previously been more important. Gassón (2000:590) notes that the Orinoco probably decreased in importance as a trade route in post-contact times, indicating the crucial role that this route must have had in pre-Columbian times.

The relationship between the Caribs and the Europeans seems to have been very different. When the Arawaks of the Guiana allied with the Spanish, the Caribs intensified their contacts with the Dutch, following a recurrent pattern of European-indigenous alliances documented in various parts of Amazonia, e.g., along the Amazon River and the Atlantic coastline, where the Spanish and Portuguese enlisted various indigenous groups in their colonial conflicts. Luckily for the Caribs, the Dutch did not possess the same territorial ambitions as the Spanish, but were instead content with a mutually beneficial trading partnership with the Caribs. The alliance with the Dutch enabled the Caribs to strengthen and expand their trade network, so that two major exchange alliances, the Spanish-Arawak and the Dutch-Carib, dominated the Orinoco-Guiana region during a couple of centuries after contact (Gassón 2000:591f). However, in 1770 Spain ordered the elimination of the western Dutch colonies which had allowed the Caribs of Guiana to trade as far as the llanos. For the Caribs, the Spanish decision meant a reduction of their long-distance trade routes to a geographically more restricted

[198] Major exchange centers positioned at such strategic points included San Salvador del Puerto de Casanare in the llanos, Aruacay at the apex of the Orinoco Delta, and Recht-Door-Zee at the mouth of the Essequibo, all controlled by Arawak-speakers at the time of contact, but often involving multi-ethnic alliances with neighboring groups.

network like the one described by Butt-Colson (1973) for the Guiana Highlands (Gassón 2000:595).

After the demise of Carib long-distance trade, which had reached from the highlands into the middle Orinoco area and the llanos, the production and trade of shell beads in this region was taken over by the Otomac, who controlled the trade center of Uruana. This trade center was still being visited in the 1800s by Arawaks travelling from the llanos, bringing back *quirípas* to neighboring groups. The Otomac had a complex social organization similar to the powerful Arawak chiefdoms that had developed in the Orinoco-Guiana region before the time of contact, e.g. among the Achagua, including such features as chiefs, collective organization, and elaborate public ceremonies (Gassón 2000:595, 599) (see chapter 6).

The trade network of the Orinoco-Guiana region is best understood as composed of several local interaction spheres interconnected by a constant flow of goods between groups residing close to each other, and at a wider scale of long-distance expeditions regularly conducted by some groups specialized in more extensive transactions, connecting more distant interaction spheres with each other.

In this chapter, several prehistoric and historic interaction spheres have been described and a number of ethno-linguistic groups facilitating contacts between these spheres have been identified. These interaction spheres include the "Lesser Antilles interaction sphere" (Hofman et al. 2007), interconnected with Trinidad and the mainland, first during Saladoid times when the Arawak regional exchange system expanded into the Caribbean, and later through groups such as the Island Caribs; the "lower Orinoco interaction sphere" described by Boomert (2000), maintained through multi-ethnic and multi-lingual conglomerates of Arawak-, Carib- and Warao-speaking groups in and around the Orinoco Delta throughout the pre-Columbian and historical periods, and including Trinidad and Tobago; the "multi-ethnic network of the lower Orinoco" described by Heinen and García-Castro (2000) for the early colonial period, comprising the mainland component of the interaction sphere described by Boomert (2000); "the System of Orinoco Regional Interdependence," which included the mainland part of the lower Orinoco interaction sphere, but also the middle and upper portions of the Orinoco and the tributaries draining into it from the east and west (Arvelo-Jiménez and Biord 1994), an interaction sphere labeled "Orinoquia" by Gassón (2002); the "Guiana Highlands" (Butt-Colson 1973), an interaction sphere centered among the Carib-speaking groups of the western section of the Guiana Shield[199]; the east-west trade along the Guiana Littoral where the

[199] Together with the "System of Orinoco Regional Interdependence," in which it is partially included, the Guiana Highland interaction sphere bordered on the Arawak interaction sphere of the northwest Amazon described in chapter 6. East of this interaction network was the interaction sphere of the middle and lower Amazon described in chapter 4, which constituted the southern border of the Guiana region.

Lokono mediated exchange with their Warao- and Carib-speaking neighbors and later also with the Spanish (Boomert 2000:426); and finally the trade network of Brazilian Amapá, where Arawaks and Caribs traded along the Atlantic Coast, connecting the interaction spheres of the Guiana Littoral and the lower Amazon (ibid., 433).

These interaction spheres were integrated by groups travelling between them on long-distance trading expeditions, and by the existence of trade centers that served as nodes in the larger regional exchange system of northern Amazonia. Such trade centers of the early historic period included San Fernando on Trinidad, the Pearl Islands, and Aruacay, all included in the lower Orinoco interaction sphere; Acamacari at the mouth of the Caura River; and colonial establishments that later grew to be national capitals such as Caracas, Georgetown,[200] and Cayenne (fig. 5.4.2, 5.4.3).

[200] Before the Dutch established themselves in Georgetown, the exchange center at this site was known as Recht-Door-Zee (Plew 2005a:24; Williams 2003:338). Here Arawak traders exchanged goods moving along the coast for products deriving from the Guiana Highlands and transported to Recht-Door-Zee via the Essequibo and Demerera Rivers (Williams 2003:262) (fig. 5.4.2). Further west along the coast, a major prehistoric exchange center was Assakata (ibid., 291), located in the northwestern Guyana Littoral. Strategically positioned between the Barima, Barama, Waini, and Moruka Rivers, Assakata continued to serve as an exchange center throughout the historic period.

6. The northwest Amazon

6.1 Physical geography

The western border of the northwest Amazon is the Andean mountain chain, rising to over 5000 masl. in the Eastern Cordillera. The area is here demarcated vis-à-vis western Amazonia by the full length of the Putumayo River, all the way from the Andes to the Amazon River, which itself forms the remaining part of the southern border down to the mouth of the Negro. The eastern border generally coincides with the Río Negro and the Orinoco River, and in between with the edge of the Guiana Shield. Finally, in the north the area is bounded by the northern cordillera in Venezuela, the natural limit of the northern llanos.

Two main ecosystems dominate this region. In the north, the llanos,[201] about 500 000 km^2 of seasonally flooded savanna covers the area between the northern cordillera and the Vichada and Guaviare Rivers, and in the south tropical rainforest dominates the remaining part of the area treated in this chapter. The soils of the llanos are composed of Quaternary sediments characterized by imperfect drainage, and generally low levels of available nutrients. Along the rivers draining from the Andes, however, more nutrient-rich patches of soil may be found, and where instances of such soils occur, poor drainage is the main problem for people aspiring to conduct farming in these landscapes. Such areas of nutrient-rich soils lacking proper drainage were farmed by the pre-Columbian populations who created agricultural earthworks in the form of mounds, raised fields, causeways, and canals in order to manage water levels.

In classifying the savanna into four types of vegetation, one must first point out the difference between the high llanos, located close to the Andes in the northwestern part of the region, from the wet llanos, where flooding occurs at a much higher level. Furthermore, there are patches of forest distributed across the whole savanna area, and finally there are swamp areas that never dry out even in the dry season (Gassón 2002:241). This natural variation in ecosystems of the llanos has been crucial for the adaptation of indigenous groups to the savanna landscape, and for their adaptation *of* the landscape to suit their respective subsistence strategies. Many groups of the llanos took advantage of advanced agricultural earthworks in order to increase food production, while other groups, such as the foraging Guahibo-speaking

[201] In the high llanos, located close to the Andes, flooding is less prevalent, and the landscape is generally dryer all year round (fig. 6.1.1).

groups, utilized a broad-spectrum subsistence strategy dominated by hunting and gathering in the various ecological niches available in their territory.

The area of tropical rainforest that covers the southern part of the region generally resembles the tropical rainforest in other parts of Amazonia in being characterized by low seasonal variation in temperature and rainfall, with the greatest seasonal marker being the high water levels caused by melting snow in the Andes, increasing flows into the Caquetá,[202] Putumayo, and Vaupés Rivers.

The river systems of the northwest Amazon can be distinguished by the same criterion as in the rest of Amazonia, i.e., the difference between white-water and black-water rivers. In the northwest Amazon, the only major river basin not draining from the Andes is that of the Río Negro, which originates in the Guiana Shield. This drainage area also includes the Trombetas River, which empties into the lower Negro. The Negro is thus an exception in being a black-water river in the northwest Amazon, but since its basin covers a vast area its importance is still very significant. As previously mentioned, the Negro is known as the river of hunger (Hill 1989:16), experiencing seasonal food shortages that have made human adaptation in this part of Amazonia particularly challenging. These challenges have been met by a diverse range of methods, from the construction of high-intensity systems of fish traps (Morey 1976:44; Hill 2007:16) and the establishment of *terra preta* soils for more efficient farming (Klinge et al. 1977, qtd. in Eden et al. 1984:137) to the import of food via an elaborate system of trade routes.

As in the rest of Amazonia, the river systems of the northwest Amazon have been crucial to the indigenous groups as both means of transportation and subsistence, as is reflected by their function as inspiration for mythical events and journeys. The two most important basins are those of the Orinoco and Negro, where riverine exchange systems have been in place since the archaic period. Important rivers draining from the Andes include the Apure, Meta, Guaviare, Vaupés, Caquetá, and Putumayo Rivers (fig. 6.1.1). Between these major rivers, many smaller rivers and tributaries, such as the Ariarí and Casiquiare, also were important as means of transportation for the indigenous population.

[202] In Brazil, the Caquetá River is known as Japurá. To avoid confusion, Caquetá, the name that applies to the longest stretch of the river, is used in this study to designate the whole river, including the part that flows through Brazilian territory.

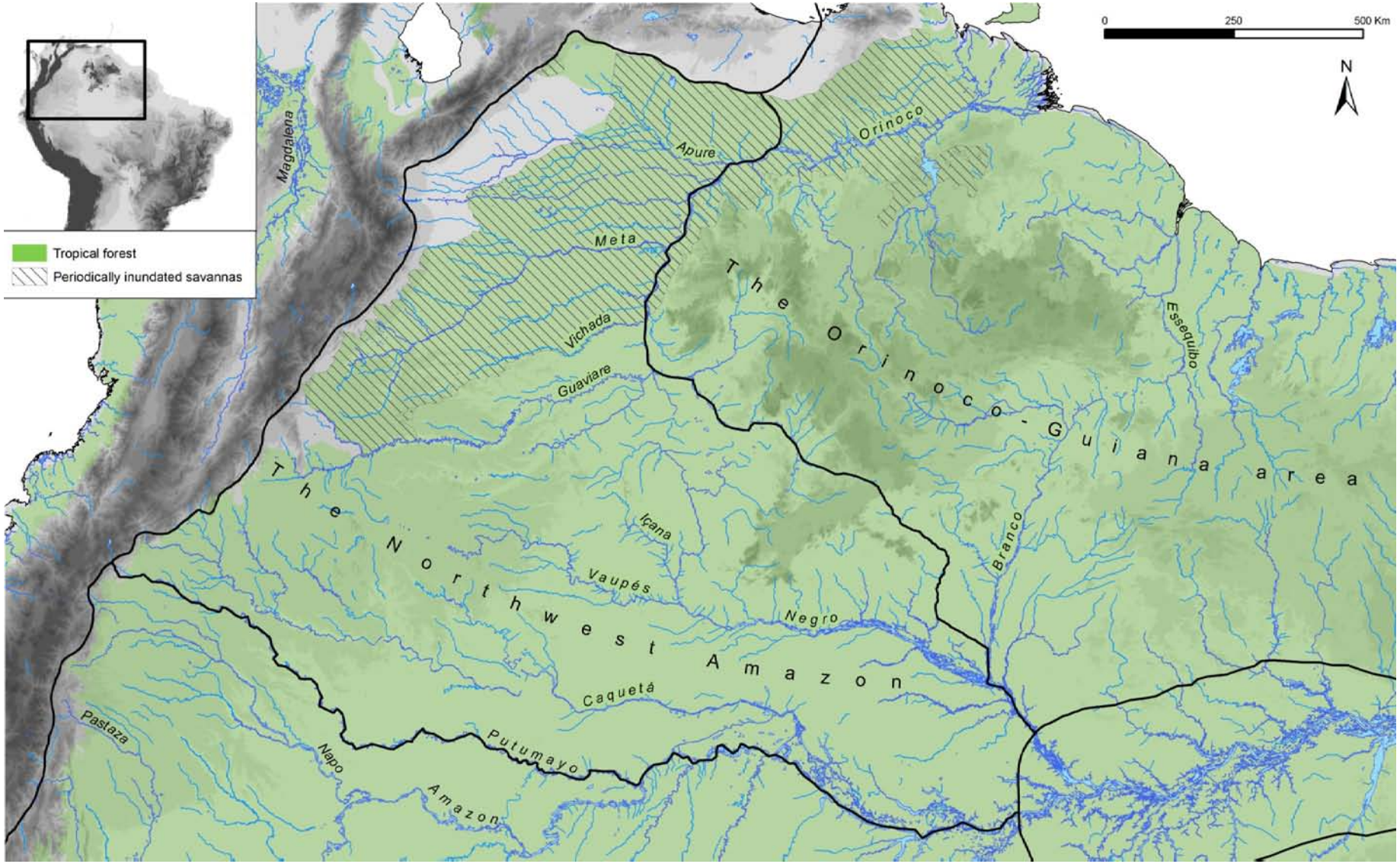

Figure 6.1.1. The physical geography of the northwest Amazon.

6.2 Archaeology

Human occupation of the northwest Amazon dates back to at least 9250 BP, as indicated from the radiocarbon dates collected at the Peña Roja site located on the north bank of the middle Caquetá River (fig. 6.2.1). At Peña Roja, seeds of the Moriche Palm (*Mauritia flexuosa*) were recovered during excavation, suggesting an archaic subsistence strategy based on products such as palm starch and larvae derived from this species (Oliver 2008:198f).[203] Contemporary with the primary occupation at Peña Roja is the Atures 1 phase discovered at the Atures site on the right bank of the upper Orinoco (Barse 1990, 1995). Barse's association of the Atures 1 phase with preceramic complexes of the Bogotá plateau suggests that the archaic complexes of the northwest Amazon, geographically located in an intermediate position between these two complexes, may be connected with both Andean and Orinoco groups. Indeed, the Maporita site, characterized by an archaic subsistence strategy, is located along one possible route connecting the Andes and the Orinoco via the Meta River (fig. 6.2.1). A single radiocarbon date from Maporita dates the preceramic occupation to 3620±50 (Gassón 2002:244), but human occupation was likely initiated well before that date. North of Maporita, archaic occupation is indicated at the Capacho site located in the highlands close to the Colombian border in Venezuela, where the archaic component underlies a later occupation associated with Dabajuroid pottery[204] (Cruxent and Rouse 1958:134; Rouse and Cruxent 1963:40; Wagner 1999:92; Gassón 2002:254).

Further south along the eastern side of the Andes, the archaic Guayabero complex is located in a similar position as Maporita, connected to both the Andean slopes and the lowlands, primarily via the Guaviare River (fig. 6.2.1). The preceramic occupation at the Guayabero rock shelter has been dated to 7250 BP, and later occupations have left traces in the form of *terra preta* in the immediate vicinity (Herrera et al. 1992:98; Gassón 2002:244). The date around 7250 BP for Guayabero correlates closely in time with the transformation between the Atures 1 and 2 phases around 7000 BP in the upper Orinoco area (Barse 1995), the initiation of the early Alaka phase at 7200 along the Guiana Littoral (Boomert 2000:57), and the Taperinha and Paituna complexes of the middle Amazon, dated around 7000 BP (Roosevelt et al. 1996). Considering the early archaic exchange between the shell mound societies of the lower Amazon and the Guiana Littoral, it is not unlikely that the archaic complexes at Guayabero and Peña Roja were also in contact with groups along the lower Amazon, although clear evidence such as the diffusion of ceramic styles is still lacking in the northwest Amazon.

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[203] A similar subsistence strategy has been documented in the Orinoco Delta, where the Warao depended on the Moriche Palm for subsistence before the introduction of manioc farming.

[204] The Dabajuroid tradition is a late prehistoric complex with its main distribution around the Falcón Peninsula on the Caribbean coast (Cruxent and Rouse 1958; Oliver 1989).

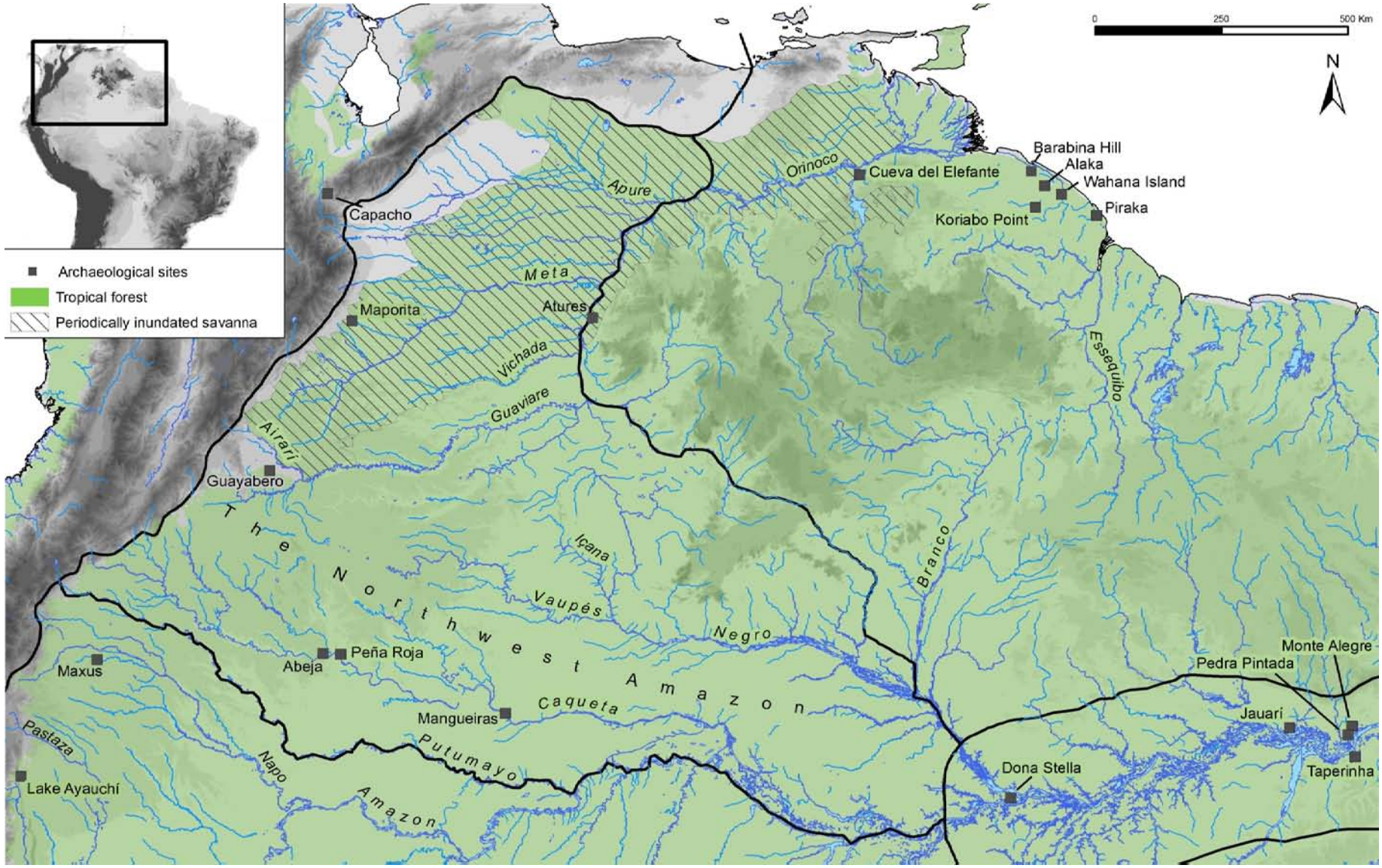

Figure 6.2.1. Archaeological sites of the pre-agricultural period.

Oliver (2008:208) interprets the early palm remains at Peña Roja as an experimental form of house garden, which, together with evidence from other parts of Amazonia, indicates that early horticulture was underway in Amazonia between 8000 – 5000 BP. Oliver labels these early horticultural remains as the product of "itinerant gardeners," indicating a combination of nomadic hunting-gathering combined with a seasonal dependence on cultivated crops. More firm evidence for early agricultural activities in the northwest Amazon comes from the Abeja site, where forest clearing and maize pollen have been dated to about 4700 BP[205] (Oliver 2008:204). The Abeja occupation around 4700 BP, labeled the Tubaboniba phase, falls within the time span of the late Alaka phase (ca. 5250 – 3300 BP) of the Guiana Littoral, i.e., the remains of a group that later developed into the first agricultural societies of the Guianas. A similar cultural development has been documented from the middle Amazon region, providing a clearer picture of a pattern of small-scale horticultural groups that was widespread in Amazonia already at 5000 BP (3700 BC).

The millennium between 5000 and 4000 BP saw the emergence of societies relying to a greater extent on agriculture in the northwest Amazon, following a similar trend throughout Amazonia (Oliver 2008:208). The forest clearing and maize farming at the Abeja site dating approximately to 4700 BP, and at Lake Ayauchi in the southern Ecuadorian Amazon to 4570 BP (Bush and Colinvaux 1988), indicate that the idea of food production started to become widespread in Amazonia at this time (fig. 6.2.1). Indeed, similar traces of agricultural activities have been documented from Lake Geral, in the Taperinha area on the middle Amazon, already at 5760 BP (Bush et al. 2000).

By 4000 BP (2400 BC), more firm evidence of formative societies manufacturing ceramics of the Zoned-Hachured tradition appears along the upper Amazon in the form of the Tutishcainyo phase (Meggers and Evans 1961; Lathrap 1962). The Zoned-Hachured tradition is also represented by the Jauarí phase[206] (4000 – 3800 BP) along the middle Amazon (Simões 1972:50; Simões and Araujo-Costa 1978:111) and the Ananatuba phase (3600 – 3100 BP) of Marajó Island (Meggers and Evans 1957:174-194; Neves 2008:364). There are also indications of small-scale horticulture in northwest Guyana dating to 4000 BP (Gassón 2002:286), and along the upper Orinoco the date 4000 BP marks the end of the archaic period with the closing of the Atures 2 phase (Gassón 2002:266). Although 4000 BP may not have seen fully developed formative societies along the Orinoco (see the debate on this matter

[205] More precisely, this C^{14} sample was dated to 4645±40 BP [Grn-14987] (Herrera et al. 1992:104).

[206] At 4000 BP the Jauarí phase replaced the preceramic shell mound societies of the Mina phase that previously occupied many of the sites along the lower course and around the mouth of the main river (Simões and Araujo-Costa 1978; Roosevelt 1995).

accounted for in chapter 5), there are certainly a number of interesting correlations indicating a wave of change sweeping across Amazonia at this point in time.

In the Araracuara area, there is an unfortunate gap in the archaeological record between approximately 4700 BP and 2700 BP, leaving what may be the most important period for understanding the transformation to fully agricultural societies without archaeological traces (Oliver 2008:205). Neither, unless one accepts the early dating of La Gruta, is there much archaeological evidence from the millennium between 4000 and 3000 BP in the northwest Amazon.[207]

However, around 3000 BP, there are several indications of a population increase in the agricultural societies of the northern part of the northwest Amazon. At 2950 BP the Osoid series were initiated by the Caño del Oso phase, named after the type site located north of the upper Apure River in the high llanos of Venezuela (Cruxent and Rouse 1958:185; Gassón 2002:255) (fig. 6.2.2). The Caño del Oso phase (2950 – 1450 BP) is followed by the La Betania phase (1450 – 750 BP), constituting the second component of the Osoid series (Zucchi 1967, 1973:188; Gassón 1999:76, 2002:255) (fig. 6.2.2). The Osoid population sustained itself on a combination of maize farming, hunting, and fishing. They lived on elevated platforms, marking the beginnings of raised habitation in the llanos of Venezuela and Colombia (Zucchi 1968:135, qtd. in Gassón 2002:255).

By the beginning of the Osoid tradition, another tradition was being born further east in the llanos. At 2950 BP (ca. 1050 BC), the Cedeñoid series was initiated along the middle Orinoco and the lower half of the Apure River (Zucchi et al. 1984). Unlike the groups belonging to the Osoid tradition, Cedeñoid societies had little or no agriculture and their relatively elaborate pottery seems to have reflected a will to distinguish themselves from their western Osoid neighbors and the makers of the Saladoid series of the middle Orinoco, established in the form of the Saladero and La Gruta phases at around 3000 BP. During the La Betania phase, the second complex of the Osoid tradition, agricultural intensification is indicated in the form of earthworks such as mounds, causeways,[208] and raised fields (Spencer et al. 1994; Spencer 1998:112; Spencer and Redmond 1998; Redmond et al. 1999:113; Gassón 2002:255). This has been interpreted by Zucchi as a result of increased interaction with the Saladoid groups of the middle Orinoco (Gassón 2002:255), but interestingly it does not seem to have affected the

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[207] Zucchi presents one C^{14} date of 3750±20 BP from the left bank of the upper Río Negro in Venezuela, but unfortunately no cultural association is provided (Sanford et al. 1985:54, qtd. in Zucchi 2002:222).

[208] Gassón (2002:259) proposes that the primary reason behind the erection of the causeways of the llanos was sociopolitical rather than economic. Although they may also have been used for water management and transportation, their monumental character indeed suggests that sociopolitical significance should be considered.

subsistence strategy or ceramic style of the Cedeñoid groups located in an intermediate position between the Osoid and Saladoid settlements (fig. 6.2.2). The interaction between the Osoid and Saladoid groups also brought the so-called *Pollo* maize variety to the Orinoco Valley, which made a new level of agricultural intensification possible (Gassón 2002:256). Small-scale maize farming has been documented since several millennia along the eastern Andean slopes, from which it appears to have diffused into Amazonia via the east-flowing rivers of the tropical lowlands. At La Betania and nearby Hato La Calzada Páez, increasingly hierarchical societies developed during the first millennium AD, leading to the establishment of two chiefdoms in the area at the beginning of the late Gaván period in AD 650 (Spencer 1998:115; Redmond et al. 1999:114).

Parallel to the cultural development in the llanos was the establishment of ceramic phases along the uppermost section of the Orinoco River, beginning with the Iboa phase (400 BC – AD 200), followed by Carutico (100 BC – AD 500), Nericagua (AD 600 – 800), Pueblo Viejo (AD 600 – 800), and Garza (AD 1450 – 1600), all in the upper Orinoco/Negro area (Zucchi 2002:210). Based on ceramic decoration, Zucchi (1991, 1992, 2002) has suggested that these phases should be grouped together in the Parallel Lines tradition, which also includes the Cedeñoid ceramics of the middle Orinoco area. Furthermore, Zucchi (2002:214, fig. 8.3) associates her Parallel Lines tradition with 13 other ceramic phases from various localities in Amazonia, including e.g. Aristé from Amapá and Paredão from the middle Amazon area. According to Zucchi (2002:221), the ceramics of the Parallel Lines tradition were produced and diffused by Arawak-speakers in the upper Orinoco/Negro area.[209]

A first millennium BC occupation is also evident in the Araracuara region in the form of the Camani phase, discovered at various sites in the area. Camani, dated between 800 BC and AD 1000[210] (Eden et al. 1984:134f; Myers 2004:85), is a local ceramic complex, not associated

[209] Although it is true that the ceramic phases mentioned by Zucchi share aspects of decoration linking them to each other, this cannot be taken to indicate that they belong to one single ceramic tradition. The similarities noted by Zucchi are of such a general nature that they rather suggest meta-similarities between different Amazonian ceramic traditions, a phenomenon that can be explained in terms of different societies of Amazonia having been interconnected over time, constantly exchanging impulses such as ceramic traits with each other. Indeed, as Petersen et al. (2004:29) put it, "it seems likely that we will ultimately be able to demonstrate long-term commonalities in Amerindian cultural development over much of the span of regional prehistory."

[210] The early Camani phase is associated with a single radiocarbon date of 2740±90 BP [Beta-6949] (about 800 BC calibrated) (Myers 2004:81, table 6.2), while remaining dates point to an initiation date for Camani around AD 200. Whether or not the Camani phase began at 800 BC is not completely clear, but it is not until AD 200 that agricultural intensification is indicated (Oliver 2008:198).

with neighboring pottery traditions such as Barrancoid or Amazonian Polychrome.[211] Previous interpretations of such local or "isolated" complexes have often been based on the idea that they are the remains of some kind of "original" inhabitants of a particular area, resisting pressure from expanding groups of intensive agriculturalists (see e.g. Lathrap 1970). This is indeed how Myers (2004:84f) views the Camani phase, but upon closer scrutiny the archaeological evidence shows that the sites belonging to local complexes such as Camani (on the Caquetá) or Paredão (on the middle Amazon) were the first to produce *terra preta* soils (Eden et al. 1984:134, 137; Heckenberger et al. 1999; Petersen et al. 2001:100; Myers 2004:85; Petersen et al. 2004; Neves 2008; Oliver 2008:198; Arroyo-Kalin 2009:54), later sharing the *terra preta* technology with neighboring Barrancoid groups for several centuries before Barrancoid (and later Amazonian Polychrome) ceramics begin to dominate e.g. the Paredão phase sites (Lathrap 1970; Myers 2004:80; Neves et al. 2004).

The Barrancoid occupation on the Caquetá River began around AD 400 (Myers 2004:77).[212] This is a relatively late date compared to the establishment of the Barrancoid series in the middle Amazon area at around 400 BC and on the upper Amazon at 200 BC. We would expect a date for these geographically intermediate Barrancoid settlements at about 300 BC, allowing plenty of time for the development of Amazonian Polychrome around AD 500 – 600, but such a chronological sequence cannot be identified in the archaeological material. The absence of early Barrancoid material in this area could be a consequence of the lack of large-scale archaeological investigation in the region, or of sampling errors, but another reason could be that the makers of the Camani phase ceramics had a cultural stronghold in the Araracuara region and were simply not susceptible to Barrancoid influences. Instead they maintained exchange relations with groups manufacturing Barrancoid ceramics, including transfers of agricultural technology, as suggested by the ancient trade route along the Caquetá.

At the site of Peña Roja in the Araracuara area, *terra preta* soils have been dated to 1800 BP (ca. AD 250) (Andrade 1986; Oliver 2008:198) (fig. 6.2.2). The dark earths at Peña Roja were formed as a consequence of a general intensification of agricultural activities, resulting in a population increase in the region starting about AD 1, a date which has also been proposed for the first occurrences of chiefdoms in Amazonia (Herrera et al. 1992:98; Mora 2003:205). Other sites in the Colombian Amazon where anthropogenic soils have been identified include Guayabero, La Pedrera, and Córdoba (Herrera et al. 1992:98) (fig. 6.2.2). *Terra preta* soils

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[211] Although Camani is clearly different from Barrancoid and Amazonian Polychrome, it shares some features with the Japurá phase and it also has commonalities with Guarita ceramics in the use of *caraipé* temper (Eden et al. 1984:135), indicating that these complexes did not evolve in total isolation from each other.

[212] For an account of the chronology of the Barrancoid series along the Orinoco, see chapter 5.

have also been reported in the Colombian llanos (Eden et al. 1984:137) and in large sites in the upper Orinoco/Negro area (Klinge et al. 1977, qtd. in Eden et al. 1984:137).[213]

The formation of anthropogenic soils in various localities throughout Amazonia seems to have coincided with the presence of other cultural markers. Labor investments associated with increased agricultural productivity were often linked to access to important routes of communication connecting the *terra preta* sites to a wider exchange system (Herrera et al. 1992:110; Mora 2003:220). Thus, control over agricultural production and communication routes became two sides of the same coin. This is evident in the northwest Amazon from the strategic location of Araracuara at an elevated position controlling the traffic on the Caquetá, and in the Guianas by the similar location of Kurupukari Falls overlooking the Essequibo River (fig. 6.2.2).

Further evidence of early farming societies in the northwest Amazon comes from the Venezuelan Andes, where the El Jobal site has been dated between 1680±70 (Tx-1577) and 1530±50 BP (Tx-1576) (Oliver 1989:380, 746; Wagner 1999:92ff; Gassón 2002:249), Miquimú to 1300±70 BP (IVIC-179) (Wagner and Schubert 1972:889; Gassón 2002:249), and Pie de Cuesta to 2060±250 BP[214] (Wagner 1999:92; Gassón 2002:249). The Miquimú occupation forms the type site of the Miquimuoid tradition (1650 – 950 BP), which also includes the Las Guayabitas phase discovered at the site of Boconó[215] in the Venezuelan Andes east of El Jobal (Wagner 1999:94) (fig. 6.2.2). A number of other archaeological phases dated to the first millennium AD have been identified in the Venezuelan Andes, but the geographical delimitations of this survey precludes further discussion of these phases. It is worth mentioning, however, that these early agricultural occupations in the highlands may have been crucial in transmitting maize farming from the lowlands of western Colombia via the Magdalena, Cauca, and San Jorge Valleys[216] to the llanos, and from there into the Orinoco Valley where it stimulated a major population increase in the period AD 100 – 700 (Roosevelt 1980, qtd. in Spencer 1998:112).

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[213] It is not clear if these sites are the same sites as those investigated by Zucchi (1991).

[214] No laboratory number has been provided for this sample.

[215] The Boconó site also includes the San Nicolas phase (AD 1000 – 1500) of the Tierroid tradition (Wagner 1999:92), associated with seated ceramic figurines which, as noted by Nordenskiöld (1930:32, fig. 9), are very similar to the Maracá phase burial urns of the Amazonian Polychrome tradition (and to those of the more nearby Napo phase and similar figurines from the Cauca Valley in Colombia.) The Cauca Valley was one of the areas from which maize farming diffused into sites of the Venezuelan llanos such as Boconó (Denevan 2001:222).

[216] At San Jorge, raised field farming has been documented at 810 BC (ca. 2700 BP) (Denevan 2001:222).

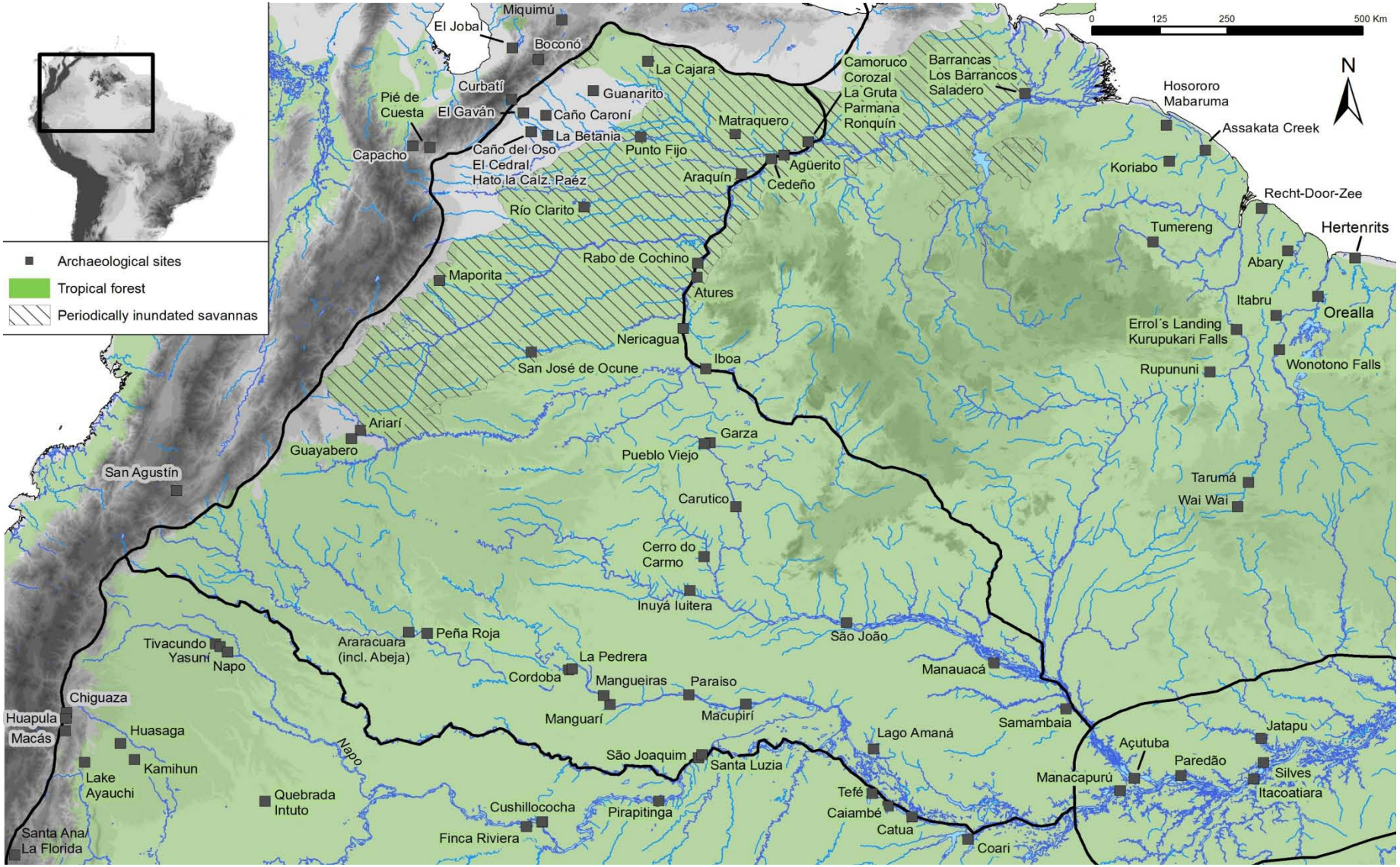

Figure 6.2.2. Archaeological sites of the agricultural period.

In the llanos, agricultural production and social complexity increased during the early (1650 – 1450 BP) and late (1450 – 950 BP) Gaván phases, identified to the northwest of Caño del Oso, a complex with which early Gaván share ceramic similarities (Gassón 2002:259).[217] During the late Gaván phase, chiefdom-level[218] societies are indicated by a three-tiered settlement hierarchy, population growth, mound building and other complex agricultural technologies, warfare, and complex social relationships with neighboring communities, including long-distance exchange, all clearly visible at the El Gaván site (Gassón 2002:259) (fig. 6.2.2). The production of an agricultural surplus through intensive cultivation of maize, which was now the staple food (Spencer 1998:121; Gassón 2002:259f), and a regional settlement hierarchy with secondary centers (Gassón 2002:259), much like the satellite communities of the Guiana Littoral, Marajó Island, and upper Xingu during the first millennium AD, indicates increased social complexity among the societies of the llanos in late Gaván times. Late Gaván ceramics has many similarities with the La Betania phase, suggesting cultural contact between these groups.

At the time of the establishment of mound-building societies in the llanos and groups generating *terra preta* along the Caquetá River, sedentism and settlement stability had gained importance among indigenous societies. During the period AD 1 – 500, a trend toward increasing long-term settlement stability can be observed in the archaeological record in Amazonia, suggesting that a new type of relationship to the local landscape was emerging. It is during the first millennium AD, more precisely around AD 300, that new types of high-intensity landscape management techniques are beginning to be applied in a large scale.

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[217] Parallel to the development of the early and late Gaván phases of the llanos was the establishment of the early (AD 300 – 550) and late (AD 550 – 1000) Curbatí phases of the eastern Andean piedmont, to the west of the llanos (Spencer 1998: 117f, figs. 4.9, 4.11) (fig. 6.2.2). Judging from the evidence of cultural contacts between the llanos and the Andes since archaic times, and the synchronic development of these phases, there was probably much mutual influence between these respective complexes. Among other identifiable cultural features such as social hierarchies and religious specialists, documented in the Venezuelan Andes from 1000 BP (Gassón 2002:249), the Curbatí complex used petroglyphs as markers of trade routes (ibid., 253) (fig. 6.2.2), a practice also noted among prehistoric groups along the Mapuera River in the Guianas (Williams 2003:147). Hornborg (2005:592) suggests that the rock art of the northwest Amazon "may reflect the propensity of Arawaks to mark, name, and memorize significant places along their extensive trade routes," a suggestion supported by Goldman's (1948:784) observation that the petroglyphs of the Vaupés-Caquetá Basin serve as territorial validations that are renewed from time to time.

[218] The concept of "chiefdom" as a label for non-state societies more complex than band or tribal societies has been much debated among Amazonian scholars. Several scholars have applied the concept, often to the late Gaván societies described above (e.g. Spencer and Redmond 1992; Spencer 1998; Redmond et al. 1999; Gassón 2002), but also in studies of other regions of Amazonia (e.g. Drennan 1995; Roosevelt 1999). Although criticism has been directed against the concept and its applications in Amazonia (see e.g. Drennan 1995:303f; Spencer 1998:105), Drennan´s (1995:305) pragmatic suggestion is to define chiefdoms as "a rough category of moderately hierarchical societies."

According to Mora (2003:220), the *terra preta* soils in the Araracuara area were produced and maintained in order to attain settlement stability, a phenomenon also described by Denevan (2004:140f), who notes that micro-movement of the buildings within a settlement site allows for permanent occupation of the dwellings. The reason for settling permanently at some sites at this point in time was the substantial investments made in the earthworks and anthropogenic soils surrounding the sites, which formed a valuable capital that the local groups would have been unwilling to abandon, and/or cultural aspects such as emotional relationships to the local and regional landscape that is reflected e.g. in topographic writing, including place names and other cultural manifestations such as rock art at sacred places and along crucial routes of communication (see e.g. Santos-Granero 1998:141; Vidal 2000; Zucchi 2002:205f; Williams 2003:147). Judging from historical and ethnographic examples, this latter incentive for sedentism would have been just as strong as guarding investments in earthworks in maintaining settlement stability during the first centuries AD.

In the Colombian Amazon and llanos regions, archaeological excavations have been few, but some signs of agricultural settlements linking the Araracuara area with the Venezuelan llanos have been found. Along the Ariarí River, an upper tributary of the Guaviare, permanent and dense human occupations with *caraipé*-tempered ceramics, interpreted as the remains of chiefdom societies, have been discovered (Marwitt et al. 1973, qtd. in Gassón 2002:262) (fig. 6.2.2). Close to Ariarí is the Guayabero 1 site, which has anthropogenic soils overlying a preceramic occupation (Herrera et al. 1992:98). In general, the ceramics of the Ariarí River area have more in common with the pottery of the central Amazon than with ceramics from the Orinoco region (although widespread features such as *caraipé* temper occur in all three contexts), suggesting that the Ariarí River was a connection-point between the tributaries of the Orinoco and Amazon (Gassón 2002:262). In fact, the geographical position of the Ariarí River would have enabled its inhabitants to maintain contacts with the Andean area, with the upper Orinoco via the Guaviare, with the middle Orinoco and the llanos via the Meta, and with the central Amazon via the Vaupés and Caquetá (fig. 6.2.2).

Northeast of the Ariarí River, along the Vichada, a left-hand tributary of the upper Orinoco, is the San José de Ocuné area (fig. 6.2.2). Here, prehistoric settlements associated with anthropogenic soils have been discovered. Ceramics tempered with *caraipé* and with red-on-white decoration associated with Arauquinoid[219] material from the middle Orinoco have also been found at this site. All along the Orinoco River and in the Caquetá/Vaupés area, sites associated with soil management and elaborately decorated ceramics often have Barrancoid or Saladoid predecessors. It is precisely in the geographical area of San José de Ocuné that one would expect to find early Barrancoid sites connected to the eastern Andean slopes, which

[219] The development of the Arauquinoid tradition is mainly treated in chapter 5.

have been proposed as a possible homeland of the Barrancoid series (Boomert 2000:124).[220] Along the upper tributaries emptying into the Meta from the north are several interesting sites located in the lowlands but close to the Andes. At CC2, an occupation containing anthropogenic soils has been dated around AD 500, and at nearby Maporita a similar occupation was dated to AD 300 (Alarcón and Segura 1998:100f, 120, qtd. in Gassón 2002:248) (fig. 6.2.2). These sites connect the early agricultural settlements of Araracuara and Ariarí River with their counterparts in the llanos.

During the second half of the first millennium AD, further agricultural intensification and development of ceramic technology occurred in the upper Río Negro area. From about AD 400 Barrancoid occupations are indicated at Mangueiras (Myers 2004:77) and from AD 500 at La Pedrera, Manguarí, and Paraiso along the Caquetá (Hilbert 1968:40, 227; Lathrap 1970:121; Simões and Araujo-Costa 1978:75 Eden et al. 1984:127; Williams 2003:422; Myers 2004:75), and at Tefé, Caiambé, and Coari 2 on the southern shore of the main river (Hilbert 1962:471f, 1968:165ff, 256, 259) (fig. 6.2.2). Although the Barrancoid sites of the upper Río Negro and Caquetá area are generally smaller than their middle Amazon counterparts, the depth of *terra preta* argues for significant population densities at these sites (Myers 2004:78).

At about the same time, a parallel development of ceramics belonging to the Guarita subtradition of the Amazonian Polychrome tradition took place in the area, creating some initial controversy among archaeologists about whether this material should be associated with the Barrancoid or Amazonian Polychrome tradition (see e.g. Hilbert 1968:227; Lathrap 1970:121; Simões and Araujo-Costa 1978:75; Neves 2008:366). In general, the ceramics along the Caquetá River around AD 500 suggest a transition from Barrancoid to Amazonian Polychrome (Guarita subtradition) beginning in the middle of the first millennium AD, as some scholars have suggested (Hilbert 1968; Lathrap 1970:156f; Eden et al. 1984:137; Myers 2004:79; Petersen et al. 2004:9). Judging from the gradual change in stylistic and technological aspects, it is clear that this transformation of the ceramics of the Caquetá Basin occurred in a situation of frequent exchange of ideas and technology between the potters of the region, and not by a simple replacement of one ceramic tradition by another. Thus, the makers of the early pottery of the Amazonian Polychrome tradition in this part of Amazonia must have been influenced by the Polychrome Marajoara phase, as well as by Barrancoid ceramics along the middle and upper Amazon River. The Marajoara phase was initiated at AD 300, but it is not until AD 750 that the evidence of this elaborate ceramic style becomes more

[220] Another indication of the importance of these east-flowing rivers draining from the Andes is the discovery of several small stone figurines used as snuff paraphernalia in the lower Amazon area, almost identical to the stone statues at San Agustín, suggesting an iconographic feature brought east from the upper Magdalena via the Caquetá (Aires Ataíde da Fonseca 2004).

frequent (Boomert 2004:259). At AD 750, the Guarita ceramics had also distinguished themselves more clearly from their Barrancoid predecessors, and within a couple of centuries this style had begun its major expansion, lasting between AD 900 and 1500 (Lathrap 1970:155ff; Petersen et al. 2004:9). In the northwest Amazon, the Guarita subtradition expanded as far up the Río Negro as the site of São João (Simões and Araujo-Costa 1978:72), and along the Amazon as far west as Santa Luzia and São Joaquim, close to the mouth of the Içá River (Hilbert 1968:173ff, 239ff; Simões 1972:65f; Simões and Araujo-Costa 1978:70) (fig. 6.2.2). The Içá River also appears to be the limit of the Napo phase of the Amazonian Polychrome tradition, identified along the upper Napo and its tributaries (Evans and Meggers 1968) (fig. 6.2.2). Another adjacent and closely related polychrome complex is the Zebu phase recovered from the Finca Riviera site in the Colombian *trapecio* (Bolian 1975:3; Eden et al. 1984:137) (fig. 6.2.2).

Further up the Caquetá River, in the Araracuara area, the polychrome ceramics are known as the Nofurei phase[221] (Herrera et al. 1980/81:196, 201, 246; Herrera et al. 1992:102). The earliest Nofurei phase ceramics are dated to 1565±35 BP [GrN-16970] (ca. AD 550 – 600) (Herrera et al. 1980/81:196; Herrera et al. 1992:102), but it is not until AD 700 – 800 that it begins to overlap the older Camani phase (Eden et al. 1984:135; Mora 2003:210). Around AD 800, increasingly intensive agricultural activities are evident in the Araracuara area, with algae being brought to the agricultural fields in order to increase productivity (Herrera et al. 1992:102; Mora 2003:220), simultaneous to the establishment of the Amazonian Polychrome tradition.[222] By AD 1000 the Nofurei phase dominated the Araracuara area, and Camani phase ceramics were no longer being manufactured (Oliver 2008:205).[223]

One of the most characteristic items of the Guarita ceramic inventory are the elaborately decorated burial urns, well known from the mouth of the Amazon to the Napo River, including the Guarita sites of the northwest Amazon. Such funerary urns have been unearthed at Macupirí, a Guarita site on the left bank of the middle Caquetá River, at Anuyá Iuitéra, on

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[221] Nofurei ceramics are closely related to the Guarita subtradition and Oliver (2008:199) even includes Nofurei within the Guarita complex.

[222] Apart from the fact that the addition of algae to the croplands increased agricultural productivity, it is also a sign of a relatively high level of social organization, capable of mobilizing the significant work force required to conduct such tasks (Oliver 2008:205).

[223] Oliver (2008:205) interprets the replacement of the Camani phase by Nofurei ceramics as an invasion by groups from the lower Caquetá area. Although there are no clear signs of warfare (as in the llanos and in the middle Amazon region) from around AD 1000 visible in Araracuara, an increased level of violence in this area would certainly fit well into the overall picture of increased hostilities in Amazonia at the closing of the first millennium AD. On the other hand, as argued earlier, the single most important factor behind changes of style and decoration in Amazonian pottery may have been changing ethnic identities.

the left bank of the middle Vaupés, and at Cerro do Carmo, on the left bank of the middle Içana River (Nordenskiöld 1930:23f) (fig. 6.2.2). Similar funerary urns have been discovered at the Atures site on the upper Orinoco (Cruxent and Rouse 1958:202f). When plotted onto a map, these sites form an almost straight line, connecting the Amazon and Orinoco Rivers (fig. 6.2.2).[224] Although the Amazonian Polychrome tradition is not known to have penetrated into the upper Orinoco Valley, these findings suggest cross-cultural contacts between the two river basins during the first millennium AD.

There are clear parallels between the transformation from Camani to Nofurei phase ceramics in Araracuara and similar transformations in adjacent regions. In the middle and lower Amazon region the century between AD 900 and 1000 was characterized by an increased level of warfare and, as in Araracuara, the replacement of previous local ceramic complexes (e.g. Paredão) with Guarita ceramics (Neves et al. 2004:133; Rebellato et al. 2009:22, 27). Meanwhile, in the llanos, the regional center of El Gaván was being fortified by the erection of a surrounding earth ridge with a palisade on it (Spencer 1998:122). However, the palisaded village of El Gaván could not resist the increased level of warfare that struck Amazonia at the closing of the first millennium AD, and by AD 1000, the site was burned, never to be reoccupied again (Spencer 1998:122f; Redmond et al. 1999:120; Gassón 2002:260). The researchers of the late Gaván period of the Venezuelan llanos have raised the possibility that the destruction of the regional center of El Gaván was the work of the inhabitants of a nearby site, El Cedral, which rose as the major regional center after the destruction of El Gaván (Redmond et al. 1999:125; Gassón 2002:261). Such a development parallels that of nearby regions in the sense that when settlements associated with Barrancoid and local ceramic complexes such as Paredão and Camani had accumulated a certain amount of agricultural capital in the form of raised fields, *terra preta* soils, and not least human labor,[225] the sites were attacked by competing groups.

In the Orinoco Valley, the development of hierarchical societies differed somewhat from that of the llanos, as societies defined as chiefdoms did not appear until AD 1100 (Spencer 1998:112). This is rather surprising, considering the long history of formative cultures along

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[224] Burial urns have also been discovered at Caño Caroní (a site included in the Arauquinoid tradition) in the western llanos (Gassón 2002:256, 261), indicating that the concept may have spread to this location via the Orinoco and Apure Rivers (fig. 6.2.2).

[225] In the llanos, human labor used in cultivating the agricultural earthworks seems to have been a more valuable resource than the raised fields themselves (Drennan 1995:321). This is particularly interesting in the context of Schmidt's (1917) study, where he reaches the conclusion that the major motive behind the Arawak expansion was precisely the need to acquire labor for agricultural work (Schmidt 1917 (6):5). Goldman (1948:769) also mentions the scarcity of labor as the limiting factor for agricultural production in the Vaupés-Caquetá area, illustrating that the biophysical characteristics of the landscape were not the primary obstacle in the attempt to increase agricultural productivity.

the Orinoco and the fact that this area witnessed sedentary occupations long before the western llanos. One explanation offered for this development is that the chiefdoms of the western llanos were formed by stratified groups migrating out of the Orinoco Valley, bringing concepts of social hierarchy with them across the llanos (Spencer 1998:128). As appealing as this explanation may sound, it aligns almost too well with Lathrap´s general explanation of cultural development in Amazonia: population pressure building up along the banks of major rivers, eventually pushing people (accompanied by their distinctive ceramic styles) outwards along the major tributaries. As I have previously argued, such an explanation of cultural development is not only simplistic, but it also contradicts what we now know about Amazonian cultural development during the late prehistoric and early historical periods. In general, the formation of societies with complex social hierarchies should be understood in terms of exchange relations, rather than the cultural luggage of migrating "peoples". Although it is clear that people in Amazonia have sometimes moved (and continue to do so[226]), to use migration as a general model for cultural development is far too simplistic in the light of our current knowledge of how regional exchange relations have generated much of the ethno-linguistic and cultural complexity of Amazonia.

The late prehistoric period from about AD 1000 until time of contact is characterized by the overlap of several ceramic traditions in the northwest Amazon. When the Arauquinoid tradition[227] was being formed along the Orinoco River around AD 600, the previous Barrancoid tradition was still in existence and had actually just begun its final major expansion into southern Amazonia in areas such as the upper Xingu and the Llanos de Mojos. Along the Caquetá and in the upper Río Negro area, Barrancoid ceramics had started to transform into the Guarita subtradition at around the same time as the Arauquinoid tradition was being developed, and the Barrancoid and Amazonian Polychrome traditions apparently coexisted for some time along the main river until the latter became dominant during the centuries around AD 1000. The internal development of the Barrancoid tradition, which had previously been characterized by great synchrony, was now unfolding in a much more uneven way, leading to

[226] For a recent account of indigenous mobility and migration in Amazonia, see Alexiades 2009.

[227] Although the Arauquinoid or Incised Punctated tradition is certainly distinct enough in terms of decoration and vessel shape for us to classify it as an independent ceramic tradition, it still shares many elements with ceramics of the Barrancoid and Amazonian Polychrome traditions. As pointed out by Boomert (2004), the similarities between Arauquinoid and Amazonian Polychrome ceramics in eastern Amazonia are of such a character that close cultural interaction between the groups manufacturing these ceramics must be assumed. Furthermore, incised and modeled decoration of Arauquinoid ceramics are shared with the Barrancoid tradition (Neves 2008:370), rendering it likely that Arauquinoid ceramics developed out of the Barrancoid tradition along the Orinoco River during the middle of the first millennium AD. The timing of this development seems to correlate well with the development of Guarita ceramics out of Barrancoid pottery in the upper Río Negro area, suggesting that major transformations were underway in the Arawak matrix at this point in time.

separate developments of its various components: the Mangueiras pottery was transformed into Guarita, and the ceramics of the upper Xingu into the Ipavu phases, while in the Orinoco Valley Arauquinoid ceramics were replacing the Barrancoid tradition.

In the llanos, cultural development during the La Betania phase had brought stratified societies at the chiefdom level of social organization. At the closing of La Betania at 750 BP (AD 1250), great cultural diversity flourished in the llanos and interaction with neighboring ethnic groups had become crucial for the societies in the area (Gassón 2002:257f). From their point of origin along the Orinoco River, several Arauquinoid complexes such as Arauquín, Caño Caroní, Matraquero, and Punto Fijo, all dating between 750 and 450 BP, now expanded out in the llanos (Cruxent and Rouse 1958:195; Navarette 1999:36; Zucchi 1999:64; Gassón 2002:257) (fig. 6.2.2). At the junction of the Casanare and Meta Rivers, in the Colombian llanos, several sites containing ceramics associated with the Arauquinoid tradition have been discovered (Giraldo de Puech 1988; Gassón 2002:262), and at Río Clarito, located on the Capanaparo River on the Venezuelan side of the border, is another occupation dating to the Arauquinoid period that shares common features with the Arauquín, Matraquero, and Caño Caroní phases (Giraldo de Puech 1988; Gassón 2002:261) (fig. 6.2.2).

The groups manufacturing the Arauquinoid ceramics were in contact with groups manufacturing El Choque and Los Caros phase ceramics of the late Cedeñoid tradition. These groups inhabited the regions north of the middle Apure River (Navarette 1999:36; Zucchi 1999:64; Gassón 2002:257). Ceramic complexes otherwise pertaining to the Venezuelan Andes and the coast such as the Tierroid and Dabajuroid[228] traditions were also represented in the lowlands at the site of La Cajara and in the Guanarito area (Gassón 2002:258) (fig. 6.2.2).

Along the Caquetá River, cultural development was somewhat different from that of the llanos after AD 1000, being more similar to developments along the main river. At approximately AD 1200, the formation of anthropogenic soil ceased at two of the sites in the Araracuara area and the sites were abandoned (Herrera et al. 1992:102, 110). This development very much parallels that of the middle Amazon region, where *terra preta* sites at this time were being taken over by Tupi-speakers as they expanded along the Amazon.

[228] Since the geographical distribution of the Tierroid and Dabajuroid traditions mainly falls outside of the area treated in the present survey, these phases have not been included in the discussion.

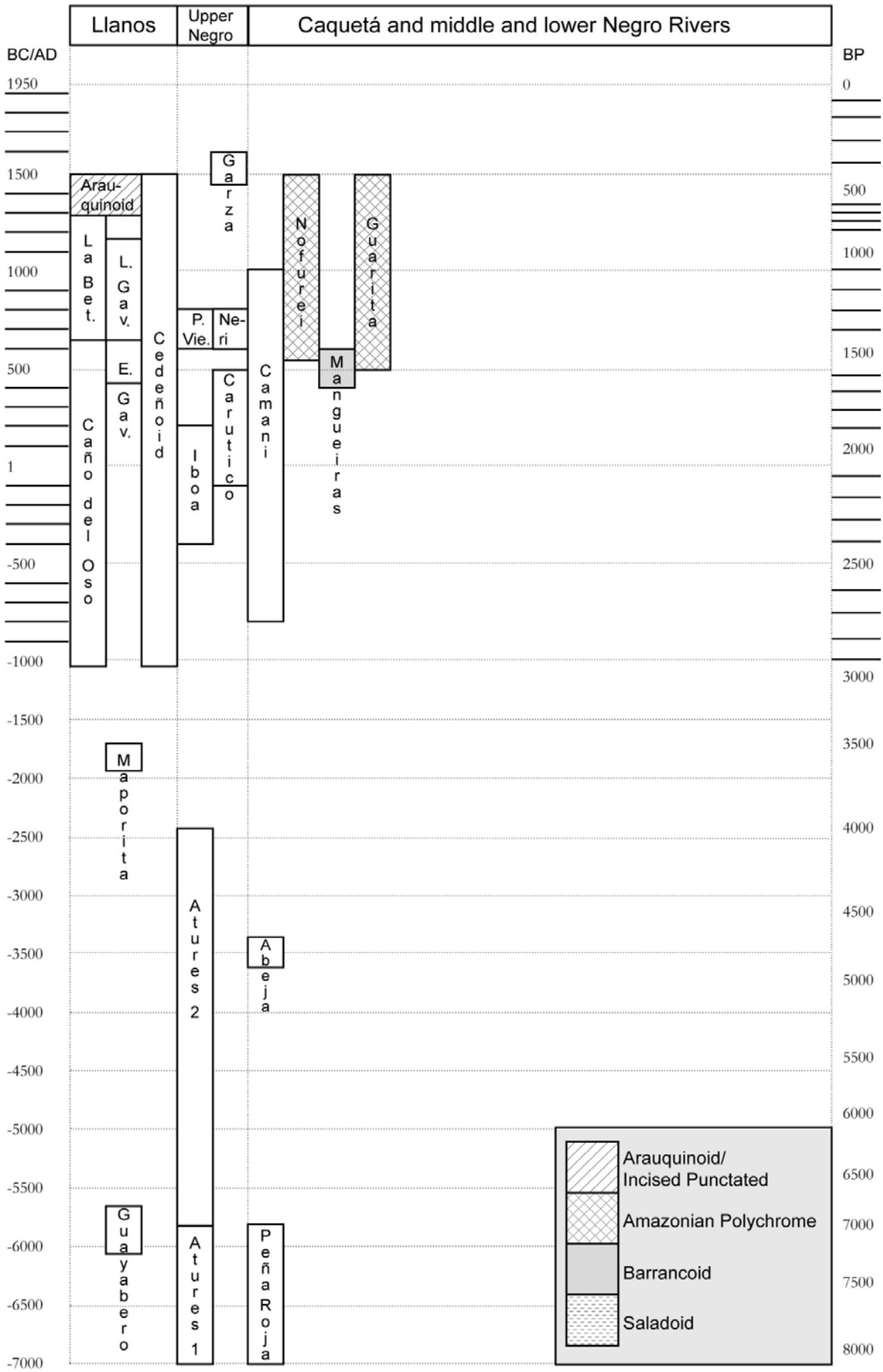
Llanos
Upper Negro
Caquetá and middle and lower Negro Rivers
BC/AD
BP
1950
1500
1000
500
1
-500
-1000
-1500
-2000
-2500
-3000
-3500
-4000
-4500
-5000
-5500
-6000
-6500
-7000
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
6500
7000
7500
8000
Arau-quinoid
La Bet.
L. Gav.
E.
Gav.
Caño del Oso
Cedeñoid
Garza
P. Vie.
Ne-ri
Caruticoo
Iboa
Camani
Nofurei
Mangueiras
Guarita
Maporita
Guayabero
Atures 2
Atures 1
Abeja
Peña Roja
Arauquinoid/ Incised Punctated
Amazonian Polychrome
Barrancoid
Saladoid

Figure 6.2.3. Chronological chart of the archaeological phases of the northwest Amazon. Abbreviations: E. Gav. Early Gaván; L. Gav. Late Gaván; La Bet. La Betania; Neri. Nericagua; P. Vie. Pueblo Viejo.

Along the upper Río Negro, cultural continuities seem to have been more persistent.[229] Once the Guarita subtradition was established, ceramic continuity continued into the historical period and vessel shapes and tempering agents (*caraipé*) remain the same in the pottery manufactured by contemporary Arawak-speaking groups of the area, even though true Guarita ceramics ceased to exist in the 1500s (Neves 2001:274f).[230] To Neves (ibid., 276), the similarities in vessel shapes between pottery manufactured by contemporary Arawak- and Tucano-speaking groups of the upper Río Negro indicate that they were once part of a wider social network with roots in pre-Columbian times, connecting them to the middle Amazon area, a connection that was lost during the centuries following European contact.

Interestingly, the Manao, occupants of the middle Río Negro at the time of contact, may have had ceramics that shared similarities with Arauquinoid pottery of e.g. the late Camoruco phase or Santarém (Myers 1999:36f). Although some decorative similarities exist between Manao pottery and ceramics of the Amazonian Polychrome tradition (ibid., 36), the overall composition of Manao pottery suggests cultural contact with groups of the middle Amazon and the Orinoco Valley, where ceramics of the Arauquinoid tradition are well represented. Such long-distance connections involving the Manao are hardly surprising considering the many indications of their vast trade network in the early historical period, but it is interesting to note the expression of difference in relation to their Arawak-speaking neighbors further up the Río Negro.

Such ceramic divergence is best understood as an expression of ethnic difference, in this case manifested not by language but by material culture. The similarities between Tucano and Arawak ceramics of the upper Río Negro area indicate that these two groups instead used

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[229] Unlike the middle Amazon region, where Barrancoid and Amazonian Polychrome pottery apparently coexisted for several centuries, the Polychrome tradition generally replaced the previous Barrancoid occupations along the Caquetá and Ucayali (Myers 2004:80). This may be accounted for in terms of the Amazonian Polychrome tradition developing out of Barrancoid material through a process of ethnic differentiation among groups of the middle Amazon, in which the ethnic identity associated with polychrome ceramics eventually became politically dominant, and its subsequent expansion into the Caquetá and upper Amazon, where this ethnic identity more immediately came to dominate the original Barrancoid population.

[230] Historical sources observe that in the Arawak-dominated Vaupés-Caquetá area, the *caraipé*-tempered pottery was manufactured by women, a pattern also reported from other areas of Amazonia where Arawak pottery has acquired high status (e.g. upper Xingu). This division of labor was also present among the Cubeo (Goldman 1948:777).

language to differentiate themselves from each other, a habit highlighted by Neves (2001:268) as a major ethnic marker among Amazonian societies. However, ceramic decoration also differs between Arawak and Tucano pottery, suggesting that some very fine differences in the overall ceramic repertoire could suffice to express ethnic distinctness vis-à-vis neighboring groups. A similar phenomenon has been observed in the interaction between neighboring polities among late prehistoric period settlements in the northern llanos (Gassón 2002:258).

Overall, both language and material culture in this part of the northwest Amazon should be considered as very fluid indicators of ethnic identity, constantly in the process of being rearranged and transformed in accordance with renegotiated social relations between groups. Language shifts (Neves 2001:284) and the rapid acquisition of new languages through cultural mechanisms such as linguistic exogamy is also well known in the area.

Thus, at the time of contact, the Arauquinoid and Amazonian Polychrome traditions had come to dominate the northwest Amazon, spreading out along the main river, along the Caquetá and in the upper Río Negro area, along the Orinoco and into the llanos of Venezuela and Colombia. These two traditions had several traits in common, indicating that there was intense contact between the makers of the two wares. As noted above, cultural continuities between these prehistoric ceramic traditions and the ethnographic material documented in the region are clear, many pre-Columbian cultural traits having been preserved up to the present date, particularly in the upper Río Negro area.

6.3 Historical linguistics

The ethno-linguistic situation in the northwest Amazon at time of contact features a great diversity in terms of the language families represented. At least 10 different language families were more or less well represented in the region at the time of European arrival, and a couple of other language families also exerted influence from neighboring regions, particularly through the trade networks extending into the Andes.

The Arawak languages are well represented in the northwest Amazon, and indeed the area has been suggested as one of the possible homelands of the Arawak language family, given its high concentration of structurally divergent Arawak languages (Aikhenvald 1999:75). Other major families include Carib, represented by the Carijona in the southwest and by several groups in the Lake Maracaibo area. The Tupi languages were only established along the Amazon River, but still exerted major cultural and linguistic influence in the southern part of the region through raiding and trading into the northwest Amazon.

A careful examination of the ethno-linguistic composition shows that the most complex and least known area was the llanos of today's Venezuela and Colombia. In this area, the open terrain provided few opportunities to escape the Spanish army, and the landscape also

attracted early cattle ranching activities, prompting the indigenous population to begin abandoning the llanos already at the end of the 1500s (Hernández de Alba 1948b:400).

What we do know with relative certainty is that in the northern llanos the Guamo, rarely mentioned in the literature, dominated a large area of land north of the Apure and Orinoco Rivers (fig. 6.3.1). The Guamo language has long been extinct and remains unclassified, but attempts have been made to relate it to Chapacuran (Campbell 1997:177) or Arawak (Dixon and Aikhenvald 1999b:14), so far without any convincing evidence presented in support of these claims. Adelaar and Muysken (2004:163) mention Guamo briefly as an isolate. Close neighbors of the Guamo were the Arawak Caquetío and Achagua, with the Caquetío generally inhabiting areas north of the Achagua (fig. 6.3.1). The Achagua dominated large parts of the llanos at time of contact, and their language is closely related to Piapoco, spoken in the upper Río Negro area (Adelaar with Muysken 2004:162).

In the northwestern part of the region, along the eastern Andean slopes, lived the now extinct Jirajara, who at the time of contact were also well represented on the western side of the Andes, east of Lake Maracaibo. Jirajara is not well described in the linguistic literature, due to lack of proper material for linguistic analyses, but Campbell (1997:172) and Adelaar and Muysken (2004:52, 129) consider it a small, isolated family ("Jirajaran").[231]

On the southern side of the junction between the Apure and Orinoco Rivers were the Otomac, speaking a poorly known language that remains unclassified (figs. 6.3.1, 6.4.1). The Otomac, once one of the most powerful groups of the middle Orinoco, were well-known traders of the region, and they fiercely resisted European attempts to subjugate them until they finally fell victims to slave raids and diseases during the 1700s. South of the Otomac, along the Capanaparo River, lived the Pumé (Yaruro), speaking an isolated language still surviving (Aikhenvald and Dixon 1999:377; Adelaar with Muysken 2004:163; Lewis 2009) (fig. 6.3.1). Western neighbors of the Otomac and Pumé were the Guahibo, who still constitute one of the most well-represented ethno-linguistic groups north of the Guaviare River (fig. 6.3.1). The Guahibo are described as nomadic hunter-gatherers, an unusual subsistence strategy in a region otherwise populated by agriculturalists (Aikhenvald and Dixon 1999:371). It seems as if most Guahibo-speaking groups lived in pockets surrounded by Arawak-speakers, generally the Achagua, and one explanation for this distribution pattern may be that their different subsistence strategies complemented each other and allowed them to co-exist and exchange products with each other.[232] Another possible explanation may be that the Guahibo-speakers

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[231] Adelaar and Muysken (2004:130) also mention a possible affiliation between Jirajaran and Chibchan, but assert that proper data to sustain such an affiliation are still lacking.

[232] The Guahibo and Achagua are known to have exchanged a number of products, which also caused areal diffusion between their languages.

were agriculturalists in pre-Columbian times and that they retreated to a nomadic lifestyle following the social unrest in the region during late prehistory and early colonial times, much like the changes documented among the Tupi-speaking Guajá of eastern Brazil (Epps 2009:596). The Guahibo languages were heavily influenced by areal contact with the neighboring Arawaks (Adelaar with Muysken 2004:162). The Guahibo language family was widespread and included many different languages, including the Bisanigua located along the upper Guaviare, Guahibo along the Meta, Chiricoa and Amorua along the Orinoco tributaries between the Guaviare and Meta, and Cuiba (Cuiva) along the northern bank of the middle Meta and in the northernmost part of the llanos (Lewis 2009).

Along the upper Apure River, close to the Andes, lived the Betoi,[233] another contested linguistic group that is now extinct (fig. 6.3.1).[234] The Betoi were in socio-economic contact with their eastern neighbors, the Achagua, with whom they exchanged *quirípa* during the early historical period (Hernández de Alba 1948b:406), and it is likely that the intense exchange conducted between the highlands and lowlands through Betoi territory fostered multilingualism among them, a phenomenon further complicating the identification of the original Betoi tongue. The Betoi family included many different languages including Airico, Betoi, Ele, Jirara,[235] Lolaca, Situfa, Atabaca, and Anabali, but unfortunately these languages remain insufficiently documented (Landar 1977:439, 443; Adelaar with Muysken 2004:161).

The western and southwestern neighbors of the Betoi spoke Chibchan languages, widely distributed in the intermediate area and in Panama, but also occurring in the lowlands of Colombia. The Chibcha-speaking Morcote and Lacalía were thus located in the lowlands (Mason 1950). The most famous Chibcha-speaking groups of this area were the Muisca, a group of affiliated chiefdoms located in the high Andes of Colombia (fig. 6.3.1). The Muisca were considered so important by the Spanish that they appointed their languages (Muisca and Duit) as *lengua geral*, to be used for administration and evangelization in the colony. Despite the high status of these languages they vanished quickly and were reported extinct in the 1700s (Adelaar with Muysken 2004:46, 81).

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[233] Betoi are not to be confused with Betoya, a former name for the Tucano language family (to which Betoi was once thought to belong).

[234] Campbell (1997:173) associates Betoi with his Macro-Páesan family, an affiliation not recognized by other scholars of the region (see e.g. Dixon and Aikhenvald 1999a; Adelaar with Muysken 2004; Lewis 2009).

[235] The close resemblance between Jirara and Jirajara has led some researchers to the conclusion that these two groups were linguistically related, but this affiliation has no firm support from linguistic studies (Adelaar with Muysken 2004:130).

Along the upper Orinoco, a long stretch of the river was dominated by Sáliva-speakers[236] at the time of contact. The left side of the river seems to have been dominated by the Sáliba, who were also occupying a portion of the left bank of the lower Guaviare River, while the area east of the river was occupied by the Piaroa[237] (fig. 6.3.1).[238] The Sáliba are reported to have moved into the Meta drainage in the 1600s (Adelaar with Muysken 2004:163), probably as a consequence of the abandonment of this area by other indigenous groups following the European presence in the region. Their eagerness to travel is documented through their various exchange relations with neighboring groups.

South of the Sáliva was a large block of Arawak-speakers that is clearly illustrated on all linguistic maps depicting the time-of-contact situation. At the time of European entry into the continent, this block of Arawaks stretched all the way from the Guayupe on the eastern bank of the Magdalena River to the Manao and Arauakí on the left bank of the middle Amazon below the mouth of the Río Negro (fig. 6.3.1). This huge area of Arawak-speakers was only interrupted by small pockets of genetic isolates such as the Puinave,[239] south of the Guaviare, and various small groups that make the Arawak block appear somewhat like a Swiss cheese (fig. 6.3.1), but most likely many of these groups of unknown linguistic affiliation were also Arawak-speakers. Even though the Arawak languages were so widespread in this part of the northwest Amazon, this should not be interpreted as a sign of linguistic homogeneity. On the contrary, the area is famous for its linguistic diversity at the micro-level, a phenomenon clearly illustrated by the widespread practice of linguistic exogamy in the area (Sorensen 1967, 1984; Jackson 1983; Chernela 1989; Hill 1996a; Aikhenvald 1996, 2001, 2002). According to Hill (1996a:159), the use of linguistic exogamy was developed by the Tucano in their historical relationship with the Arawaks. Through the norm to marry outside one's native linguistic

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[236] An alternative spelling for the Sáliva language family is Sáliba, the latter also being the name of an individual language of the family (Aikhenvald and Dixon 1999:370f). To distinguish the names of the language and the family, Sáliva is used to refer to the language family, while Sáliba refers to the individual language, spoken along the western bank of the upper Orinoco.

[237] Aikhenvald and Dixon (1999:370, note 4) mention the incomplete evidence for a genetic link between Sáliba and Piaroa. Whether or not these two languages are genetically related, the most important observation for the present study is that they have been in such close socio-cultural contact that areal diffusion has occurred.

[238] Lewis (2009) lists a third Sáliva language, Maco, located close to the Piaroa. The group speaking this language is not mentioned in any of the time-of-contact maps consulted for this study, but must have lived near the Piaroa, or been a Piaroa subgroup.

[239] It has been suggested that Puinave (Guaipunave) are related to Makú (Aikhenvald and Dixon 1999:370, note 5; Adelaar with Muysken 2004:164), while Vidal (2000:635) considers them as one of the Arawak-dominated, multi-ethnic confederacies of the northwest Amazon at the time of contact. Given the large number of bilingual, multi-ethnic groups known to have existed in this area, both accounts may be valid.

domain, the Tucano identified themselves in opposition to the Arawaks and their habit of marrying within their own language family, a habit closely related to the Arawak concept "people of our language", a category designating groups with whom friendly socio-political alliances had been established.[240] Thus, Hill sees linguistic exogamy as a feature originating among the Tucano, later spreading to their Arawak neighbors through the close socio-cultural relationships between the two groups. Linguistic exogamy was a way for the Tucano to define their socio-cultural practices as distinct from those of the Arawaks. According to Hill (1996a:159), linguistic exogamy among the Tucano originated around 1740, at a time when Arawak power in the northwest Amazon was beginning to decline. The Arawak-speaking Achagua had been forced to give up their dominant position in the trade networks of the llanos around 1730, following population decline and increased conflicts with Europeans and with the Carib (who were allied with the Dutch). We may thus identify the period around 1730 – 1740 as the time of the final decline of the Arawak regional exchange system in the northwest Amazon. After 1740, only local clusters of the system remained, with myths of a once pan-Amazonian interaction sphere recalled among some groups that were fortunate enough to survive.

Linguistic exogamy, particularly common among the Eastern Tucano and Arawak groups of the Vaupés River, implies that linguistic diversity at the micro-level, that is at the level of individual speakers, is constantly being increased, eventually influencing the relationship between the languages themselves. This is illustrated e.g. by frequent borrowing between Tariana (Arawak) and its Eastern Tucano neighbors (Aikhenvald 1996). Among the large number of Arawak language groups between the upper Río Negro and the Orinoco River, the most important for the present study are the Warekena, Baré, Baniwa, Curripaco,[241] Piapoco, and Tariana, and along the middle Río Negro the now extinct Manao and Arauakí. There are several linguistic features that are shared between the northwest Amazon Arawaks and their southwest Amazon linguistic relatives, for example the phenomenon of parallelism,[242] which occurs among the Curripaco of the Vaupés area and the Nanti[243] of the Urubamba River. These two groups also share similar forms of chanting. Other features shared between the

[240] According to Peter Rivière (2009) the comparison of Arawak and Tucano variations in the northwest Amazon can be extended in both eastern and western directions.

[241] Curripaco (Kurripako) are known as Baniva do Içana in Brazil (Adelaar with Muysken 2004:162).

[242] Parallelism signifies the patterned repetition of some discursive unit, usually found within the context of ritual speaking and chanting (Beier et al. 2002:135).

[243] The ethnic group speaking Nanti is usually referred to as Pucapucari (Pukapukari).

southwest and northwest Amazon include echo speech,[244] which is reported as very similar among the Nanti and the Vaupés Arawaks (Beier et al. 2002:131, 135).

South of the Arawak block, between the Negro/Vaupés and Caquetá Rivers are three large blocks of Makú, Tucano, and Carib languages, respectively (fig. 6.3.1). The Makú[245] linguistic family is made up of the Nadëb, Dâw, Hup and Yuhup,[246] and Kakua and Nukak[247] languages. The Makú-speakers consist of small groups of mobile hunter-gatherers which have sustained themselves successfully through this subsistence strategy, taking on a similar role as the Guahibo have in the northern part of the northwest Amazon. Some researchers have proposed a connection between Makú and Puinave (Métraux 1948f:865), but the Makú are clearly an independent family. During the historical period many speakers of Makú shifted to Arawak and Tucano languages after changes in the nature of socio-cultural contact with these neighboring groups (ibid.).

West of the Makú, and sometimes interspersed with them, are the Eastern and Central Tucano languages, composed of a mosaic of groups speaking genetically related languages. The most populous groups of Tucano-speakers remaining today are the Cubeo and Tucano, still numbering in the thousands, and around twenty Tucano languages (including the Western Tucano branch) are still spoken in the area (Barnes 1999:209; Lewis 2009). Intensive linguistic interaction has been taking place in this part of the northwest Amazon for a long time. The norm of linguistic exogamy, leading to frequent intermarriage between Arawak- and Tucano-speakers, has generated considerable multilingualism in the area and linguistic distribution patterns in which Tucano languages are interspersed with pockets of Arawak,

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[244] Echo speech refers to a phenomenon where a second speaker repeats the words of the principal speaker without interrupting the speaker's turn at talk (Beier et al. 2002:131).

[245] Names similar to "Makú" have arbitrarily been applied to various indigenous groups of Amazonia, denoting "savage" (Lewis 2009). To the Arawaks of the northwest Amazon, the term "Makú" simply designates tribes whose cultures are practically unknown (Métraux 1948f:865). The Makú languages considered in this study should therefore not be confused with the following:

1. Máku, an isolated language of the Guiana Highlands north of the Yanomámi (Aikhenvald and Dixon 1999:361f), spoken by a group known as famous traders in the area (Métraux 1948f:867).
2. Mako, also known as Cofán-Maco (Cofán being classified as a Chibchan language by Lewis [2009], while Adelaar and Muysken [2004:50] consider it an isolate) of the Andes in Colombia and Ecuador.
3. Sáliba-Makú, or Maco, a group of Sáliva-speakers east of the upper Orinoco (Martins and Martins 1999:251).

[246] These two languages are sometimes referred to as a single language: Hupda-Yuhup (Martins and Martins 1999:253).

[247] Kakua and Nukak have also been grouped together as the Kakua-Nukak language (Martins and Martins 1999:253).

Makú, and Witoto, southern neighbors of the Eastern Tucano (fig. 6.3.1). The multilingualism and inter-ethnic interaction in this part of the northwest Amazon has led not only led to considerable areal diffusion of linguistic elements between the indigenous languages of the region, but also to a measure of cultural homogeneity, with elements of material culture as well as religious ceremonies being transferred between different groups.

The Witoto[248] (Huitoto) language family is a southern neighbor of the Eastern Tucano languages (fig. 6.3.1). The Witoto family consists of six languages divided into two main branches, Bora and Witoto. The first branch is made up of the Bora and Muinane languages that were once spoken north of the middle Putumayo River (which constitutes the present border between Peru and Colombia), but whose speakers have moved into Peru.[249] The second branch is made up of the Nipode, Minica, and Murui languages, while the Ocaina, spoken along the upper Amazon between the Napo and Marañon Rivers at the time of contact, is sometimes included in this branch and sometimes classified as a subgroup of its own (Ruth Wise 1999:310; Adelaar with Muysken 2004:449; Lewis 2009). Studies on lexical borrowing from Arawak into Witoto (e.g. terms for coca, drum, rattle, and an hallucinogenic substance) suggest that Arawak-speakers exerted profound cultural influence on the Witoto (Epps 2009:595f), and the close relationship between these groups is also illustrated by linguistic distribution maps showing pockets of Arawaks such as Yucuna, Resígaro,[250] and Uainumá in immediate contact with the Witoto (fig. 6.4.3). In this area was also found the Yurí language, a linguistic isolate situated inside the block of Arawak languages north of the middle Putumayo River (Adelaar with Muysken 2004:164) (figs. 6.3.1, 6.4.3). Yurí, also known as Xurúpixuna or Tucano-tapuya (although not genetically related to the Tucano language family), was once spoken south of the Amazon River, adjacent to the Omagua between the mouths of the Napo and Putumayo Rivers (Landar 1977:524; Campbell 1997:184). A genetic relationship between Yurí and Ticuna has been suggested (Kaufman 2007[1994]:62, qtd. in Campbell 1997:184).

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[248] Steward (1948b:749) considered the Witoto languages as genetically related to the Tupi family. Although modern linguistics recognize Witoto as a separate family, Steward's interpretation should be viewed as an indication of Tupian influence on the Witoto languages through Tupian raiding and trading expeditions up the Amazon and Putumayo Rivers, which brought the speakers into contact (fig. 6.3.1).

[249] Adelaar and Muysken (2004:164) also include the Miraña language in the Bora branch.

[250] The Witoto languages exerted strong areal influence on Resígaro (Aikhenvald and Dixon 1999:370), enough to prompt Steward (1948b:750) to consider Resígaro (and Andoke) as part of the Witoto family. There was also socio-cultural interaction between Arawak- and Witoto-speakers, bringing Arawak cultural traits such as the sacred bark trumpets and the habit of ritual blowing to Witoto shamans (ibid., 761). The Witoto-speaking groups also acquired many cultural features from their Eastern Tucano-speaking neighbors (ibid., 749).

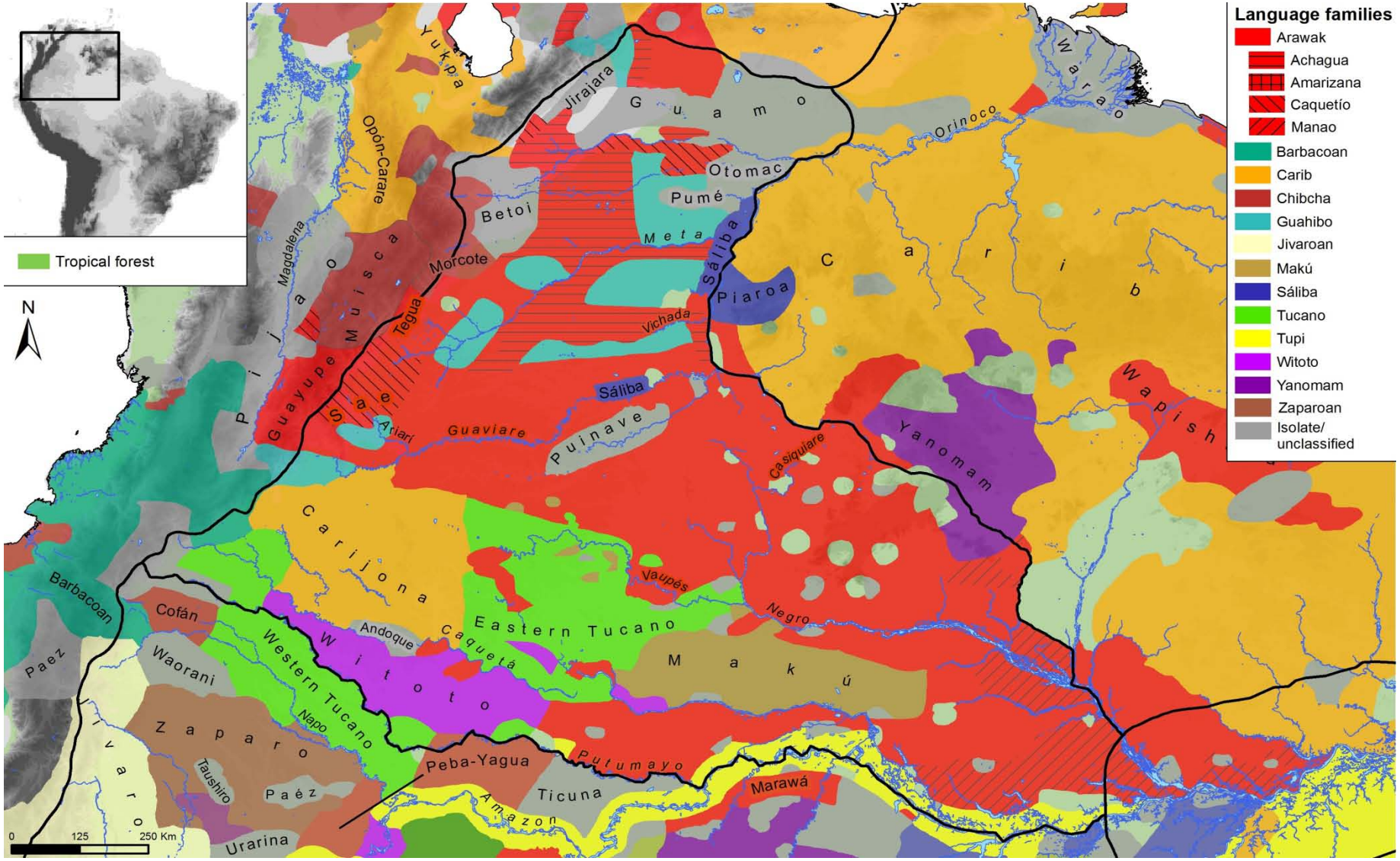

Figure 6.3.1. The distribution of ethno-linguistic groups in the northwest Amazon at the time of contact.

North of the Witoto are the Andoque (Andoké), speaking an isolated language and neighboring the Carijona, the only group of Carib-speakers in this part of the Amazon (fig. 6.3.1). Although the history of the Carijona remains somewhat obscure, linguistic evidence indicates that they are a relatively recent split-off from their linguistic relatives of the Guianas (Sergio Meira, pers. com., May 2010). Linguistically, Carijona is most closely related to Trio, in the eastern Guiana Highlands (Adelaar with Muysken 2004:161), and the relatively close resemblance between these two languages testifies to the relatively recent arrival of the Carijona language in southwestern Colombia. Lewis (2009) and Derbyshire (1999:24) also place Carijona in the same branch as the Carib languages of southern Guiana. It is interesting to note that Yukpa and Opón-Carare, Carib languages spoken in the area between the middle Magdalena Valley and Lake Maracaibo, do not seem to be closely related to Carijona. This is somewhat surprising, considering the relative ease with which contacts could have been maintained between Yukpa and Carijona via the Magdalena River.[251] Adelaar and Muysken (2004:50) point out that the Chibchan languages have a more extensive history than does Carib in the northern Andes. We thus have to assume that the Carijona language reached its present distribution via the Guaviare River, which may have been used as a route connecting speakers of Carijona with e.g. the Maquiritari on the upper Orinoco (fig. 6.3.1).[252]

In the southwestern corner of the region were the Koreguaje (Correguaje), Macaguaje, and Tama, Western Tucano languages separated from their Eastern Tucano relatives by the Carijona (fig. 6.3.1). The Macaguaje language was also spoken along the northern shore of the middle Putumayo River, as was Orejón, a Western Tucano language primarily found on the southern side of the Putumayo, i.e. in western Amazonia. During the colonial period, Siona, also a Western Tucano language, was considered important enough to be appointed a *lengua geral* by the Spanish (Adelaar with Muysken 2004:163).

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[251] To further complicate the situation, Pijao, an extinct and unclassified language once spoken along the middle and upper Magdalena, had Carib lexical influence and used Carib-derived toponyms (Adelaar with Muysken 2004:53). If indeed the Pijao language was Carib, contacts between the Carijona and Yukpa along the Magdalena Valley seem even more likely (fig. 6.3.1).

[252] Before the Carijona language acquired its present distribution between the Eastern and Western Tucano languages, it is likely that the Tucano-speaking groups formed a more coherent cluster. The Tucano languages could have been split into two entities either through a migration of Carib-speakers into the area via the Guaviare River, or, perhaps more likely, considering the history of multilingualism in the area, through a language shift from Tucano to Carib resulting from trade or intermarriage, as was the case with the Omagua, southern neighbors of the Western Tucano (see Epps 2009:588 for the Omagua case).

6.4 Ethnohistory

There are great differences between different areas of the northwest Amazon in terms of the ethnohistorical material available. In the northern part of the region, particularly the llanos, most material comes from the early days of European documentation, before the indigenous groups were displaced by cattle ranches, slavery, and epidemics. On the other hand, the upper sections of tributaries in tropical forest areas have yielded some of the best ethnographies in Amazonia. In the upper Orinoco/Río Negro area, many indigenous groups have found refuge from the most devastating effects of the European conquest, and until recently also from the modern nation states of Brazil, Colombia, and Venezuela. Although many of these indigenous groups have seen glimpses of western civilization for centuries, some have resisted "modernization", consciously struggling to maintain their indigenous identity.

The strong cultural continuities of indigenous groups in the northwest Amazon contribute to our chances of understanding complex socio-cultural processes dating back to pre-Columbian times. Direct analogies between ethnographic examples and prehistoric material are of course problematic, but the large amount of information on indigenous cultures of the upper Orinoco/Río Negro area should be regarded as a major resource for researchers interested in the specifics and generalities of cultural processes in the region. In particular, the documented continuities in material culture between prehistoric and ethnographic material, exemplified by ceramics in the upper Río Negro area (Neves 2001), presents a unique opportunity to attempt such investigations.

At the time of contact, most of the large-scale chiefdoms that had dominated the llanos, the Orinoco, and the main river up to about AD 1200 had broken down and been replaced by politically more fragmented, multi-ethnic interaction spheres. Although arguments seeking to explain these multi-ethnic alliances as consequences of the European arrival have been presented, a closer look at evidence from the late pre-Columbian period clearly indicates that such alliances began to form around AD 1000, that most of them were in full bloom by AD 1500, and that new ones continued to emerge at least up until the 1700s. Thus, at the time of contact the Orinoco River area was divided into a number of interaction spheres: the "middle Orinoco interaction sphere" or the "Multiethnic Network of the middle Orinoco" (including Trinidad and northwestern Guyana) centered around the mouth of the river (Boomert 2000; Heinen and García-Castro 2000); the "The System of Orinoco Regional Interdependence" (Arvelo-Jiménez and Biord 1994); the "Regional System of the Northwest Amazon" between the upper Orinoco River and the Río Negro (Thomas 1972:87); the "upper Río Negro Regional System" (Neves 2001:280) and the "Manao Political Macrosystem" (Santos-Granero

2002:33), which was composed of several multi-ethnic confederacies dominated by Arawaks[253] but including neighboring ethno-linguistic groups speaking languages belonging to the Tucano and Makú[254] families (Vidal 2000; Neves 2001). The llanos had seen the growth of multi-ethnic interaction spheres since the closing of the La Betania period around AD 1250 (Gassón 2002), a point in time that also saw the emergence of the Caquetío, Achagua, and Otomac macro-polities in this region (Spencer 1998:108). Along the main river were the Arawak-speaking Manao, part of Vidal's (2000:635) multi-ethnic Demanao confederacy, and various Tupi-speaking groups such as the Omagua, Yurimagua, and Ibonama, which had emerged from ethnogenetic processes fusing Tupi-speakers and earlier inhabitants of the upper Amazon, possibly including Arawaks. At the time of contact, trade relations between Arawak-speakers of the middle Amazon such as the Manao and their Tupi-speaking neighbors were intensive, suggesting close interaction between speakers of these two language families also in pre-Columbian times. Thus, the first Europeans to enter the northwest Amazon were met by multi-ethnic confederacies characterized by intense exchange. In the llanos, some of this exchange consisted of flows of goods up and down the eastern Andean slopes, as well as to and from the Orinoco River via tributaries such as Apure, Meta, and Guaviare. On the Casanare River,[255] an upper tributary of the Meta, was the major trade center of San Salvador del Puerto de Casanare, combining a lowland location with easy access to the Andes (fig. 6.4.1). At San Salvador, the Arawak-speaking Achagua exchanged goods with the Muisca of the highlands and with other Chibcha-speakers such as the Morcote, ho dwelled in the lowlands. Initially, San Salvador appears to have been controlled by Chibcha groups from the highlands, but the Arawaks gained control of this trading center during the 1600s (Mason 1950:179; Gassón 2000:582). The Achagua traded *quirípa*[256] and agricultural products from San Salvador into the lower llanos and the Orinoco Valley, but their dominant position as traders of the llanos was lost following their involvement in the Spanish slave trade (Morey 1976:52). Historical descriptions of the Achagua thus frequently mention how they are constantly being attacked by neighboring tribes (Hernández de Alba 1948b:408).

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[253] Vidal (2000:635) refers to these multi-ethnic confederacies as Demanao, Madáwaka, Marabitana, Guaypunavi, Umasevitauna, and Darivazauna.

[254] According to Schmidt (1917 (1):4), the relationship between the Makú and Arawaks was hierarchical, as the Makú lived in a state of dependency on the Arawaks.

[255] The upper section of this river is also known as the Tocoragua.

[256] The Betoi, western neighbors of the Achagua, also manufactured and traded *quirípa,* as did the Puinave further south (Hernández de Alba 1948a:396; Hernández de Alba 1948b:406)).

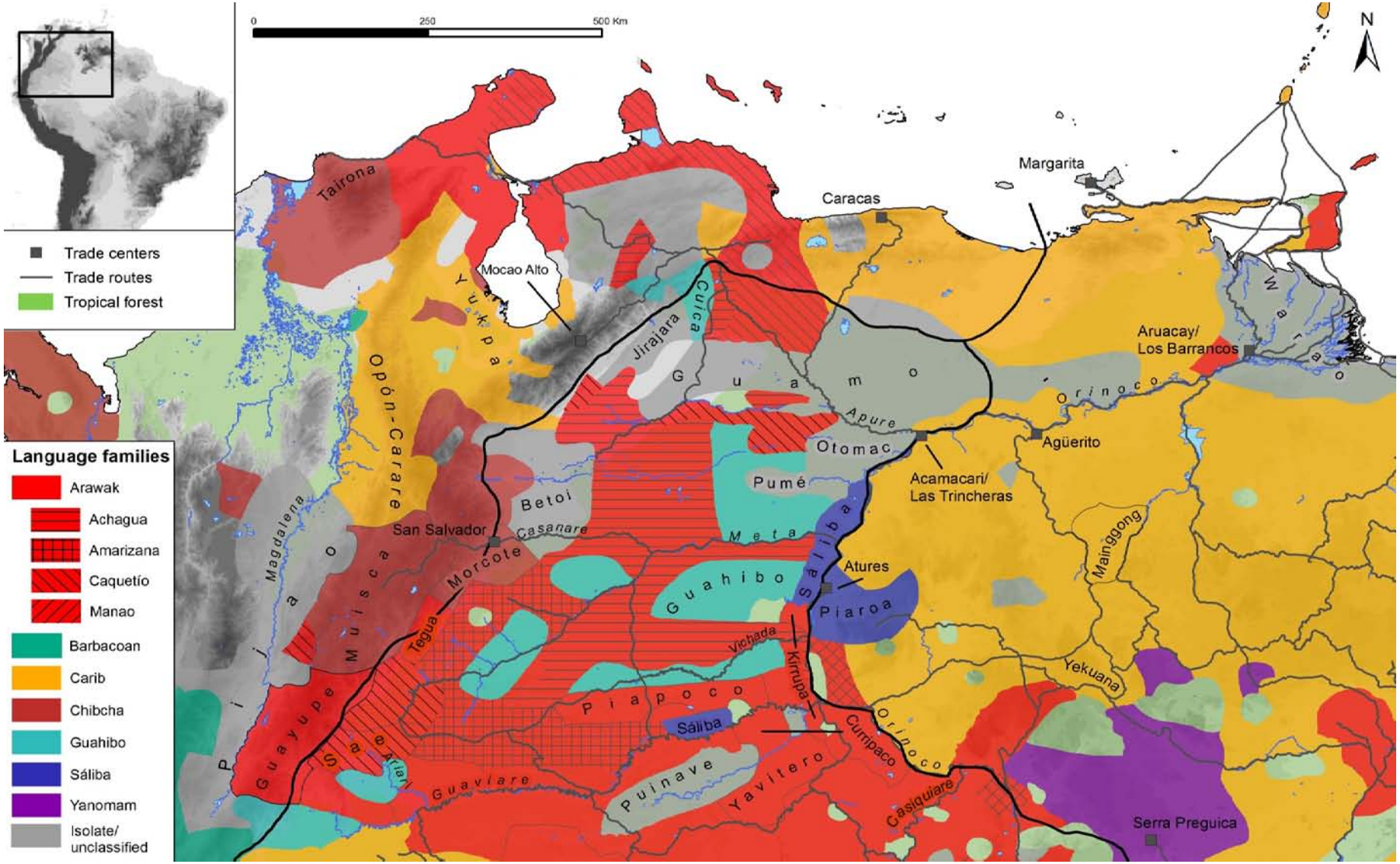

Figure 6.4.1. Trade routes of the northern part of the northwest Amazon and adjacent areas.

Following the decline of the Achagua, the Orinoco Caribs took over much of the trade in *quirípa* from around 1730. Through their alliance with the Dutch the Caribs received iron tools and weapons.[257] Before the Caribs gained control over much of the trade in the wider Orinoco region, coastal Arawaks (i.e. the Lokono) in the 1600s had travelled to San Salvador to exchange iron tools and hammocks for *quirípa* from the Achagua in the 1600s (Gassón 2000:593f). The products exchanged at San Salvador deriving from the Andes included gold, cotton cloth, and agricultural products, and most likely also *guanín*[258] objects, which were bartered against products from the llanos and the lowland forests (Morey and Morey 1975, qtd. in Hill 1996a:149-150; Gassón 2000:593). The Achagua, who recognized a specific social category of traders, conveyed products between the Guaviare and Casanare Rivers (Morey 1976:51f), establishing a link between communities in the llanos and the multi-ethnic confederacies of the tropical forest area between the Orinoco River and the Río Negro (fig. 6.4.1). Apart from *quirípa,* the second most important trade good for the Achagua was oil made from a fruit named *abay*. This oil was used for burning and was also applied in the hair. It was acquired from one of the Achagua subtribes, the Becirri (Hernández de Alba (1948b:406). Along the upper Meta River, between the Casanare and Guaviare, *quirípa* was also traded (Boomert 2000:434). This trade was probably initially controlled by the Arawak-speaking Amarizana, who inhabited the area in the early historical period (Aikhenvald 1999:71), but at least part of it was taken over by Caribs in the 1700s (fig. 6.4.1). The same transition occurred in the *quirípa* trade of the Guaviare River (Gassón 2000:594).

The Muisca, main exporters of highland products to the Achagua during the late prehistoric and early colonial period, consisted of a group of affiliated chiefdoms sharing a common language and ethnic identity (Langebaek 1991; Kurella 1998; Gassón 2002:252). The Muisca are reported to have had twenty regular markets at which exchange within the region took place, but they also had long-distance exchange with the Orinoco region in order to obtain exotic goods and raw materials for manufactures (such as cotton for weaving), which were processed into finished products and then exported back to the lowlands (Langebaek 1991:533f; Drennan 1995:318f; Gassón 2002:245). The highland chiefdoms were dependent on the lowlands for many items, particularly those used in shamanic activities such as hallucinogenic plants, e.g. *Anadenanthera*, which was grown by lowland groups such as the Tegua (Langebaek 1991:330f). The Tegua (Tecua), an Arawak-speaking group in the foothills below the Muisca (fig. 6.4.1), had a diversified subsistence strategy that involved growing a number of different plants and pursuing a broad-spectrum hunting strategy. This allowed them to produce a variety of products such as fish, exotic birds, maize, manioc, sweet potatoes,

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[257] For an account of this process in the Orinoco-Guiana area, see section 5.4.

[258] Hammered objects made of an alloy of gold, silver, and copper (Steverlynck 2008:574).

chili peppers, peanuts, gourds, honey, wax, coca, tobacco, *Anadenanthera*, and cotton, of which some could be exported to the Muisca in exchange for finished products such as cotton cloth (Langebaek 1991:332, table 1). The Tegua was one of the lowland groups that were crucial in providing the Muisca with highly valued shamanic equipment and esoteric knowledge. The Muisca considered the lowlands to be the center of shamanic activities (Landar 1977:451, 511; Langebaek 1991:333, 336).[259] Apart from interacting with the lowlands through trade and other forms of exchange, the Muisca also incorporated some of the ethnic communities of the lowlands into their political units, further indicating the tight integration between the highland and lowland communities during the late prehistoric and early colonial periods. Further east in the llanos, however, ethno-linguistic diversity seems to have been higher and the levels of sociopolitical integration lower (Gassón 2002:245). At least this was the situation following the demise of complex chiefdoms such as Gaván and El Cedral in the beginning of the first millennium AD.

Southwest of the Tegua lived another Arawak-speaking group called Guayupe. Unlike other Arawak groups in the region the Guayupe lived not only in the dense tropical forest along the Andean slopes, but also in the high Andes, above Caquetío groups in the eastern Andean foothills (fig. 6.4.1). In fact, the Guayupe exerted political control across the mountain range, dominating the area from the eastern slopes to the upper Magdalena Valley, where their territory was bounded by the eastern bank of the Magdalena River (Kirchhoff 1948a:385-391; Morey 1976:53f). This part of the river was reported to be highly multilingual in the 1500s (Adelaar with Muysken 2004:53). The highland location of the Guayupe is unusual but not unique among Arawak groups,[260] and it gave the Guayupe access to trade with the Muisca, who travelled south into their territory to exchange gold objects for cotton. The Guayupe also traded with more southern groups in the highlands, from whom they acquired gold, silver, and other jewelry in exchange for products such as coca, tobacco, *Anadenanthera*, and cotton (Kirchhoff 1948a:385ff; Langebaek 1991:332, table 1).

The Caquetío controlled the trade along a large part of the Apure River, but they were also widespread in the upper Meta area as well as in the northern llanos and along the Caribbean coast in the area of the Falcon and Guajira Peninsulas (fig. 6.4.1). Caquetío societies consisted of independent but ethnically related chiefly polities of a kind that were at the center of exchange systems in many areas of the northwest Amazon (Spencer 1998:108). Products

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[259] Another indication of the importance of lowland shamanic knowledge and material culture is the widespread occurrence of lowland iconography in Muisca ceramics and goldwork (Langebaek 1991:336).

[260] Some Caquetío groups were also located in the highlands (fig. 6.4.1). Other Arawak-speaking groups living at relatively high altitudes at the time of contact include the pre-Andine, Apolista, and some Chané groups further south in the Andes (see chapters 2 and 3).

manufactured and traded by the Caquetío included *quirípa*, ceramics, and various tree products, and they also conveyed turtle eggs and oil, fish, game, maize, manioc, chili peppers, honey and wax, tobacco, *Anadenanthera*, cotton, animal skins, and slaves. The Caquetío were also involved in the flow of goods into the llanos from the east, including such products as *curare*, vegetable dyes, and manioc graters, and they conveyed goods deriving from the Andes such as salt, gold, cotton cloth, lithic material, and probably also *guanín* objects (Langebaek 1991:332, table 1; Spencer 1998:109). Some of these goods, such as *curare*, were passed on to the Achagua (Hernández de Alba 1948b:408).[261]

In the northern llanos, the coastal branch of the Caquetío exported raw material for *quirípa* manufacture across the northern cordillera of Venezuela into the lowlands (Boomert 2000:434). This route partly followed the path from the cordillera to the site of Mocao Alto in the Cordillera do Mérida, where a workshop for serpentine artifacts was located in late prehistory (Wagner and Schubert 1972:888; Gassón 2002:248) (fig. 6.4.1). It also crossed the route used to transport gold from the Chibcha-speaking Tairona[262]'s workshops along the Caribbean coast east of the mouth of the Magdalena River into the Guianas, where one such item has been discovered at the Mazaruni River (Landar 1977:508; Whitehead 1990, 1996; Williams 2003:417) (figs. 5.4.2, 6.4.1).

An important part of the exchange in products from the Andes into the lowlands involved high-status objects such as *guanín* (Steverlynck 2008:574). These objects were exported from the mainland into the Lesser Antilles, from where the Island Carib brought them to the Taino[263] of the Greater Antilles. The *guanín* objects were manufactured in the central Andes, from where they were brought across the llanos via Arawak-speaking groups such as the Achagua and Caquetío into the Orinoco Valley and from there out into the Antilles (Boomert 2000:429f). In addition to the Achagua, other Arawak-speaking groups of the eastern Andean foothills, such as the Tegua and Guayupe, were probably also important participants in the *guanín* exchange system (fig. 6.4.2).

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[261] Another group that conducted trade in the llanos was the nomadic Guahibo, who moved across the savanna on raiding and trading expeditions (Morey 1976:43).

[262] For further information on the Tairona prestige-goods economy, see Bray 2003.

[263] Besides *guanín* and greenstone objects, the Taino also utilized a type of stone named *ciba*, similarly related to fertility, crops, women, and rain. Taino women are reported to have been wearing frog-shaped *ciba* stones during their pregnancy (Steverlynck 2008:574).

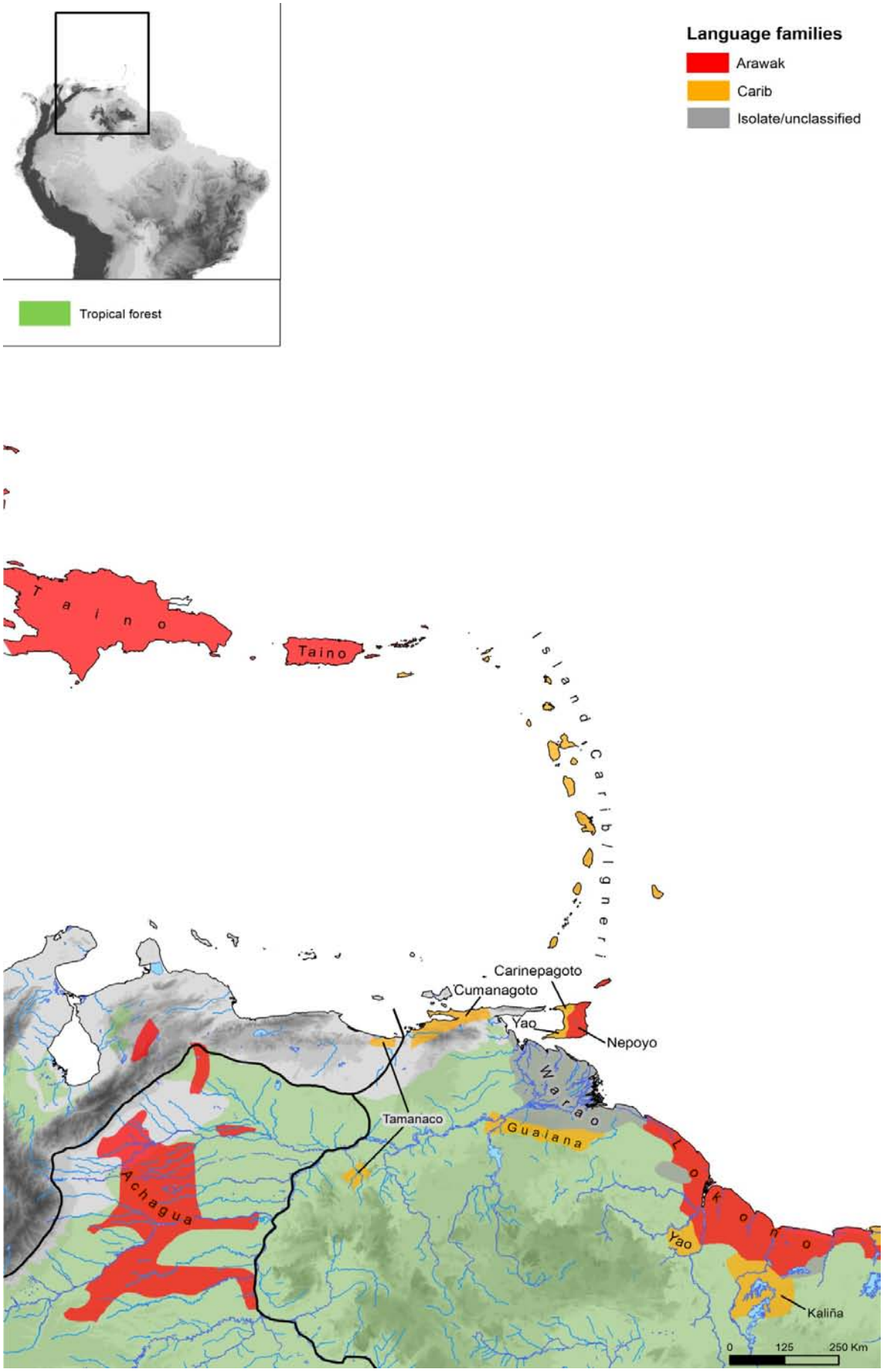
Language families
Arawak
Carib
Isolate/unclassified
Tropical forest
Taino
Taino
Island Carib/Igneri
Carinepagoto
Cumanagoto
Yao
Nepoyo
Tamanaco
Warao
Guaiana
Lokono
Achagua
Yao
Kaliña
0
125
250 Km

Figure 6.4.2. Ethno-linguistic groups involved in the trade with *guanín* objects.

Across the northern cordillera there was a lively trade in glass beads flowing into the northern llanos and further into the Orinoco Valley from the Spanish settlement of Caracas. In the Orinoco, the glass beads were bartered further inland to groups such as the Pemon by the Sáliva-speaking Piaroa (Gassón 2000:596) (fig. 5.4.1, 6.4.1). The Sáliva groups were also involved in the Spanish slave trade[264] (Morey 1976:48), but managed to maintain their population more successfully than many other indigenous groups of Amazonia involved in these kinds of activities. The Piaroa also manufactured and traded *curare* poison to the Carib-speaking Yekuana and received blowguns in return (Coppens 1971, qtd. in Butt-Colson 1973:58) (fig. 6.4.1). In the Vaupés area, the Yurí were one of the groups manufacturing and trading dart poison (Métraux 1948e:709). One of the Piaroa-speaking groups of the upper Orinoco was the Ature,[265] a group of specialized traders occupying the Atures Island in the Atures Rapids (fig. 6.4.1). The Ature are said to have subsisted entirely by catching and trading fish (Morey 1976:44), a business that may have been stimulated by demand along the Río Negro, known as the "river of hunger" (Hill 1989:16).[266] The Ature were specialized traders, even importing the wood used to smoke the fish they caught, and the strategic location of their settlement prompted groups from the llanos, the tropical forest, and the middle Orinoco to travel there to trade (Morey 1976:49).

This part of the Orinoco was also an important route for traders from the middle Amazon area. The route along the Amazon, Negro, Casiquiare, and Orinoco Rivers in the 1600s brought *curare* poison and resins to the middle Orinoco in exchange for turtle oil, smoked fish, and *quirípa*[267] (fig. 6.4.3). The upper Orinoco was part of the Arawak trade network that

[264] The Sáliva group engaged in slave trade with the Spanish may have been the Chimere, a populous community of about 15,000 people, according to sources in the early 1600s (qtd. in Morey 1976:49). It is also reported that the Arawak-speaking Caverre captured and sold Sáliba-speakers as slaves (Hernández de Alba 1948b:408).

[265] The Ature (Áture) were contacted by Europeans already in 1584, and reportedly had a population of 5000 in 1680 (Morey 1976:49). They were again contacted by Europeans in 1750 and 1767, but became extinct after these contacts (Nimuendajú 1987). They are now classified as speakers of the Piaroa language (Lewis 2009).

[266] One of the indigenous forms of adaptation to the scarcity of the Río Negro Basin was the establishment of high-intensity landscape management systems, such as large-scale fish trap systems (see section 6.2).

[267] As mentioned in chapter 5, *curare* was also manufactured and traded in the middle Orinoco area by the Arawak-speaking Caverre, who inhabited the upper section of the Guaviare River (Roth 1924:635f; Hernández de Alba 1948b:409) (fig. 6.4.3).

connected groups such as the Manao[268] of the lower Río Negro and middle Amazon with their linguistic relatives of the upper Río Negro and other Arawak-speakers of the upper Orinoco such as the Kirrupa (Quirruba), Yavitero, and Mandahuaca. It also served as a transportation route for goods brought in from the Guaviare River, such as *quirípa*. *Quirípa* was also being brought to the Orinoco River from the Caquetá Basin via the Casiquiare (Morey and Morey 1975, qtd. in Hill 1996:149f; Santos-Granero 1992:29; Boomert 2000:434; Gassón 2000:594) (fig. 6.4.3).

South of the Orinoco, in the Río Negro Basin, the Manao controlled much of the trade between the Amazon, Andes, and Orinoco regions. The Manao imported gold from the Andes into their territory along the middle Río Negro via the Vaupés, and gold was also brought into this area via the Caquetá, eventually ending up among the Omagua of the Amazon River (Porro 1994:84; Newson 1996:218ff; Boomert 2000:430). One of the Omagua subtribes, the Curuzirari, received gold ornaments from the Manao and manufactured pottery[269] that was being traded to neighboring tribes. Another Omagua subtribe, the Aisuari,[270] manufactured excellent painted pottery and shell beads that were traded to neighboring tribes in exchange for slaves, which gave the Aisuari access to iron tools from the Europeans (Métraux 1948e:705) (fig. 6.4.3). The Manao also manufactured large canoes, and they traded gold, vermillion, manioc graters, hammocks, and clubs and shields to the Yurimagua, another Tupi-speaking group inhabiting areas adjacent to the Curuzirari (Métraux 1948e:707, 709). Manioc graters are also reported as a trade item characteristic of the Arawaks of the Vaupés-Caquetá area (Goldman 1948:778). Along the middle Río Negro, the Manao in the 1500s and 1600s controlled trade routes from the Essequibo drainage system via the Trombetas, and they probably also conveyed the greenstones being mined at Serra Preguica and brought to the Tupians along the Atlantic Coast via the Amazon, Negro, and Demini Rivers around the time of contact[271] (Myers 1981:21; Boomert 2000:426) (fig. 6.4.3).

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[268] Another factor uniting the Manao with other Arawak-speaking groups in the region was their strongly developed social hierarchies (Métraux 1948e:709), a trait that was characteristic of Arawak-speakers throughout Amazonia (see Santos-Granero 2002).

[269] This painted pottery was probably a late variant of ceramics of the Amazonian Polychrome tradition, typical of contact-period Tupi-speaking groups along the main river.

[270] The Aisuari (Aizuare, Aicuare) may have been the same tribe as the Curuzirari (Nimuendajú 1987).

[271] Besides the greenstone trade directed eastward from Serra Preguica, some of the trade was probably also directed northward, judging from the discovery of a greenstone amulet at El Cedral in the Venezuelan llanos. The Cuiva, a Cuiba-speaking group of the Guahibo family inhabiting the Andes above the northern llanos, also utilized greenstones (Gassón 2000:587).

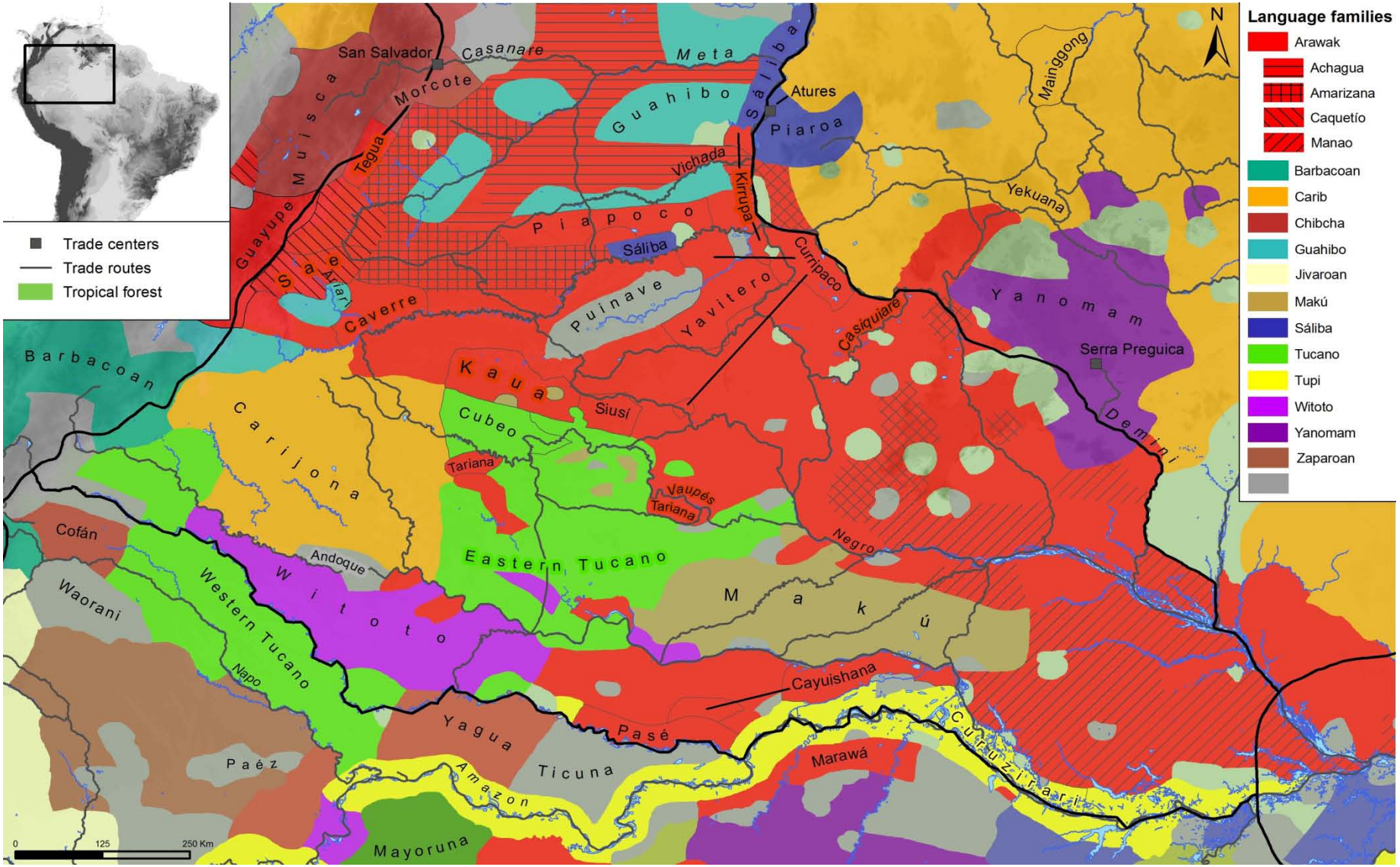

Figure 6.4.3. Trade routes of the southern part of the northwest Amazon and adjacent areas.

The Witoto-speaking groups, inhabiting the area between the Caquetá and Putumayo Rivers, were dependent on an unknown source for their imports of lithic material for stone tools. Witoto-speaking groups involved in the local trade network included the Menimehe, who traded pottery, the Witoto, who were specialized in tobacco and hammocks, and the Bora, who had expertise in mats and other woven products. The Carib-speaking Carijona were specialized in the distribution of dart poison in the area. Each Witoto-speaking group is reported to have had their own specific style of pottery (Steward 1948b:754f), confirming that ceramics were an important means for expressing ethnic identity. Finally, along the Amazon, large amounts of goods and knowledge were being transferred between regions as far apart as the middle Amazon and highland Ecuador (Santos-Granero 1992:29).

A unique and important source of knowledge on indigenous trade routes in the northwest Amazon is the mythology and ritual associated with the Arawak ancestor figure *Kúwai*. Recorded among several Arawak groups in the area, the myths and chants of *Kúwai* constitute a record of extensive transportation routes used historically by the ancestors of modern Arawaks. The *Kúwai* routes comprised a system of named places that were reiterated in religious ceremonies in the form of ritualized chanting of place names along the most important routes of communication in the region (Vidal 2000, 2002; Hill 2011; Wright 2011). During a female initiation (*málikai*) ceremony lasting for nearly six hours, a chant owner among the Arawak-speaking Wakuénai[272] lists a number of places along the Içana, Negro, Cuyarí, Guanía, and Casiquiare Rivers that constitute the ancestral territories of the group. The memory of riverine routes listed during male initiation rituals reaches even further,[273] including place names from as far away as the middle Orinoco and Amazon Rivers (Hill 1996a:153f; 2002:235f; 2009:250). Similar chants have been documented among the Baniwa and Hohodene[274] (Wright 1993, 2011), Piapoco (Vidal 1987), and Warekena (Gonzalez Ñañes 1986), all Arawak-speakers of the northwest Amazon. As pointed out by Hill (2007:10), the geographical positions of place names chanted by the Arawak shamans roughly correspond to the distribution of Arawak-speakers north of the Amazon at the time of contact.

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[272] The language of the Wakuénai (Waquenai) is classified as a dialect of Curripaco (Kurripako), which is closely related to Baniwa (Aikhenvald 1999:70; Lewis 2009).

[273] According to Goldman (1948:783, 787f, 795), chants about the ancestors were also directed to newborns, and the sacred flutes used during male initiation rituals were known as the "ancestor horns" – sacred trumpets stored in an equally sacred hiding-place by the river bank. Besides being represented by the trumpets, the ancestors could also be depicted in petroglyphs, signaling the importance of long-term, materialized relationships to past generations.

[274] Hohodene (Hohôdene) is classified as a dialect of Baniva do Içana, which is the Brazilian name for Curripaco (Aikhenvald 1999:70).

The *Kúwai* routes were no doubt established in the pre-Columbian period but show clear continuities into the colonial period, when they were used to resist European attempts to subdue the native groups of the northwest Amazon. In the early days of the historical period, during the 1500s and 1600s, the Warekena and Baré, the two Arawak-speaking groups of the northwest Amazon among whom the actual use of the *Kúwai* routes has been best documented, were organized into a regional exchange system together with the Manao (Vidal 2000:648, 2002:259; Neves 2001:280). This regional system was characterized by a flow of trade goods through the *Kúwai* routes and further into adjacent trade networks and more distant interaction systems, e.g. that of the Lokono (Vidal 2000:649, note 18). Partly still in operation today, a central feature of the *Kúwai* routes is the flow of language and esoteric knowledge through religious ceremonies conducted throughout the region.

The flow of language and other forms of non-material culture side by side with material artefacts transported along the *Kúwai* routes illustrates the existence of what Santos-Granero (2002) calls the Arawak "matrix", a cultural package comprising *both* material and non-material culture (including language). The Arawak regional exchange system diffused both these aspects of human culture, and the best ethnographic examples that still illuminate this system are to be found among the Arawak-speaking groups of the northwest Amazon. As mentioned above, there are clear continuities between the *Kúwai* routes documented in the historical period and the prehistoric exchange systems of the region. Furthermore, the *Kúwai* system represents a survival of the Arawak regional exchange system into the historical period, suggesting a way to decipher the cultural operation of the prehistoric Arawak regional exchange system and the Arawak matrix at the pan-Amazonian level.

The connection between the *Kúwai* routes and the hypothesized Arawak regional exchange system can be established through several convergences. First, the two systems had both sacred and secular functions, as exemplified by the fact that the routes were both physically travelled (during trading expeditions) and the subject of mental journeys (during shamanic séances). Wright (1993, qtd. in Chaumeil 2007:273) mentions the trade routes of the Achagua and Manao as similarly serving both secular and sacred functions. Secondly, important cultural events such as the celebration of *Yuruparí* festivals, which combine music, religious ceremonies and social interaction and are still being celebrated in the northwest Amazon, are intimately connected to *Kúwai* and to religious events in other parts of the Amazon that were once connected to the northwest Amazon through the Arawak regional exchange system, such as the Llanos de Mojos and the upper Xingu. The word *Yuruparí* is a northwest Arawak name for the sacred flutes that are played in pairs during the religious festival (Wright 2011), indicating the centrality of these instruments for the ceremonies. The use of the *Yuruparí* concept among Tucano-speakers, including both the linguistic term and the actual instruments, is the result of

borrowing from their Arawak-speaking neighbors (Hill 1996a:148). In Nheengatú,[275] the Tupi-based *lingua franca* of the early colonial period, *Yurupari* actually translates into *Kúwai*. During *Yurupari* festivals sacred flutes and trumpets are always played in pairs. The similarity between this performance and ritual performances in other areas that were once parts of the Arawak regional exchange system was noted by early comparative ethnographers such as Izikowitz (1935), and has been confirmed by recent publications (Wright 2011).

Besides being the ancestor from whose body the world of humans was created, *Kúwai* also provided material for the ritual wind instruments used in religious ceremonies. The *Yurupari* flutes are artefacts directly derived from the bones of the mythological hero and thus representatives of the ancestors (Steverlynck 2008:580). In the words of Robin Wright (2011):

> *"After his* [Kúwai's] *sacrificial death in an enormous conflagration, from the ashes of his body emerged the sickness-giving spirit* Iupinai *but also a giant tree from which the sacred flutes were made, and it is with these flutes that traditionally the men initiated boys and girls in the major rituals held at the beginning of the rainy season."*

Overall, the sacred wind instruments of the Arawaks were one of their most central characteristics. Sacred flutes have been known to occur among a number of Arawak-speaking groups of the northwest Amazon, including the Achagua, Baniwa, Baré, Cabiyarí,[276] Curripaco, Maipure, Matapí,[277] Pasé,[278] Resígaro, Wakuénai, Yucuna, and Yumana, and they also occur among neighboring non-Arawak-speaking groups who maintain close socio-cultural contact with the Arawaks (Chaumeil 2007; Wright 2011) (fig. 6.4.4). Chaumeil (1997, qtd. in Steverlynck 2008:579) points to the connection between the sacred flutes complex of the

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[275] In the upper Río Negro area, many speakers of Eastern Tucano as well as Arawak languages shifted to Nheengatú in the historical period and some groups still maintain this language (Neves 2001:273; Epps 2009:588). The Nheengatú spoken by Tucano and Arawak groups of the area has developed morphosyntactic and phonological features matching the original languages of the speakers, which distinguishes this version of Nheengatú from that spoken by other communities in Amazonia (Epps 2009:588). Epps (ibid.) suggests that Cocama and Omagua, neighboring Tupian languages of the upper Amazon, may be examples of early language shifts from Arawak to Tupi along the upper Amazon. If so, this would not only explain the non-genetic relationship between Cocama and Omagua, but would also confirm that these types of language shifts occurred before the arrival of Europeans. Most importantly, it would establish a continuous corridor of Arawak-speakers running from the northwest Amazon into the upper Amazon, connecting the former area with the Chamicuro and Campa groups of the latter region (see also Cabral 1995; Michael n.d.:7f).

[276] Cabiyarí (Cauyari, Cabuyarí, Acaroa) is classified as a dialect of Tariana (Landar 1977:454).

[277] Matapí (Matapí-tapuya) is also known as Yucuna (Lewis 2009).

[278] Métraux (1948e:708) writes that the "Pasé were considered the most advanced Indians of the middle Amazon."

northwest Amazon and the use of ceremonial trumpets by Taino shamans of the Greater Antilles. These Taino shamans also made use of small stone figurines, resembling the quartz stone pendants of the northwest Amazon and the widespread *muiraquitas*.

Chaumeil (2007:265) notes how Arawak-speaking groups dominate the sacred flutes complex throughout Amazonia, and Wright (2011) identifies the sacred flutes as an important element in the expansion of Arawak languages. Arawak-speaking groups located outside of the northwest Amazon who also use sacred flutes include the Apuriña[279] of the Purús River; the Baure and Mojo in the Llanos de Mojos; the Parecís further west; and the Mehinaku in the upper Xingu. Other groups belonging to the same complex include a few Tupi-speaking groups such as Cocama and Omagua, Mundurukú, Tupinambá, and Kamayurá. In the upper Xingu, the complex also spread to the Carib-speaking Kalapalo and Bakairí, who were "Arawakized" by their Mehinaku, Kustenau, Yawalapití, and Waurá neighbors (Chaumeil 2007:266, fig. 8.4). Another widespread feature of the sacred flutes complex was ceremonial blowing associated with ritual wind instruments and the habit of blowing smoke during shamanic séances,[280] as documented e.g. among the Achagua (Hernández de Alba 1948b:411). The importance of blowing was given such importance that the sorcerers became known as "blowers" (Goldman 1948:797).

[279] The sacred flutes of the Apuriña, *Kamatxi*, are reported to have been very similar to the flutes of the northwest Amazon (Wright 2011:454), indicating close cultural contact between these two Arawak clusters, probably by way of the Purús River.

[280] Smoke was also blown during funerals (Goldman 1948:789), reflecting the association between this custom and the deceased ancestors.

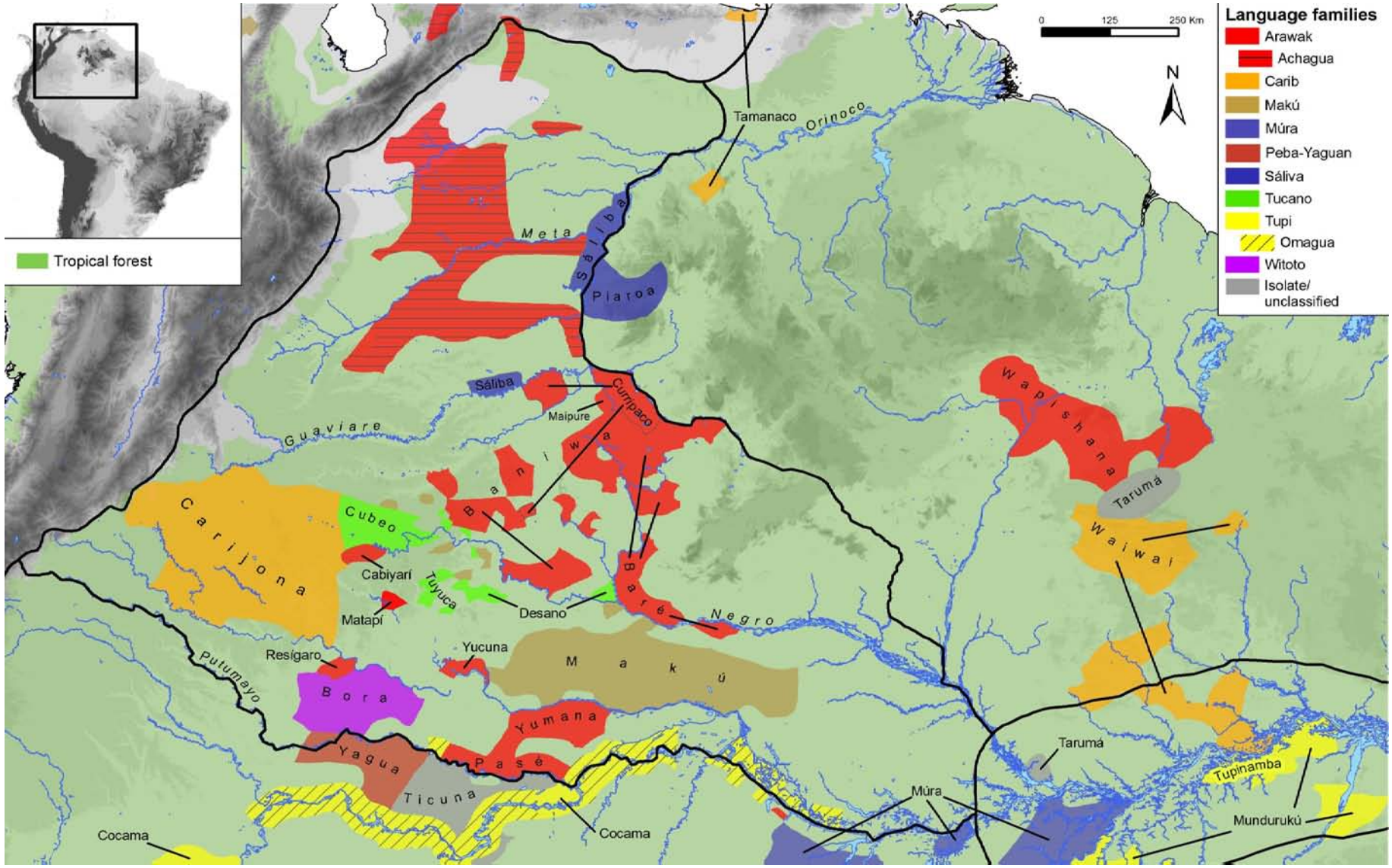

Figure 6.4.4. Ethno-linguistic groups of the northwest Amazon and adjacent areas sharing the sacred flutes complex.

Closely associated with the sacred flutes complex are elaborate burial rituals and different forms of endocannibalism identified among indigenous groups that were once part of the Arawak regional exchange system (Chaumeil 2007:245), indicating the importance of descent and ancestors among Arawak societies.[281] Among Arawaks of the northwest Amazon and other areas of Amazonia, a close link to the ancestors is indicated by secondary burials in urns that could be stored and visited by future generations, and many Arawak groups are known to have had cemeteries or caves for storing the ancestors (ibid., 250ff). Another way of maintaining a close link to the ancestors was through ritual consumption of their remains, as illustrated by the Arawak-speaking Guayupe and Sae,[282] who cremated their ancestors and drank their ashes mixed with beer (Kirchhoff 1948a:387f). The Tupi-speaking Cocama of the upper Amazon, inhabiting an area once heavily influenced by the Arawak matrix, also had secondary urn burials (Chaumeil 2007:250), as did many other Tupi-speaking groups on the main river during late prehistory.[283] The funerary urns of the Guarita subtradition of the Amazonian Polychrome tradition, shared by Arawak- and Tupi-speakers in this part of Amazonia, was undoubtedly closely associated with the ancestor-focused ceremonial life of Arawak-speaking groups of the northwest Amazon. Other Arawak-speaking groups who also utilized urn burials included the Pasé and Cayuishana, north of the Amazon (Métraux 1948e:710) (fig. 6.4.3). As noted by Neves (2001:275), the ceramic material from the northwest Amazon Arawaks of the historical period shows continuities linking it to Guarita ceramics of the late prehistoric period. Another indication of sustained interaction between Arawak-speakers of the northwest Amazon and Tupi-speakers of the main river is the important role of small stone pendants used by both language families. While among the Tupians of the main river, greenstone pendants or *muiraquitas* were widespread symbols of mythical power and social status, quartz stone pendants assumed a similar importance among the Arawaks of the northwest Amazon (Goldman 1948:785; Steverlynck 2008:578). According to Steverlynck (2008:579), the social status of northwest Amazonian chiefs was marked by a large quartz cylinder worn across the chest. This cylinder imitates the original quartz pendant, *itá-tixáua*, which was given to the

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[281] Another indication of the importance of ancestry in the northwest Amazon is that the special wood (*Iriartea* sp., *Bactris* sp.) used to manufacture both sacred flutes and weapons is cultivated by indigenous groups on old habitation sites, making their harvest a reason to return to the dwellings of the ancestors. Among the Yagua and Mayoruna (both close neighbors of Arawak-speaking groups along the upper Amazon) the *Bactris* palm is explicitly associated with the ancestors (Chaumeil 2007:270) (fig. 6.4.3). Cultural performances focused on ancestry are also reported from Witoto male initiation rites, which are described as ancestor cults (Steward 1948b:749) and seem related to similar rites reported from their Tucano-speaking neighbors (Goldman 1948:768). Goldman (ibid.) also mentions the importance of descent among both coastal and inland Arawaks.

[282] The Sae language is classified as belonging to Caquetío (Landar 1977:503).

[283] Large funeral urns for direct burial have also been discovered close to the city of Manaus (Métraux 1948e:707).

ancestors by the primordial female shaman creator. According to the mythological narrative, *itá-tixáua* was then passed on, together with feather headdresses[284] and other ritual paraphernalia, from the ancestors to *Kúwai*, in order for him to establish society.

An interesting feature of the use of stone pendants across Amazonia is the symbolic correspondences that such artefacts share across vast territories; although greenstone is sometimes replaced by quartz or other types of lithic material, the mythical content (symbolizing women, fertility, and water) of the artefacts remains the same over large areas. This phenomenon seems to be related to one of the recurring themes of Amazonian mythologies: the exchange between women and men (Steverlynck 2008). An interesting example of the mythological tension between women and men across Amazonia is the recurrent taboos surrounding the sacred flutes, which once in the past belonged to the women, but must now be kept out of sight of the women in order to conserve their mythological powers.

Connected with this theme is the myth about the transfer of *muiraquitas* from the female to the male realm. The stone objects that had been soft and malleable when part of the female, marine underworld were transformed into hard rocks when coming into contact with the sun and thus became objects associated with the male world (Steverlynck 2008:578). References to the transformation of stone from soft to hard have also been made by Arawak groups of the northwest Amazon when asked to explain the formation of petroglyphs in the region. According to the mythological explanation of these imprints, they were inscribed "when the rocks were still soft" (Zucchi 2002:208; Steverlynck 2008:578), i.e. when these sites were still part of the women's universe. Schmidt (1917 (3):21f) also interprets the rock art associated with Arawak speakers as a means of communicating mythological concepts. Among the Parecís, such concepts are embodied in hills and cliffs (ibid.), which recalls the use of topograms by the Yanesha (Santos-Granero 1998) and the northwest Amazon Arawaks. Other artefacts such as sacred flutes could be used to illustrate the exchange between men and women; thus, among the Wakuénai, the playing of flutes during rituals served to illustrate the ceremonial exchange between women and men (Steverlynck 2008:578, note 20). Another way to represent the mythological exchange between men and women in the northwest Amazon is through ritual blowing (Steverlynck 2008:581). Such blowing is a crucial component of Arawak rituals in the northwest Amazon (Métraux 1948e:711; Hill 2009:249, 259; Hill and Chaumeil 2011a), indicating the close interconnections between these different symbolic phenomena.

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[284] Feather headdresses are characteristic not only of the northwest Amazon Arawaks, but also of the coastal Arawaks (Goldman 1948:776).

In summary, the symbolic exchange of *ciba*, *guanín*, greenstone and quartz pendants, sacred flutes, and smoke between men and women establishes the social order of many Amazonian societies. As pointed out by Steverlynck (2008:576, 583f), "total social objects" such as *ciba* stones and *guanín* objects not only constitute social life but also serve as the basis for political leadership, thereby linking mythology, social life, and political power, particularly within the context of the Arawak matrix.[285] The role of such symbolic objects is particularly prominent among Arawak-speaking groups, and especially those of the northwest Amazon. These objects carry mythological meanings as well as material properties. This illustrates the importance of taking into account both the symbolic and material perspective when studying artefact distribution in Amazonia. Even cultural features directly involved in subsistence, such as raised fields or agricultural mounds, are not simply secular features strictly associated with subsistence. On the contrary, such earthen structures are as significant aspects of identification and phenomenological relationships with landscapes as they are aspects of physical geography.

[285] Among the Eastern Tucano-speaking groups living in close socio-cultural interaction with the northwest Amazon Arawaks, these "total social objects" are recognized as "Instruments of Life Transformation" (Steverlynck 2008:581), a category which includes the following objects: "rattle lance, shield, stool, cigar/tobacco, tobacco smoke, forked cigar-holder, gourds, gourd stand, coca, caimo and kana fruits/juice, adze, split-palm screen, maraca, *Yurupari* flutes, feather ornaments" (Hugh-Jones 2009, qtd. in Steverlynck 2008:585, note 27).

7. Conclusions

7.1 Regional integration, ethnogenesis, and the Arawak phenomenon

Although the trans-disciplinary database[286] presented in the previous five chapters will hopefully be useful as a point of departure for various interpretations of Amazonian prehistory, this chapter outlines some conclusions that appear particularly significant from the perspective of regional integration, ethnogenesis, and the Arawak phenomenon. The aim is to summarize evidence of long-distance connections indicating such regional integration, the distribution of central features of Arawak culture, and the diffusion of these features along particular routes of trade and communication. As argued in previous chapters, many of these features appear to have served as markers of ethnic identity, at least during certain periods and within certain areas. Besides Arawak languages, the list of features discussed in this context includes specific kinds of ceramics (including the Barrancoid style, burial urns, and the use of *caraipé* temper), various forms of landscape modification (including *terra preta* soils, raised fields, and other earthworks), and a ceremonial life emphasizing hierarchy, descent, certain kinds of wind instruments, ritual place-naming, and pyrogenic substances such as smoke and ash.

This tentative reconstruction of Amazonian prehistory builds on the observations of a long line of predecessors ranging from Schmidt (1917) and Nordenskiöld (1924) through Lathrap (1970) to Heckenberger (2002), Hill (2002), and Santos-Granero (2002). In a continuing struggle to avoid an essentialization of Arawak culture, the presentation frequently pauses to discuss moments in time and space when separate ethnic markers appear to diverge, as when a population shifts language or adopts a new ceramic style. A central focus of this inquiry, accordingly, is the relation between language and material culture. Although no one-to-one

[286] One of the main differences between this study and previous comparative studies on Amazonian prehistory lies in the use of G.I.S. as a tool for storing and analyzing the data. Although it is often argued that the empirical material from indigenous Amazonia available for scientific research is scarce, relatively large amounts of archaeological and historical material can actually be assembled for comparative studies, as shown by the present investigation. In order to collect, store, and analyze such large amounts of data from archaeology, ethnohistory, linguistics, and physical geography, a tool like G.I.S. is necessary, simply because the task of organizing such a vast material transcends the capacities of analog research. Also, the trans-disciplinary aspects of the research process have been facilitated by the possibility to analyze empirical material developed in various academic disciplines using a single research tool.

correspondence between a specific language and a specific variety of artefact can ever be taken for granted, previous chapters have indicated the extent to which such connections can in fact be traced over comparatively long time periods. Even if we cannot use discoveries of specific kinds of pottery as diagnostic of specific language groups, as suggested by Lathrap (1970), certain constellations of cultural features appear to have remained significantly coherent over time. A possible theoretical conclusion of this observation is that, contrary to much current theorizing in anthropology, pre-modern "cultures" can be approached as integrated wholes. It seems that various elements of the Arawak "matrix" (Santos-Granero 2002) have been reproduced as assemblages of mutually interdependent features. Upon closer examination, for instance, it is quite obvious how a specific Arawak language, the ritual chanting of place-names, riverside agriculture, trade, petroglyphs, ancestor myths, hierarchy, burial urns, *caraipé*, *terra preta*, smoke, shamanic blowing, and sacred trumpets can constitute a cohesive and cosmologically integrated whole. It is important to add, however, that such assemblages have no intrinsic connection to human genes. Given the exogamous marriage preferences of Arawak-speakers in various parts of Amazonia, it would be highly misleading to conceptualize Arawak culture as an attribute of a given biological population. This is one reason why the notion of demic migration, which has been extremely influential in previous reconstructions of Amazonian prehistory (e.g. Lathrap 1970), does not play a prominent role in the current account.

In order to set the stage, so to speak, for the emergence of an Arawak-mediated regional integration of Amazonia during the first millennium BC, the chapter also reviews significant cultural developments during the millennia prior to this integration. This includes identifying, in roughly chronological order, the earliest evidences of agriculture, pottery, sedentary settlements, social hierarchy, and long-distance trade in various parts of greater Amazonia. For geographical orientation beyond what is provided by the maps in this chapter, the reader may wish to consult the maps in chapters 2-6.

7.2 Regional interaction reflected in the early development of agriculture, earthworks, and ceramics

7.2.1 Western Amazonia

The millennia between 8000 and 5000 BP show the first signs of incipient agriculture in Amazonia (see Oliver 2008:208). The early archaeological sites of western Amazonia illustrate the transition from hunting, fishing and gathering to agriculture which eventually took place among most Amazonian societies at some point in the prehistoric sequence. At Lake Ayauchi and Maxus, sites dating back to the seventh and eighth millennium BP respectively, early signs of agricultural activities such as forest clearing and maize pollen have been recovered, confirming the association between these sites and similar complexes in neighboring regions

such as the Atures 1 and 2 complexes in the upper Orinoco area and the Abrigo do Sol and Gruta do Gavião sites in southern Amazonia (Miller 1977, 1987; Magalhães 1994; Silveira 1994; Barse 1995; Piperno and Pearsall 1998; Athens and Ward 1999).

Judging from the archaeological investigations in the Orinoco-Guiana area, where the Ortoiroid tradition of the archaic period has affinities with lower Amazon complexes such as Taperinha and Paituna and to archaic sites in Panama and Ecuador (Boomert 2000:74), it is not unlikely that the archaic sites of western Amazonia also had such long-distance relationships, e.g. with the lower Amazon.

The dating of incipient maize farming at Lake Ayauchi at 5300 BP (Piperno and Pearsall 1998:258) coincides with the inception of the late Alaka phase of the Guiana Littoral at 5250 BP (Boomert 2000:81), from which the first agricultural societies in the Guianas are likely to have evolved. Late Alaka had connections with the shell mound societies of the Mina phase at the mouth of the Amazon and with the archaic societies at Lake Geral on the lower Amazon, where forest clearings interpreted as early agricultural activities have been dated to 5760 BP (Bush et al. 2000). Judging from the datings of late Alaka, Lake Geral, and Lake Ayauchi, we may conclude that early agricultural activities and small-scale landscape modifications were being conducted simultaneously at widely separated sites in Amazonia between 6000 and 5000 BP.

Around 4000 BP it is once again obvious that transformations of subsistence strategies, involving agriculture as an increasingly important component, are fairly synchronized across Amazonia. By the advent of the early Tutishcainyo phase of the Zoned-Hachured tradition at 4000 BP, its ceramic affiliations along the Amazon included the Jauarí phase (4000 – 3800 BP) of the middle Amazon and later the Ananatuba phase (3600 – 3100 BP) of Marajó Island (Meggers and Evans 1957:174-194; Simões 1972:50; Simões and Araujo-Costa 1978:111; Neves 2008:364). In northwestern Guyana, the area influenced by the late Alaka phase saw the rise of small-scale horticultural societies by 4000 BP (Gassón 2002:286), while the closing of the Atures 2 phase in the upper Orinoco area at this time marked the final end of the broad-spectrum subsistence strategies that had proved so successful during the archaic, and from which the early horticultural societies had evolved. Finally, the Mina phase, whose subsistence strategy had been based on marine gathering, also came to an end around 4000 BP (Simões and Araujo-Costa 1978; Roosevelt 1995), providing yet another indication that a large-scale transition to agriculture was taking place across Amazonia at this time.

The early Tutishcainyo societies of western Amazonia followed a subsistence strategy based on manioc farming (Piperno and Pearsall 1998:312). In addition to the exchange relations reflected in the stylistic resemblance of their ceramics to other phases of the Zoned-Hachured tradition, they also had contacts with societies on the opposite side of the Andes. According to Brochado and Lathrap (1982:11), early Tutishcainyo was engaged in exchange with Valdivia

and Machalilla on the Pacific coast and with the Pastaza phase at the Huasaga site in the Ecuadorian Amazon.

Lathrap (1970:14) also associates the Tutishcainyo tradition with Saladoid material of the Orinoco Valley. It has been suggested that the Saladoid series of the Orinoco dates back to 2400 BC, making it contemporary with the Tutishcainyo tradition. As tempting as such a correlation might sound, such early datings from the Saladoid material of the Orinoco Valley is yet to be confirmed by excavations in the area. Meanwhile, archaeologists will have to try to explain the similarities between the early ceramics of the Ucayali and Orinoco Rivers without the support of undisputable Saladoid datings. An obvious but controversial solution is to view the Tutishcainyo tradition as ancestral to the Saladoid series and thus consider Tutishcainyo a transitional phase that evolved out of the Zoned-Hachured tradition around 4000 BP (2400 BC) and into the Saladoid series, spreading into the Orinoco Valley by 900 BC. Although such an account may appear tempting as a solution to this chronological problem, Saladoid ceramic material from geographically intermediate sites has not been found, which means that such explanations will remain speculative until further evidence is unearthed. However, it may be useful to bear in mind that (1) it has been suggested that the origin of the Barrancoid tradition, closely related to the Saladoid series, should be sought along the eastern slopes of the Andes (Boomert 2000:124) and that (2) *caraipé*-tempered pottery, which occurs in both these traditions, has been discovered at the San José de Ocuné and Ariarí sites in the northwest Amazon, suggesting a possible route to the eastern Andean slopes via the Guaviare and Vichada Rivers (see fig. 6.2.2). If these sites were indeed to be confirmed as related to the Saladoid and Barrancoid series, they would form an intermediate link between the early formative ceramic cultures of the Orinoco Valley and those of the upper Amazon.

The possibility of a connection between these two areas is interesting not only to archaeologists specialized in the study of ceramic styles, but also to researchers interested in broader questions of Amazonian cultural development. These ceramic traditions were highly influential across lowland South America and the societies associated with them should be key components in our understanding of general cultural development in Amazonia. Lathrap (1970:110-112) was quick to interpret the stylistic similarities between the Tutishcainyo and Saladoid pottery as an indication of the presence of Arawak-speaking peoples along the Ucayali River. Given the close association between Saladoid (and Barrancoid) pottery and the Arawak matrix discussed in previous chapters, the riverside agricultural orientation of the Tutishcainyo societies, the presence of a large population of Arawak-speakers in the upper Amazon area at the time of contact, and the fact that the Arawaks of the northwest Amazon share many linguistic and cultural traits with those of the upper Amazon all agree with Lathrap's interpretation. However, to strengthen the case that the Tutishcainyo tradition reflects the presence of Arawak-speakers along the Ucayali, a more careful investigation of the spread of the Arawak matrix through the regional exchange system is required.

In figure 7.2.1, suggesting a reconstruction of the Arawak regional exchange system at approximately AD 1000, the Arawak sphere of influence not only encompasses the area in the upper Purús/upper Ucayali region known to have been historically populated by Arawaks, but also the whole length of the Madre de Díos, Madeira, Purús, Ucayali, and upper Amazon Rivers. The Purús and Madeira Rivers probably served as communication corridors in the Arawak regional exchange system and help to explain the diffusion of several features of the Arawak matrix, such as the cosmology and technology behind earthwork construction that reached Acre and the Llanos de Mojos between 400 and 100 BC (Saunaluoma 2010), and the Barrancoid-style ceramics that reached the Llanos de Mojos by AD 600 and the upper Xingu area by AD 500[287] (Lathrap 1970:126; Heckenberger 2005:56, 2006:329, 2008:955; Walker 2008:936). Judging from the fact that the Barrancoid tradition was most coherent between AD 200 and 600 (Petersen et al. 2004:16), it is likely that the spread of Barrancoid ceramics along the Madeira and/or Purús Rivers reflects intense contacts with the societies manufacturing Barrancoid ceramics along the Amazon and north of the main river. The intermediate dating of Barrancoid pottery at Hupa-iya suggests that this complex could have been related to the ceramic and socio-cultural developments in the Acre and Llanos de Mojos areas around AD 1.

A slightly different account of the establishment of the Arawak regional exchange system south of the Amazon would interpret the agricultural component of the Arawak matrix as having spread first, predating the Barrancoid pottery by several centuries in Acre and southern Amazonia. If this was the case, agricultural societies based on *terra preta* farming along the middle and lower Amazon around 400 BC expanded along the Madeira as far south as the Llanos de Mojos, where earthworks would have replaced the role of *terra preta* as the main tool for landscape modification. Simultaneous with the spread of *terra preta* along the Madeira, this soil improvement technology would also have been brought into the upper Amazon, where some indications of *terra preta* have been associated with Hupa-iya sites (Myers 2004). Once the earthworks of the Llanos de Mojos had been established as a successful subsistence strategy about 400 BC, they expanded into the dryer environment of Acre by 100 BC, where the construction continued until AD 400. By AD 500 earthwork technology had spread east into the upper Xingu, where landscape domestication became a crucial foundation for the Arawak-speaking societies in the area (Heckenberger 2008). Barrancoid pottery, however, would have spread into western and southern Amazonia somewhat later. Once established in the middle and lower Amazon by 400 BC, Barrancoid pottery reached Hupa-iya by 200 BC but is not indicated in the Llanos de Mojos until AD 600. Almost simultaneously, by AD 500, it reached

[287] As mentioned by Heckenberger (2006:329, 2008:955) the occupation of the upper Xingu area may have begun already around AD 1. This is not unlikely, considering e.g. the establishment of agricultural earthworks in the Llanos de Mojos and in Acre between 400 and 100 BC.

the upper Xingu. This account also agrees with the observation by Petersen et al. (2004:16) that it is between AD 200 and 600 that the internal homogeneity of the Barrancoid series was at its greatest. The imperfect synchrony of agricultural technology and ceramic style is fully compatible with the ethnogenetic processes postulated as responsible for the diffusion of the Arawak matrix, in which cultural artefacts could be adopted at various times and locations and subsequently distributed throughout the regional exchange system.

Apart from Hupa-iya, the upper Amazon area also saw the development of several other ceramic phases related to the Saladoid and Barrancoid series. As mentioned above, Lathrap (1970:14) associated the Tutishcainyo tradition, dated between 2000 and 1000 BC, with the Saladoid series. After 1000 BC, Barrancoid-related ceramics are represented by the Chiguaza phase (1000 – 800 BC), and after Chiguaza, there is a chronological gap until the Hupa-iya phase (initiated at 200 BC), and shortly thereafter also the Yasuní phase, dating around AD 1. One of the late prehistoric ceramic phases of the area, Naranjal, is interpreted by Lathrap (1970:122f) as the remains of Hupa-iya societies that were "pushed away" from the Ucayali by Panoan populations (see also Brochado and Lathrap 1982:6).

7.2.2 Southern Amazonia

Between 1000 and 500 BC, Arawak-speaking groups along the middle and lower Orinoco River were beginning to gain influence in that region through the expansion of a cultural matrix that included the following elements:

- More or less sedentary settlements with complex spatial symbolism as an important component.
- Subsistence systems based on riverside agriculture and later *terra preta* farming at a more intensive level than previous horticultural societies.
- Non-predatory ideologies and defensive military strategies with suppressed endo-warfare.
- A hierarchical political organization founded on genealogy and inherited rank as the basis for leadership
- Regional sociopolitical interaction with an emphasis on trade and ceremonial exchange, including a tendency to establish socio-political alliances between linguistically related groups.
- A common high-prestige language.
- Ceremonies where this language was a crucial component.
- A material culture including certain artefacts connected to the above-mentioned ceremonies, and ceramics with advanced decoration and strong emphasis on status and ceremonial functions.

This cultural matrix began to attract and incorporate neighboring groups through ethnogenetic processes where language and ceremonies were crucial components, and became widespread through interaction networks based on the regional exchange system. The agricultural component based on a subsistence strategy focused on riverside agriculture and *terra preta* farming was an important part of the pattern, but should not be interpreted as a Neolithic Revolution in the sense suggested by e.g. Bellwood and Renfrew (2002). Important crops such as manioc, beans and *cucurbita* had been domesticated millennia before the Arawak expansion and were already widespread in lowland South America at 1000 BC (Piperno and Pearsall 1998; Oliver 2008).

There were different degrees of interaction between the full-scale Arawak societies that incorporated more or less all of the elements listed above and some neighboring groups who chose to interact mainly through trade, while maintaining their previous societies almost intact. Some populations became bilingual, others interacted through both intermarriage, bilingualism and ceremonial life, and yet others entered into more full-scale ethnogenetic processes through which their societies were more or less completely transformed.

Around 400 BC, the Arawak matrix had spread into the middle and lower Amazon region via the Río Negro. The Río Negro would be maintained as an Arawak stronghold, dominated by groups such as the Manao, well into the historical period, when many other groups had succumbed to the Europeans. Along the middle and lower reaches of the main river the Arawak matrix continued to expand, assimilating a number of societies that had previously occupied the region. At the mouth of the Amazon the Marajoara culture would later develop into an important manifestation of the Arawak matrix, incorporating all of the central elements of the concept.

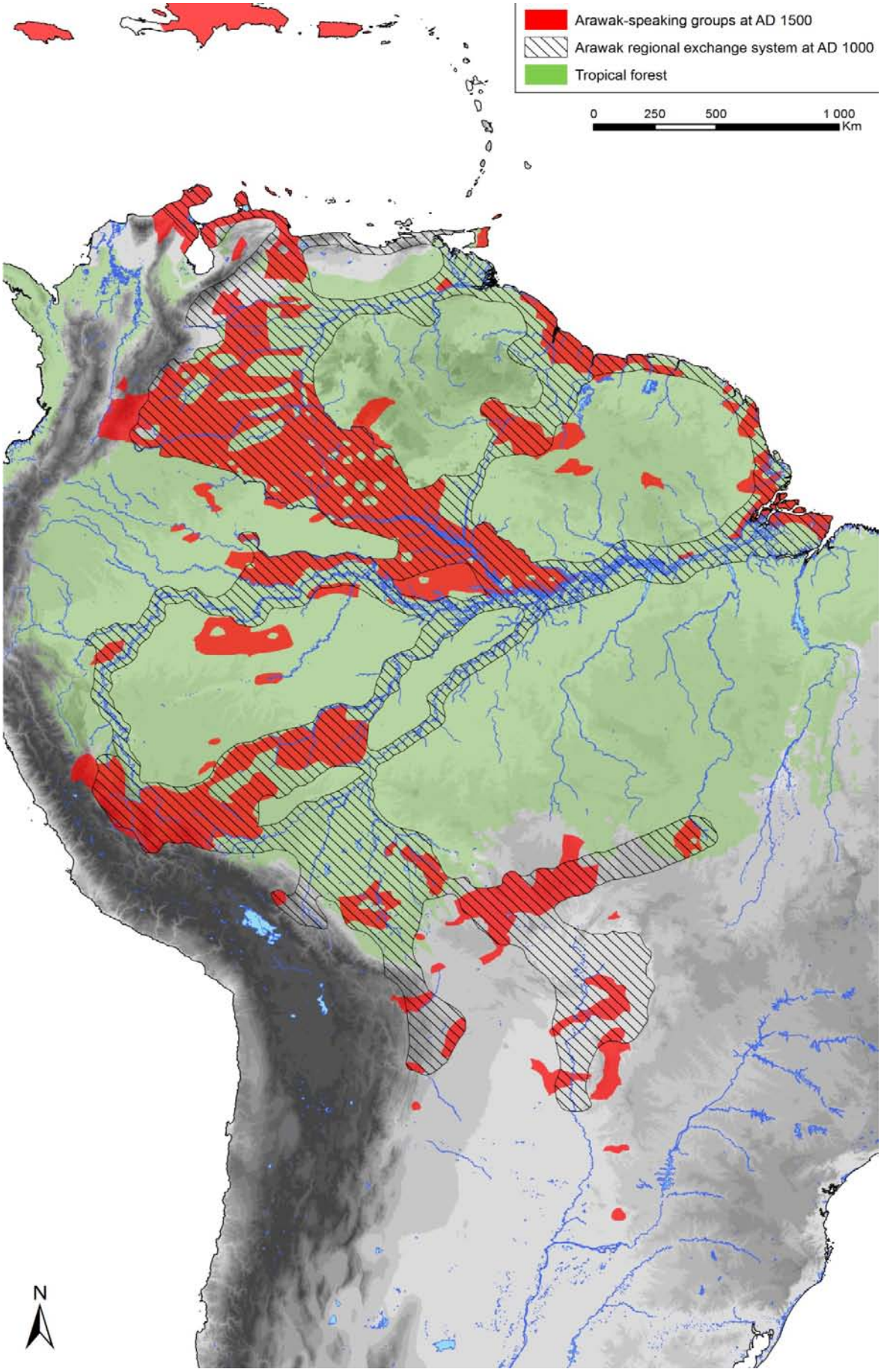
Arawak-speaking groups at AD 1500
Arawak regional exchange system at AD 1000
Tropical forest
0
250
500
1 000
Km
N

Figure 7.2.1. The postulated Arawak regional exchange system of Amazonia around AD 1000.

Contacts between the middle and lower Amazon and southern Amazonia must have been intensive, judging from the synchronized dates for the appearance of intensive agriculture in the two regions. Given the late dates for the appearance of Barrancoid ceramic influences in southern Amazonia, it seems plausible that some elements of the Arawak matrix, such as subsistence strategies, were adopted more quickly in this region. The Arawak matrix continued to expand in southern Amazonia after AD 1 and during the first half of the first millennium AD, occupations were established in the upper Xingu region. Between AD 200 and 600, Barrancoid-style ceramics exhibited their greatest range of influence and homogeneity, as continent-wide similarities appear, including the use of the same *adornos* in ceramics recovered thousands of kilometers apart. It is at this point in time that the Arawak regional exchange system reached its maximum extension in southern Amazonia.

At this point in time, also, the Amazonian Polychrome tradition begins to disperse through the interaction network established along the Amazon River and its tributaries. Although the origins of this ceramic tradition may be traced to an earlier period, as indicated by Miller's (1992a) dating of the polychrome Jatuarana phase sometime between 800 and 1 BC (Neves 2008:368), it is not until AD 500 that it begins its decisive expansion, ultimately stretching from the Atlantic Ocean to the Andes. In the Llanos de Mojos the Amazonian Polychrome tradition quickly became widespread, along with the concept of secondary urn burials typical of the lower Amazon.

Given the close correlation between complex trumpets, polychrome ceramics, and the concept of urn burials, it is reasonable to conclude that around AD 500 this pattern of religious ceremonies with adherent material culture in the form of sacred musical instruments had entered southern Amazonia. In the upper Xingu region societies developed in a manner similar to those of the Llanos de Mojos and the intermediate region. All shared an emphasis on spatial symbolism (e.g. circular plaza villages, radial road networks), pottery production, and religious ceremonies, later identified as characteristics of the historical Arawak-speakers of the region.

From about AD 1000 the Arawak dominance in southern Amazonia is increasingly eclipsed by that of the Tupi-speakers, whose expansion accelerates rapidly after AD 1200 and continues up until the time of contact. The Tupi utilized the interaction routes established by the Arawak regional exchange system and extended their influence throughout southern Amazonia, the lower and middle Amazon, and western Amazonia.

7.2.3 The middle and lower Amazon

The middle and lower Amazon region contains some of the first indications of landscape modification in Amazonia. The domestication of manioc had been initiated by at least 9000 BP (Piperno and Pearsall 1998:4; Oliver 2008:208) and by 7000 BP forest clearings indicating

larger-scale food production had emerged (Piperno and Pearsall 1998:4). At this time, human occupation in the middle and lower Amazon region is documented from several sites including Dona Stella (Petersen et al. 2004), Pedra Pintada (Roosevelt et al. 1996), and Taperinha (Roosevelt et al. 1991) (fig. 4.2.1). The Taperinha shell mound also contains the earliest known pottery in Amazonia (and in the Americas), dated between 8000 and 7000 BP (Roosevelt et al. 1991:1623). Although there is not yet any archaeological (neither palynological nor macro-fossil) evidence that the people of the Taperinha occupation were practicing horticulture, it is interesting to note how closely in time human settlement, ceramic production, and horticulture correlate in the lower Amazon region at around 8000 – 7000 BP.

At the time of the Mina culture (5500 – 4000 BP) (fig. 4.2.1), evidence for food production is strongly indicated by forest clearing at the site of Lake Geral, located about 15 km from the main river below the mouth of the Tapajós dated to 5760 BP (Bush et al. 2000). The Mina culture forms a continuation of Taperinha in the sense that shell mounds and ceramics are present in both contexts. No signs of food production have been discovered at the Mina sites, but given the difficult conditions for preserving the kind of archaeological material that would indicate such activities, it can hardly be taken as evidence that small-scale horticulture did not occur in the region at this time. The best indication of food production is perhaps signs of forest clearance identified in the palynological records, but it is necessary to remember that forest clearance could have been useful for a number of subsistence purposes, including the favoring of species utilized in hunting and gathering.[288]

At 3350 BP maize agriculture is indicated at the site of Lake Geral, but there is no evidence of large-scale production or consumption of maize at this point in time (Roosevelt 1980). At Caverna da Pedra Pintada, agricultural activities are indicated in the form of ceramic manioc griddles (*budares*) dated to 3600 – 3200 BP (1900 – 1300 BC) (Roosevelt et al. 1996:381; Oliver 2008:200).[289] Roosevelt et al. (1996:381) has labeled this ceramic phase Aroxí and assigned it to the Barrancoid series, significantly altering the ceramic chronology for the Barrancoid series in the middle and lower Amazon area. The dating of Aroxí would have been consistent with the long chronology for the Saladoid and Barrancoid series proposed by Roosevelt (1980) on the basis of her own excavations in the Orinoco Valley, but given the harsh criticism from specialists on that region (Sanoja and Vargas 1983; Gassón 2002; Zucchi

[288] For a recent summary of pre-Columbian forest modification in Amazonia see Balée and Erickson (2006).

[289] If the dating of the *terra preta* soils of the Jamari River to 2500 BC (Miller 1992a) are confirmed, this is yet another indication that agricultural activities were beginning to intensify as early as around 2000 BC in Amazonia.

2002) favoring a shorter chronology,[290] the dating of Aroxí remains inconsistent with the conventional, short chronology. The solution must be to relate Aroxí to another ceramic tradition, most probably the Ananatuba phase of the Zoned-Hachured tradition on nearby Marajó Island, established approximately 3300 BP (Meggers and Evans 1957:174-194; Neves 2008:364). A human cranium from the Aroxí material yielded dates between 3300 – 3000 BP, making it contemporaneous with the Ananatuba phase. Furthermore there is a relationship between the Ananatuba and Jauarí phases of the Zoned-Hachured tradition and early Barrancoid material from the Manaus region (Petersen et al. 2004:13). These two ceramic series are related through the use of *cauixí*-temper, Zoned-Incised decoration, and vessel shapes, and Petersen et al. (2004:8) claim that Barrancoid ceramics may date back to 950 BC at Açutuba. This early date makes the Barrancoid material of the Manaus region roughly contemporaneous with the Barrancoid material from the lower Orinoco. If confirmed by future excavations, these dates may prompt us to revise the chronology of the Barrancoid series in the Orinoco Valley.[291]

At the beginning of the Barrancoid series along the middle and lower Amazon (using here the more conservative estimate of about 400 BC) the first signs of high-intensity landscape management appear in the region. At this point, *terra preta* soils were beginning to form at sites along the main river and lower parts of the major tributaries (Petersen et al. 2001:100; Neves and Petersen 2006:290; Rebellato et al. 2009:20), and water management systems were being constructed at Marajó Island (Schaan et al. 2009:130). During this same period, the agricultural earthworks of the Llanos de Mojos were also being established (Erickson 2006:253).

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[290] One of the more recent summaries of this chronological issue is offered in the Handbook of South American Archaeology, where Navarette (2008:431) simply omits Roosevelt's earliest La Gruta phase from his chronological chart.

[291] If the chronology of the Barrancoid series in the middle and lower Amazon region can indeed be pushed back to 950 BC, as suggested by Petersen et al. (2004:8), it suggests an interesting correlation with events taking place in southern Amazonia shortly thereafter. The upper Madeira may have seen the first signs of pottery from the Amazonian Polychrome tradition already at 800 BC, correlating closely in time with the initial dating of the human occupation of the Llanos de Mojos at 900 BC (Miller 1992a; Erickson 2006:253). Such early dates also leave plenty of time for an establishment of the Barrancoid series in the Llanos de Mojos during the first millennium BC. Furthermore, we know that the Guarita subtradition of the Amazonian Polychrome tradition developed out of Barrancoid material in the central Amazon (Lathrap 1970:155-157; Petersen et al. 2004:9), an event that may have to be pushed back in time if the early datings of the polychrome Jatuarana phase of the upper Madeira are confirmed. On the other hand, the replacement of the Barrancoid and Paredão occupations by groups using Guarita ceramics in the central Amazon, dated to AD 900-1000 (Rebellato et al. 2009:22), does not support the hypothesis of such an early development of the Amazonian Polychrome tradition.

The Barrancoid pottery of the middle and lower Amazon is clearly related to the Barrancoid ware of the middle and lower Orinoco, but it also shares similarities such as *cauixí* temper,[292] Zoned-Incised decoration, and vessel shapes with the pottery of the Zoned-Hachured tradition previously established along the Amazon River (Petersen et al. 2004:13). It is also related to pottery excavated at Hupa-iya along the Ucayali River, dated to 200 BC (Lathrap 1970:117), to ceramics from the upper Xingu dated between AD 500 and 800 (Lathrap 1970:127; Heckenberger 2005:69), and to Barrancoid-influenced material from the Llanos de Mojos dated between AD 600 and 800 (Lathrap 1970:124ff; Walker 2008:936).

The indications of high-intensity landscape management in the middle and lower Amazon region that began to appear during Barrancoid times, around 400 BC (Petersen et al. 2001:100; Neves and Petersen 2006:290; Rebellato et al. 2009:20), also has counterparts in surrounding regions. Along the lower Orinoco, *terra preta* is documented from 900 BC (Oliver 2008:211), in the upper Amazon from 200 BC (Eden et al. 1984:126). The idea of improving soil conditions for increased agricultural production was apparently closely connected to the cultural matrix that also included Barrancoid ceramics. Through the trade routes along the main rivers and on elevated causeways and roads that were being constructed in various parts of the Arawak interaction sphere (e.g., the llanos in Venezuela, Llanos de Mojos, upper Xingu), a long-distance exchange network was being established.

The idea of rearranging the soil, not only for agri- or aquacultural purposes but also as a way of spatially structuring their domesticated landscapes, was crucial to the participants of the Arawak regional exchange system. High-intensity landscape management is one of the earliest components in the cultural matrix associated with this sphere of influence.

With an intensive, high-yielding agricultural system that had required substantial investments in labor, the incentives to remain sedentary increased in the middle and lower Amazon region from about 400 BC. The generally peaceful interaction documented among Arawak groups in the historical period (Hill and Santos-Granero 2002) can be recognized even at this early point, and it is not until more than a millennium later that fortifications begin to appear in the middle and lower Amazon and upper Xingu, probably as a response to pressure from raiding Tupian groups (Neves et al. 2004; Heckenberger 2005; Rebellato et al. 2009).

There was apparently a strong connection between the spatial organization of settlements, material culture in the form of manufactured objects, and the emphasis on ancestry, genealogy, and inherited rank. A central, practical and cosmological component seems to have been fire and its by-products charcoal, smoke, and ashes, which feature prominently in various social contexts. Charcoal and ashes were essential components in the formation of *terra preta*

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[292] *Cauixí* was used alongside with *caraipé* in various Barrancoid phases.

(Arroyo-Kalin 2009:53), and *terra mulata* was apparently created by low-intensive, near-surface burning aimed at storing burnt organic material in the ground (Arroyo-Kalin 2009:75). In the formation of *terra preta*, population density was a more crucial component than time (Neves et al. 2004:132),[293] suggesting that once this technology was adopted by a new group, relatively large areas of *terra preta* and *terra mulata* could be created fairly rapidly. Some *terra preta* sites in the middle and lower Amazon region were established later than the Barrancoid period. At Osvaldo, *terra preta* started to form around AD 600 – 700, and at Hatahara it was during the Paredão (AD 700 – 1200) and Guarita (AD 900 – 1550[294]) phases that this technology was implemented (ibid., 128f).

The period between AD 500 and 1000 is a very important sequence in the cultural processes that generated the distribution of ethno-linguistic groups at the time of contact. From about AD 500, a period of warfare was initiated in the middle and lower Amazon region that would last well into the colonial period (Neves et al. 2004:133). During the Paredão phase circular villages with defensive constructions predominate in the archaeological material and *terra preta* was being accumulated at the settlements (Neves et al. 2004; Rebellato et al. 2009). The combination of strategic positions, defensive structures, and large tracts of *terra preta* being accumulated contributed to making the Paredão sites attractive for settlement also for the surrounding groups. These *terra preta* sites, established during the Manacapurú and Paredão phases, "may have been associated with the arrival and spread of Arawak speaking peoples" (Rebellato et al. 2009:20).

Around AD 500, when the Barrancoid ceramics along the middle Amazon started to transform into a polychrome ware of the Guarita subtradition (Lathrap 1970:156), the significance of burning is reflected in the anthropomorphic burial urns typical of the Amazon Polychrome tradition, indicating a secondary urn burial in which the burning of the corpse and the storing of the ashes in the urn are central components. In some instances even the pottery itself included ashes in the form of *caraipé* (tree-bark-ash) temper, utilized in the Ipavu phase in the upper Xingu (Heckenberger 1996:136f), the Guarita phase in the middle Amazon (Petersen et al. 2003:252), the Mazagão phase in Maracá (Meggers and Evans 1957:596), the Koriabo phase of the Guianas (Boomert 2004:259), and, together with crushed sherds, in Marajoara (Brochado and Lathrap 1982:50). According to Boomert (2004:259) *caraipé* is generally the dominating temper used in pottery of the Amazonian Polychrome tradition. This

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[293] This view differs substantially from that of Betty Meggers (1971:12-14), who claims that dense cultural layers in Amazonia are a product of multiple re-occupations of the same sites by small groups of people through time, a position increasingly difficult to defend in the light of excavations conducted by the Central Amazon Project.

[294] The Guarita phase actually began around AD 500, but became widespread between AD 900 and 1550.

new ceramic technology was first developed during the transition between the Açutuba and Manacapurú phases and correlates with the emergence of *terra preta* (Arroyo-Kalin 2009:119).

7.2.4 The Orinoco-Guiana area

As mentioned earlier in this chapter, there are many indications of interconnections and exchange between the Orinoco-Guiana area and surrounding regions since the early archaic period. A study by Barse (1995) indicates that the Atures tradition (initiated 9200 BP) of the upper Orinoco shares a common origin with archaic complexes of the Bogotá plateau of the Andes, suggesting early interaction between these two regions separated by the llanos of Venezuela and Colombia. The beginning of the Atures 1 tradition is coeval with the earliest domestication of manioc at about 9000 BP (Piperno and Pearsall 1998:4; Oliver 2008:208). Although there are no indications of early farming activities in the Atures material, it is interesting to note that the Guiana Highlands is one of the two locations suggested to be the point of domestication of manioc,[295] and that groups with an attested broad-spectrum diet such as the inhabitants at Atures are particularly likely to have initiated such experimentation with food production.

At 7000 BP, at the beginning of the Atures 2 complex, the first occupation of the Taperinha shell mound of the lower Amazon is attested. At this point in time the inhabitants of Taperinha were producing the first pottery of the New World, and may have conducted forest clearings suggesting the first major wave of forest manipulation in order to improve human subsistence in Amazonia (Piperno and Pearsall 1998:4). In the Orinoco-Guiana area, the Banwarian subseries of the Ortoiroid tradition shares similarities with the Taperinha and Paituna complexes of the lower Orinoco, indicating a long-distance connection between these sites that was to grow stronger during the millennia to follow. Within the Guianas, early interdependence between the highlands and lowlands are indicated in the form of raw material imports for stone tool manufacture in the archaic settlements along the littoral at 7700 BP (Williams 2003:71).

The connection between the Guiana Littoral and the lower Amazon established by at least 7000 BP was maintained during the following centuries and by 5250 BP the art of pottery production had diffused from the Taperinha region to the sites of the Late Alaka tradition of the western Guiana Littoral (Boomert 2000:81). Late Alaka (5250 – 3300 BP) was a continuation of Early Alaka (7200 – 5250 BP) in terms of subsistence strategies and lithic technology, but with a ceramic component added to the inventory. It is likely that more organized forms of food production were underway in the Orinoco-Guiana area during Late Alaka, given that indications of such production have been noted from sites known to have

[295] The other is the highlands of the Brazilian Shield (see chapter 3).

been in interaction with archaic sites of the Orinoco-Guiana area, including the Lake Geral site located close to Taperinha, where indications of forest clearings for agricultural purposes are indicated from 5760 BP (Bush et al. 2000). Other such sites dated at 5150 BP (Piperno and Pearsall 1998:261) are in the Cauca Valley, west of the Bogotá plateau in Colombia, an area with which the Atures tradition of the upper Orinoco had been interconnected since the early archaic, facilitated by the excellent opportunities of transportation along the Meta River connecting the Orinoco and Andean regions with each other (Barse 1995).

Between 5000 and 4000 BP, the early ceramic-producing shell mound societies of the Late Alaka phase along the Guiana Littoral and the Mina phase around the mouth of the Amazon prospered and expanded. However, after the so-called freshwater climax at approximately 4700 BP, the shell mound societies of the Guiana Littoral experienced a gradual freshening of their marine catchment areas, resulting in a continuous decline of the shellfish species that formed the basis of their subsistence, eventually making the traditional subsistence strategy of marine gathering impossible. An arid interval around 3650 BP also contributed to the decline in available marine resources (Gassón 2002:287; Williams 2003:207). As the shell mound societies of the Guiana Littoral and the mouth of the Amazon began to decline, new subsistence strategies focused on more intensive use of domesticated plants emerged in both these areas.

By 2400 BC, the Mina phase was replaced by the Jauarí tradition, producing the first ceramics of the Zoned-Hachured tradition in the middle and lower Amazon region (Meggers and Evans 1957:174-194). At the same time, the Saladoid series emerges on the middle Orinoco, suggesting an almost synchronic development of more advanced ceramic manufacture in two geographically separate areas of Amazonia. Still within the Zoned-Hachured tradition, the successor of the Jauarí phase, the Ananatuba phase (3600 – 3100 BP) of Marajó Island marks the emergence of large-scale social systems with increasing complexity at the mouth of the Amazon. This time period is of crucial importance, both along the middle and lower Amazon and in the Orinoco-Guiana area, because it marks the establishment of agricultural intensification in both areas.[296]

The knowledge of food production through the use of domesticated plants was no doubt widely diffused via the exchange networks established in northern Amazonia since the early archaic period. The exchange in the region had been gradually intensified during the archaic, e.g. through the construction of transportation channels connecting the Waini and Barima Rivers (Williams 2003:132), facilitating the diffusion of goods, ideas and technologies. The

[296] On Marajó Island, a substantial portion of food production would have built on the construction of water management systems for fish farming (Schaan 2008). Still, this marks an important difference from archaic subsistence strategies and the societies associated with them.

transition in subsistence strategies from marine gathering to agriculture was probably fairly smooth, perhaps similar to the Warao transition from palm starch to manioc as the main source of carbohydrates (ibid., 261, 265).

In the Guianas, the time around 1500 BC marks the transformation from the archaic to the agricultural period. As suggested previously, this date can only indicate a point in time on a scale of increasing agricultural intensification, but nevertheless it was a time of great changes in many areas of Amazonia. 3350 BP is the date of the first occurrence of maize pollen at Lake Geral, and it marks the beginning of the Ananatuba phase on Marajó Island. Some of the technical and stylistic elements, as well as various socio-economic phenomena typical of the Barrancoid[297] expansion and the subsequent Arawak regional exchange system also originated around 1500 BC, or perhaps even earlier. But it is not until 600 – 700 years later that we see the expansion of an integrated cultural pattern, including a linguistic component, out of the Orinoco Valley. However, early occurrences of some components of this cultural pattern can be seen as indications of the long and complex cultural history of the Orinoco-Guiana region, and of the early establishment of an interaction network capable of transmitting cultural traits among the diverse ethno-linguistic groups inhabiting the region during the late archaic and early agricultural periods.

At around 900 BC, Barrancoid pottery began to occur along the upper Orinoco in the form of the Isla Barrancas phase, along the lower reaches of the river in the form of the Barrancas phase, and shortly thereafter (around 800 BC) along the Guiana Littoral in the form of the Mabaruma phase. This marked the initiation of what would become a pan-Amazonian network for the diffusion of material and non-material culture that we have referred to as the regional exchange system. In the lower Orinoco region, advanced pottery in the form of the Saladero phase had been present since around 1300 BC (Roosevelt 1997; Boomert 2000), but it is not until 900 BC that the Barrancoid series begins its expansion out of this area. The first major expansion seems to have been directed southward toward the middle Amazon River, where it was fully established by 400 BC, and later continuing further south into the Llanos de Mojos and the upper Xingu.

7.2.5 The northwest Amazon

As mentioned previously, the most ancient evidence of cultural connections involving the northwest Amazon are indications of exchange between the Andean area and the lowlands, as represented by the relationship between the Atures 1 tradition and archaic complexes of the Bogotá plateau (Barse 1995). The two Atures complexes (dating from 9200 – 7000 and 7000

[297] The Ananatuba phase shares similarities with the Barrancoid series such as the use of *cauixí* temper, Zoned-Incised decoration, and certain vessel shapes (Petersen et al. 2004:8).

– 4000 BP, respectively) are associated with a broad-spectrum subsistence strategy with many different components, suggesting that it was one of the possible centers of early agricultural experimentation during the late archaic. Contemporary with the Atures 1 complex is the earliest occupation at the Peña Roja site, dated to 9250 BP. Together with the Guayabero complex located in the lowlands close to the Andes, the Peña Roja and Atures occupations form the earliest known human occupations in the northwest Amazon. Well-known as an important transportation route throughout history, the Casiquiare River, connecting the Orinoco and the Río Negro, may have been used for communication between the Atures complexes and the archaic groups of the middle Amazon. The rivers draining from the Andes into the Orinoco and Río Negro would have facilitated contact also with the inhabitants of Peña Roja and Guayabero.

Lacking seacoasts, the northwest Amazon area never had marine gathering societies like those that produced the shell mounds of the lower Amazon and the Atlantic and Caribbean coastlines. Inland complexes such as Atures and Peña Roja were a crucial factor in the early agricultural experimentation taking place in Amazonia during the late archaic, while the shell mound societies were able to retain their traditional subsistence strategy focused on marine gathering. Indeed, Oliver (2008:208) views early complexes associated with broad-spectrum subsistence strategies such as the ones mentioned above as "itinerant gardeners", characteristic of several Amazonian sites between 8000 and 5000 BP. Around 5000 BP, clearer indications of agriculture are evident at several sites across Amazonia, including Abeja in the northwest Amazon, where maize pollen and forest clearing have been dated to 4700 BP (ibid., 204). The site most closely associated with Abeja is probably the site of Lake Ayauchi in the Ecuadorian Amazon, dated to 4570 BP, also associated with maize pollen (Bush and Colinvaux 1988). Another site with similar dating and findings is Lake Geral on the middle Amazon (Bush et al. 2000).

By 4000 BP evidence of agricultural societies producing formative ceramics has been found in northwest Guiana, the Orinoco,[298] and the upper and middle Amazon. Even though no ceramic remains of the Zoned-Hachured tradition (4000 – 3100 BP) have been discovered in the northwest Amazon, the presence of prehistoric exchange systems connecting the area to the Amazon River, where Zoned-Hachured ceramics were widespread, indicates that the inhabitants of the northwest Amazon had some kind of relationship to the manufacturers of this pottery.

[298] Although the dating of the Saladoid series is controversial, most scholars studying this area agree that the transformation to agriculture occurred around 2400 – 2000 BP (Rouse 1978; Roosevelt 1980; Oliver 1989; Boomert 2000; Gassón 2002; Williams 2003).

The millennium between 4000 and 3000 BP has yielded very little archaeological data for the northwest Amazon, and it is not until the establishment of the Caño del Oso phase, the initial component of the Osoid tradition, at 2950 BP that we know substantially more about cultural development in the area. The makers of Caño del Oso phase ceramics relied on maize as part of their diet and constructed the first habitation mounds in the llanos (Zucchi 1968:135, qtd. in Gassón 2002:255). The primary occupation of the Caño del Oso phase at 2950 BP coincides with the initial occupation of the similar ecological niche in the Llanos de Mojos in southern Amazonia, where human occupation began around 900 BC (Erickson 2006:253). This close correlation in time between widely separate, probably Arawak-speaking societies that began to farm the wet savannas of northern and southern Amazonia suggests some kind of interaction between these areas already at this early date. A few centuries later, the Arawak regional exchange system connected the two llanos with other savanna areas like Marajó Island and the Guiana Littoral. It is also noteworthy that landscape modification in the (Venezuelan) llanos around 900 BC was coeval with another form of high-intensity landscape management, the production of *terra preta* soils, also dating from 900 BC at Barrancas (Oliver 2008:211).

As noted by Gassón (2002:256), the simultaneous development of agricultural societies in the llanos and the Orinoco Valley was based on the *Pollo* variety of maize, particularly during the La Betania phase of the Osoid tradition. The differences in agricultural technologies between the two areas should not be taken to indicate cultural differences, but simply local adaptations to the conditions in two different ecological niches. Instead of cultural differences, we may assume that the groups of the llanos and the Orinoco Valley were connected through sharing some of the early features of the Arawak matrix, and that they were two of the earliest nodes in what was to become the pan-Amazonian Arawak regional exchange system. This is not to say, however, that ethnic and cultural differences did not exist in the northwest Amazon at 1000 BC. On the contrary, the manufacturers of Cedeñoid ceramics in the middle Orinoco Valley, who used a distinct subsistence strategy as well as distinct pottery, indicate that different indigenous societies expressed their separate identities through persistent differences in material culture and lifestyle. Another example of a locally distinct ceramic style in the northwest Amazon can be found in the Camani phase (800 BC – AD 1000), excavated in the Araracuara region, which demonstrated a similar, long-term continuity despite its position on the frequently travelled Caquetá River. The groups manufacturing Camani phase ceramics also diverged from their Barrancoid-making neighbors on the Amazon River by not adopting intensive agriculture until AD 200 (Oliver 2008:198), much like the Cedeñoid groups of the middle Orinoco.

At the same time as the first habitation mounds and *terra preta* soils were being established in the llanos and along the Orinoco, a similar development can be traced along the Essequibo River, where advanced ceramic production has been dated to around 1000 BC. The most well-known archaeological sites along the middle Essequibo, Kurupukari Falls and Errol's

Landing, have *terra preta* soils, and their ceramics are linked to Saladoid and Barrancoid pottery in the Orinoco Valley, Zoned-Hachured ceramics on Marajó Island, and pottery of the Amazonian Polychrome tradition on the Amazon River. All these links indicate an increasingly integrated regional exchange system in Amazonia around 1000 – 800 BC.

7.3 The relation between ceramic styles, language families, and socio-cultural organization

7.3.1 Western Amazonia[299]

According to Lathrap and his associates, several ceramic phases in western Amazonia dating to the first and second millennium AD were related to Arawak-speakers. One of these, Enoqui[300] (AD 1200 – 1500), like the Naranjal phase mentioned above, was located in the area occupied by pre-Andine Arawak-speaking populations (Yanesha and Anti) at the time of contact. Another phase attributed by Brochado and Lathrap (1982:14) to Arawak-speakers is Natá, located on the Amazon at Cushillococha, opposite the site of Finca Riviera and the Colombian *trapecio*. Prehistoric pottery related to ceramics manufactured by historical Arawak-speakers of the northwest Amazon have been discovered in the upper Río Negro area, not very far from Cushillococha (Neves 2001:274f), but in the Río Negro area ceramic continuity reflects the fact that the area has been continuously occupied by more or less the same ethno-linguistic groups since pre-Columbian times. At Cushillococha, on the other hand, the ceramic traditions related to the Arawak matrix were truncated following the ethno-linguistic disruption caused by the expansion of Tupian languages into the upper Amazon around AD 1000. Judging from the Zebu phase pottery unearthed at the Finca Riviera site on the opposite shore of the main river, across from Cushillococha, the expansion of Tupian languages, more precisely Omagua, into the area also brought pottery belonging to the Amazonian Polychrome tradition. After the demise of the Omagua in the 1700s, another type of pottery (the Ticuna phase) appears at the Cushillococha site together with the historical Ticuna, an ethno-linguistic group speaking a genetically isolated language. Both the Ticuna- and Arawak-speaking groups in the area may have been forced to relocate their settlements away from the main river following the Tupian expansion, but much of the expansion of Tupian languages in this particular area may have involved language shifts among the original inhabitants, prompted by small groups of Tupi-speakers expanding upriver. Such a process is strongly indicated by the recent rejection of a genetic relationship between the Omagua and Cocama languages, and by Epps' (2009:599) suggestion that the presence of Tupian languages along

[299] Parts of this section also appear in Hornborg and Eriksen 2011.

[300] The Enoqui phase was discovered at the Casa de La Tía site (fig. 2.2.2)

the upper Amazon may represent a local language shift to Nheengatú. Whichever is the case, it is likely that the Arawak-speaking Waraikú, living south of Cushillococha, away from the main river, are the remnants of a former extension of the Arawak regional exchange system in the area. Following the expansion of Cocama and Cocamilla up the Amazon around AD 1200, the connection between Waraikú and their linguistic relatives such as the Chamicuro and the pre-Andine Arawaks would have been lost.

Several attempts have been made to correlate the Tupi and Pano language families with material culture in the area. To Lathrap (1970; see also Brochado and Lathrap 1982), the Pacacocha (AD 300 – 900) and Cumancaya (AD 600 – 1700) traditions, as well as the Tournavista phase (AD 1300 – 1500) on the lower Pachitea River (believed to be associated with the Pano-speaking Cashibo), can generally be assigned to Pano-speakers. Cumancaya may even represent a continuation of Pacacocha; or at least traits were transferred from Pacacocha into Cumancaya, which is not surprising considering that these traditions were partly contemporary (Brochado and Lathrap 1982:7f). Panoan languages are believed to have dominated the area east of the Ucayali River for a very long time, probably several millennia (Carneiro and Wurzel 2011). There are, in fact, good reasons to believe that this is the area in which the Panoan language family originated.

If the ancestors of modern Pano-speakers at one point can be assumed to have been as homogenous in culture and social organization as they still are linguistically (Erikson 1993; Loos 1999), it is reasonable to suggest that the conspicuous differences between riverine and interfluvial Panoans were generated by their different degrees of integration in the regional trade system. The Ucayali River appears to have been a major trade route linking imperial highland centres like Wari (along the Apurímac) and Cuzco (along the Urubamba) to the tropical lowlands, and it also served as an important segment of the Arawak regional exchange system. Even though much of the trade along the Ucayali was handled by Arawak-speakers such as the Piro (Taylor 1999:199), Pano-speaking communities along the river were also unavoidably drawn into these expansive social networks. Interfluvial Pano-speakers like the Amahuaca and Yaminahua (the "wild Indians" contemptuously referred to by the river-dwellers) should thus not be viewed as refugees from the rivers but perhaps as more representative of proto-Panoan culture and social organization at a time when highland-lowland trade had not yet assumed the proportions that can be inferred for the Ucayali since what Andeanists call the middle Horizon (AD 600 – 1000). The material culture of the Mayoruna has similarly been interpreted as "proto-Panoan" (Steward and Métraux 1948:551).

The Panoan cluster of languages is often observed to feature a remarkable degree of homogeneity and mutual intelligibility from one end to another (cf. Erikson 1993), which has led some linguists to suggest that it represents "a fairly shallow time-depth and recent expansion and split" (Loos 1999:227). However, this homogenous cluster of languages is divided by two major rifts, one (socio-cultural) between the riverine and interfluvial groups

mentioned above, the other (geographical) between the main group of Pano-speakers in eastern Peru and western Brazil, on one hand, and a smaller cluster of Panoan and (probably related) Tacanan languages along the Madre de Díos and the Beni River in Bolivia (see Fleck 2011). The first of these divisions can probably be accounted for in terms of different degrees of involvement in riverine trade, but the second requires an explanation of the history of Arawak languages along the Purús River. It seems very obvious that this corridor of Arawak languages (Apurinã, the now extinct Kanamaré, Piro) at some point created a wedge through what was previously a compact Panoan territory (Erikson 1993:55). Two things suggest that this corridor is quite ancient: the possible derivation of all pre-Andine Arawaks from this intrusion, and the remarkable genealogical amnesia of Arawak neighbours along the Purús regarding their common ancestry (Gow 2002:153). The presence of Arawak- and Tupi-speakers in lowland Peru and on the Llanos de Mojos in Bolivia, however, does not appear to antedate the presence of Panoans in the area east of the Ucayali and north of the llanos (Carneiro and Wurzel 2011). We can be fairly certain that Panoan languages predated Arawak-speakers on the upper Purús, but we can as yet only speculate about the extent to which the intrusion involved displacement or assimilation of the ancient Pano-speaking population. It is not entirely impossible that the Purús has been an "Arawak corridor" during two separate periods in prehistory, perhaps roughly coeval with the early (100 BC – AD 400) and late (AD 900 – 1200) periods of construction of the earthworks in Acre, interrupted by a period of Panoan dominance in the centuries after AD 400. If this was indeed the case, the Panoan block at one time represented a wedge across what was previously a coherent Arawak territory, but as the Arawak presence was re-established, the roles were later reversed. This admittedly speculative reconstruction would harmonize with several other circumstances: the probability of ancient Arawak connections along the Purús already in the centuries before AD 1, archaeological indications of a Panoan expansion around AD 400 (cf. Lathrap 1970), the close affinity between Panoan languages on opposite sides of the currently Arawakized upper Purús, and the lack of acknowledged affinity between pre-Andine Arawak and Purús Arawaks such as the Apuriña.

Judging from the clear distinctions between the different pottery traditions and the strict associations between ceramic complexes and language families posited by Lathrap (1970), one might think that these puzzles were solved already in the 1970s. However, a close examination of the empirical material immediately complicates the picture: as noted by Brochado and Lathrap (1982:15) themselves, all ceramic complexes of the upper Amazon (with the possible exception of Pastaza) dating before 1000 BC seem to be related to each other in terms of decoration or vessel shapes, indicating that there was a constant flow of stylistic influence throughout the region. At this period in time, ceramics may not have been a primary means of expressing ethnic identity in this area. Several of the late prehistoric ceramic phases supposedly associated with Pano-speakers have been found within the traditional territories of Arawak-

speakers. This is the case of the Naneini[301] (AD 600 – 1100) and Sívia (AD 1000 – 1350) phases (fig. 2.2.2), the latter located far from the territories occupied by Pano-speakers at the time of contact (i.e. only 150 years after the supposed termination of the Sívia phase). Also, as mentioned above, the occurrence of burial urns in the Cumancaya tradition pottery (Brochado and Lathrap 1982:7) suggests influence from ceramics historically related to Arawaks and Tupians. Processes of ceramic hybridization were obviously responsible for some of these incongruities, but if Lathrap (1970) was right in that Naneini pottery was made by Panoan-speakers, it would support the proposal of a Panoan territorial expansion in the centuries following AD 400.

To the extent that correlations between language and material culture continue to be interesting and relevant, it is now generally acknowledged that they are fraught with great theoretical and methodological difficulties. It will not do to simply assume that changes in ceramic style correlate with changes in language, or that either of these changes correlates with patterns of human migration. Social and cultural theory can offer much more complex explanations for such discontinuities. Most important is the recognition that material culture and language tend to be media for expressing ethnic distinctness, that the incentives to communicate distinctness of identity can be expected to change over the course of history, and that ethnic identity need not have anything to do with migration. It is thus quite unwarranted to assume that a discontinuity in material culture necessarily represents demographic displacement due to the arrival of a new wave of migration, as Lathrap suggests. This is not to deny that the archaeological record, properly used, should have a lot to tell us about social processes in the past, but it is essential to keep in mind that the diffusion of languages and material culture frequently occurs through different and divergent processes. The presence of many features of the Arawak matrix, distributed along the Amazon, Ucayali, Madeira, and Madre de Díos Rivers through the Arawak regional exchange system, probably influenced the lives of most inhabitants of the region, regardless of language family.

In the eastern part of western Amazonia, a conspicuous gap characterizes the lower Purús and Madeira in linguistic maps reconstructing the situation at time of contact. Parts of the lower Purús were inhabited by Araua-speakers, once believed to be genetically related to the Arawak family but currently viewed as related to them merely through areal contact (Dixon 1999). Contiguous and parallel to this stretch of the Purús occupied by Araua-speakers is the lower Madeira, the obvious link between the Apurinã and pre-Andine Arawaks and the Río Negro, yet conspicuously empty of Arawak-speakers since the sixteenth century at least. During the

[301] On the upper Pachitea River, the Cobichaniqui tradition dominated the ceramic record during a period of nearly 4000 years, only to be interrupted by an intrusion of the Naneini complex about AD 600 (Myers 2004:89).

1700s and 1800s, the lower Madeira River was inhabited by groups of the Múra language family, but according to Aikhenvald and Dixon (1999:353), this expansion occurred after the original groups in the area had been eliminated by European diseases and Portuguese slave raids and thus offers no clue to which languages were spoken here at the time of contact. In order to understand this gap, we should consider the expansion of Tupian languages from eastern Amazonia in the centuries preceding European contact. The recent Tupi expansion over much of Brazil generally seems to have involved more military violence than did the largely mercantile and ceremonial Arawak expansion several centuries earlier, but even the Tupi were often inclined to incorporate and assimilate neighbouring groups (Brochado 1984:402f). It seems quite plausible that the disappearance of Arawak languages along the Madeira can be accounted for in this way.

It is worth noting that several discoveries of Guarita-style pottery have been made by archaeologists working on the lower Madeira. This is a type of ceramics that can elsewhere (particularly along the Río Negro) be correlated with a presence of Arawak-speakers. Alongside the Guarita ceramics, the long stretch of Araua-speakers north of and parallel to this zone may possibly be a reminder of the former presence of Arawaks in the area. For if there are linguistic similarities between Araua and Arawak strong enough to suggest areal affinities (Payne 1991; Facundes 2002:81f; Heckenberger 2002:103, 122, n.5), then the Araua should once have had Arawak-speaking neighbours. The Arauan languages may not be genetically related to Arawak (Dixon 1999), but may indicate a kind of historical "shadow" of their former presence in the area.

Considering the many small language families and language isolates of western Amazonia, some general observations can be offered. First, the incentives to communicate distinctness of identity can be expected to change over the course of history due to changing socio-cultural relationships. Secondly, this observation may help us explain why the small families and isolates managed to retain their languages despite frequent interaction with large and socio-culturally dominant language families: their languages had become means to distinguish themselves from and actually resist their more powerful neighbours. Given the many indications of multilingualism in the lowlands east of the Andes, in combination with the evidence of economic interaction, it appears that an individual's ability to master several languages was an asset in this part, as in many other parts, of pre-Columbian Amazonia.

Regarding the correlation between small linguistic groups and material culture, it is worth mentioning the local ceramic tradition of the Napo River, Tivacundo, which has been assigned by Myers (2004:90) to western Tucanoan groups. Despite dates no younger than AD 510 (uncalibrated) for the Tivacundo Phase, Myers posits a connection to the historical Encabellado and Abishira (Abixira) peoples. Not only is this correlation problematic due to

the large gap in the chronology, but also because the Abishira are no longer classified as Tucanoan-speakers.[302] In Myers' view, such local traditions were the decisive factor preventing the development of large tracts of *terra preta* in the upper Amazon area by blocking the long-term establishment of "Barrancoid peoples" with the knowledge to create *terra preta*. Although Myers' account of cultural development in this particular area appears somewhat static, it is not unlikely that distinctive languages and features of material culture were often used as means of resisting ethnic assimilation by powerful ethno-linguistic groups such as Arawak and Tupi that established themselves along the upper Amazon. In this respect, the local ceramic traditions of the Napo River probably functioned in a manner similar to the Camani phase of the Caquetá River. Once established as a sign of ethnic distinctness, such ethnic markers may prove very resistant to outer pressure, as indicated by the persistence of e.g. the Camani, Paredão, and Tivacundo complexes. A possible explanation for prehistoric socio-economic developments in the upper Napo area is that local forms of agriculture were sufficient to meet the needs of subsistence without the use of *terra preta*, and that local socio-cultural traditions were strong enough to resist the influence of the Arawak matrix in the area. However, in late prehistory, it appears that the presence of Tupi-speakers along the upper Amazon was felt also in the upper Napo area. Like the Caimito component of the Amazonian Polychrome tradition on the Ucayali, the Napo-style ceramics of eastern Ecuador can be attributed to Tupi-speakers, based on historical information.

7.3.2 Southern Amazonia

Many of the cultural elements that were reviewed in chapter 3 have been assigned either to speakers of the Arawak language family or to those of the Tupian family by earlier scholars reviewing the cultural history of southern Amazonia (e.g. Lathrap 1970; Meggers 1971; Brochado 1984; Heckenberger 2005). Considering the vast geographical distribution of the speakers assigned to these two language families and the cultural dominance they have exerted either through trade (mainly Arawak-speakers) and warfare (more significant in the Tupian expansion from AD 1200), such correlations should come as no surprise to us. There are, however, many other groups that have been significant in the spread of cultural elements in the region.

We must ask ourselves when the languages of southern Amazonia began to disperse and form the complex pattern that is evident in the distribution maps depicting the ethno-linguistic situation at AD 1500. The Tupian language family originated in southern Amazonia, more precisely in Rondônia, and thereafter spread over a large portion of South America south of the Amazon River (Rodrigues 1964). As is the case with all major linguistic entities in the

[302] Abishira (Abixira) is an extinct language classified as an isolate by Adelaar and Muysken (2004:620). Lewis (2009) leaves it unclassified.

region, the initial formation of the Tupian language family occurred several millennia ago, and it is extremely difficult to trace correlations between language and material culture dating this far back in time. More rewarding is to try to seek correlations relating to the position of these ethno-linguistic groups at a later point in time, when we have a fairly good idea about the geographical distribution of the different groups, and then try to reconstruct the earlier, pre-Columbian cultural history of the region.

There are several important points in time in the cultural history of southern Amazonia that are worth exploring more in detail through an examination of correlations between different data sets. One of the first such points is around 800 BC, when the Llanos de Mojos had just experienced the first human occupation of the region, which correlates closely in time with the earliest datings of the Jatuarana Phase of the Amazonian Polychrome tradition along the upper Madeira River.[303] Given the close proximity of these two regions and the possibilities for rapid transportation via the easily navigated Madeira River, we may suspect that these two events were related. It is possible that the societies along the Jamari and upper Madeira Rivers were beginning to expand, perhaps in conjunction with increased efficiency in agricultural production, and that this increase in population may have led to a dispersal into the Llanos de Mojos. This is also the point in time at which occurred the expansion of the Tupian language family, which appears to have originated in precisely this area (Rodrigues 1964). Its southern branch, Tupi-Guaraní, must have expanded south at some point, reaching its sixteenth century territory along the Paraguay River and the Atlantic coastline via the Madeira, Guaporé, and Paraguay Rivers. This expansion may have had effects on the demography of the Llanos de Mojos around 800 BC.

The initial expansion of the Barrancoid series and the Arawak matrix into southern Amazonia was treated in section 7.2.2, but the subsequent period, characterized by the expansion of the Amazonian Polychrome tradition, remains to be discussed. By AD 500, the Arawak-controlled interaction sphere encompassed much of Amazonia, uniting widely separated regions (Hornborg 2005). At this point in time we have indications that the Amazonian Polychrome tradition had begun to expand through the interaction network. As previously mentioned, the Amazonian Polychrome tradition may have been initiated some centuries BC in the upper Madeira region, but it is not until several centuries AD that it began its major territorial expansion. Neves (2008:368) tentatively suggests a correlation between manioc and peach palm farming, *terra preta* technology, polychrome ceramics, and Tupi-speakers expanding out of the upper Madeira region around 500 BC, but there are no signs of such an expansion

[303] There are reasons to believe that humans had entered the Llanos de Mojos at a much earlier date, although this remains to be documented through archaeological excavations. Given the early datings of human occupation from other sites in southern Amazonia (see section 3.2 for details), mobile groups of hunter-gatherers may have visited the area for millennia.

outside of the upper Madeira Basin at this time. As has been previously discussed, all of the components mentioned by Neves may have been in place along the upper Madeira by 500 BC, but there is not yet any evidence for an expansion outside of the region either of *terra preta* farming or polychrome ceramics. Manioc farming, on the other hand, was already widespread at this point in time (Oliver 2008).

At AD 300 polychrome ceramics suddenly appear in the archaeological material from Marajó Island at the mouth of the Amazon. As has been suggested by Neves (2008:368), this may indicate a connection between the Marajoara culture and the societies inhabiting the upper Madeira Basin, clearly suggesting the wide-reaching nature of regional interaction at this time. The similarities between the different versions of Barrancoid ceramics are greatest between AD 200 and 600, at the very transition between Barrancoid and the Amazonian Polychrome tradition. At this point in time, the southern Arawak languages and their associated cultural package would also have reached their maximal distribution through ethnogenetic processes along the trade routes. The Arawak regional exchange system now reached its maximal extent in all directions including the upper Xingu region via the Baure and Terêna in the east (Heckenberger 2005), the Andes via the Kallawaya traders as indicated by the findings at Niño Korin dated to AD 350 (Wassén 1972:63; Lathrap 1973:180f), the Guiana area and Caribbean via the trade routes along the Purús, Madeira, Negro, and Orinoco Rivers, and the far south via the trade routes reaching down from the Mojos towards the northern Chaco and the Paraguay River.

For the period between AD 500 and 1000 we have several indications that the Arawak regional exchange system penetrated further south than indicated by any linguistic reconstruction maps for the situation at time of contact. This southern extension of the Arawak sphere of influence includes several of the characteristics identified elsewhere, but is reflected particularly in religious ceremonies, cosmology, and the preoccupation with descent and genealogy as the basis for social hierarchies.

By about AD 500, the ceremonial complex associated with the ceramics of the Amazonian Polychrome tradition begins to disperse within the exchange network, and the system is advancing its territorial reach even further south. The Amazonian Polychrome tradition is established in the Llanos de Mojos at the sites of Velarde (the upper strata of the site) and Mound Hernmarck, and polychrome burial urns begin to appear in the archaeological material (Nordenskiöld 1930, pl. XLVII, XLVIII). Anthropomorphic funerary urns typical of the Amazonian Polychrome tradition (most elaborately exemplified during the Maracá Phase along the lower Amazon [Guapindaia 2001, 2008]) have also been recovered in the Mojos at Rurenabaque (Nordenskiöld 1930, pl. XLV). The ceremonial complex associated with secondary urn burials also included complex trumpets, which began their initial dispersal via

the Arawak regional exchange system (Izikowitz 1935:235).[304] Both complex trumpets and burial urns spread from the southern Arawak groups to the Diaguita-speakers located in an area stretching from northern Chile towards the Río de la Plata (Métraux 1933; Izikowitz 1935:235), reflecting the vast territorial reach of the Arawak regional exchange system at this time. The evidence for this southern branch of the Arawak interaction sphere also includes information about the trade route stretching from the Arawak-speaking groups of the Llanos de Mojos via the Chiquitano to groups such as the Bororo, continuing down the Paraguay River and eventually reaching the Atlantic Ocean at the Río de la Plata (Métraux 1948b:409). Merchandise such as maize and dried and smoked fish also entered this network via the western Chané, who traded with southern and western neighbors such as the Chiriguano, Mataco, Toba, and Chorote (Métraux 1946:211, 1948c:467).

Judging from the correlations between several different types of data reviewed above, we may postulate that the Arawak regional exchange system encompassed an extensive region south of the Llanos de Mojos at AD 500 – 1000. The ceremonial complex including the focus on descent and genealogy as the basis for social hierarchy and political leadership was the primary medium that promoted the introduction of new types of material culture into these southern regions, transforming the societies engaged in the Arawak exchange system. The trade routes reaching south from the Llanos de Mojos were avenues for the diffusion of ceremonies involving funerary urns and complex trumpets. Language, ceremonies, a focus on descent, trade, and material culture (trumpets and polychrome ceramics including burial urns) comprised an integrated complex emulated by various ethno-linguistic groups that came into contact with the Arawak traders.

We shall now turn to the period AD 1000 – 1500. The most significant event during this period is the expansion of Tupian languages through southern Amazonia and into other geographical regions. At the time of the arrival of the first European explorers to the continent, Tupi-speaking groups were still expanding their territory, often at the expense of other ethno-linguistic groups. Along the Atlantic coast the Tupinambá were at war with the former inhabitants, some of which were Macro-Ge-speaking groups (Hemming 2004[1978]; Nimuendajú 1987). Along the upper Amazon the Omagua, Cocama, and Cocamilla had recently established themselves in the area, still launching annual war expeditions up the tributaries when the first European explorers travelled the region (see chapter 2). In southern Amazonia and the adjacent northern Chaco, the Chiriguano had defeated the Arawak Chané

[304] The spread of complex trumpets can be divided into two separate phases (Izikowitz 1935:243). In the initial phase the dispersal was connected with the Arawak regional exchange system, but during the second phase (beginning around AD 1200) Tupi-speakers spread the instrument through their late pre-Columbian territorial expansion. During this second phase the design of the complex trumpets also changed from end-blown to side-blown.

and were attacking the easternmost outposts of the Inca empire in the late 1400s (Métraux 1948c:465; Alconini 2004). In summary, the expansion of the Tupian languages was a geographically wide-reaching event involving many different regions and ethno-linguistic groups. It resulted in the formation of new ethno-linguistic identities forged from the ethnogenetic processes prompted by the meetings between Tupi- and non-Tupi-speaking groups.

Much has been written in attempts to correlate the expansion of the Tupian languages with material culture in southern Amazonia (Howard 1947; Lathrap 1970; Brochado and Lathrap 1982; Brochado 1984). The most comprehensive publication is the dissertation by Brochado (1984), who offers "an ecological model of the spread of pottery and agriculture into eastern South America." Brochado's model for the expansion of the Tupian languages is problematic, since he assumes that the southern shore of the middle or lower Amazon River was its point of departure. Ignoring Rodrigues' (1964) now widely accepted thesis that Rondônia was the birthplace of the Tupian language family,[305] his model is frequently contradicted by the empirical data.

Brochado (1984:303f, 314) assumes that all ceramics of the Amazonian Polychrome tradition (except for the pottery that spread into and beyond the Venezuelan llanos) were spread through the geographical expansion of Tupi-speakers. In southern Amazonia, the two ceramic traditions labeled Guaraní and Tupinambá are presented as subtraditions of the Amazonian Polychrome tradition, the polychrome ceramics along the Madeira River and in the Llanos de Mojos as belonging to the Miracanguera subtradition (also of the Amazonian Polychrome tradition), and the polychrome ceramics of the historical Chiriguano as yet another southern member of the Amazonian Polychrome tradition. All these ceramic styles are considered by Brochado to have been manufactured and spread by Tupi-speakers.

Although the affiliation of the so-called Guaraní, Tupinambá, and Chiriguano pottery with Tupi-speakers can be corroborated on the basis of historical information, the connection between polychrome ceramics on the Madeira River and along the middle and lower Amazon and the expansion of Tupi-speakers is not as evident. There are strong indications that the polychrome Guarita phase ceramics of the Madeira and Río Negro were manufactured by Arawak-speakers, the Río Negro being known to have been an Arawak stronghold well into the colonial period. Given the correlation between Arawak languages and Guarita ceramics along the Río Negro it is unlikely that all ceramics of the Amazonian Polychrome tradition

[305] Brochado's (1984:354) comment on Rodrigues' conclusion is that it "at least moved our thinking into the Amazon Basin." This is obviously a reference to the early works of cultural ecologists such as Betty Meggers and Julian Steward, who assumed that all major cultural influences in Amazonia came from outside the basin.

were manufactured by Tupi-speakers (see chapters 4 and 6 for an account of the distribution of Guarita phase ceramics in the middle and lower Amazon region and in the northwest Amazon). In defense of Brochado it is necessary to note that few of the correlations that have been accounted for previously in this section, tracing the expansion of the Arawak regional exchange system in this part of Amazonia, could have been identified at the time when Brochado began his research. For instance, Miller's (1992a, 1992b) excavations on the upper Madeira had not yet been published, and the field of historical ecology was still poorly developed. We must therefore distinguish his conclusion that the pottery of the historical Chiriguano, Guaraní and Tupinambá were connected with Tupian languages from his idea that all the other major polychrome phases, e.g. along the Madeira and in the Llanos de Mojos, were manufactured and spread by Tupi-speakers. The former conclusion is highly relevant to the issues discussed in this chapter, while the latter must be considered untenable based on the empirical material previously presented.

Brochado was not the first author to associate the polychrome ware decorated by corrugation and finger impressions with Guaraní-speakers. Howard (1947:75) concludes that the ceramics unearthed at the site of Río Palacios just south of the Llanos de Mojos belonged to the "Guaraní culture", and he observes that the appearance of this type of ceramics is a relatively late phenomenon, occurring after the establishment of the "Painted tradition" (i.e. ceramics of the Amazonian Polychrome tradition). Lathrap (1970:142) and Lathrap and Brochado (1982:39) further observe that the material from Río Palacios shares similarities in corrugated decoration and vessel shapes with the ceramics from Cumancaya on the Ucayali River and suggests a connection between these two sites. The conclusion that the corrugated decoration would point to an influence from the southeastern Guaraní ceramic tradition is also noted by Métraux (1948b:411), who adds that the use of direct urn burial points to an influence from the southern Guaraní groups.[306]

Río Palacios shares similarities with the Masicito complex of the upper Mamoré River, and Masicito has certain similarities with ceramics of the Incised Punctated tradition (Brochado and Lathrap 1982:39) and with the ceramics of the Chimay complex (Métraux 1948b:411). Chimay, tentatively dated to AD 800 by Lathrap (1970:124), is affiliated with the Barrancoid series.

Given the affiliations between Masicito and Río Palacios and the Incised Punctated tradition, we may conclude that these phases were initiated around AD 1000. Indeed, Darvill (2008) dates the Masicito phase to AD 1000 – 1200. The Cumancaya complex was established about

[306] Note the difference between the direct urn burial practiced by the southeastern Tupi-speaking groups and the secondary urn burial in anthropomorphic urns practiced by Arawak groups (Izikowitz 1935:242; Métraux 1948b:411).

AD 600, and as it incorporated traits of Guaraní ceramics (Myers 1990:105), the conclusion must be that by AD 1000 there had been an exchange of ceramic technology between the Llanos de Mojos and the Ucayali River. Brochado (1984:327) adds that the ceramic exchange between the Guaraní and the Panoan area along the Ucayali is the reason behind the difference between Tupian polychrome ceramics with corrugated decoration and the other phases of the Amazonian Polychrome tradition.

The ceramic exchange between the Tupians of southern Amazonia and the Panoan groups of the Ucayali is one of the first signs of the massive expansion of Tupi-speakers that took place in the following centuries. The first items of Tupinambá ceramics are dated to AD 800 (Brochado 1984:342) and in the northeastern part of southern Amazonia the Tupinambá were beginning their expansion along the Atlantic coastline and into the lower Amazon region via the Pará River south of Marajó Island (Nimuendajú 1987).

At AD 1200 the Tupian expansion is clearly visible in the archaeological material from the middle and lower Amazon region (chapter 4) as well as from the upper Amazon (chapter 2). In southern Amazonia fortified villages begin to appear in the upper Xingu region at AD 1250 as a result of the external pressure from Tupi- and Macro-Ge-speakers (Heckenberger 2005:134, 141). The Macro-Ge speakers themselves had constructed fortified ring villages for protection from Tupi-speakers starting at AD 800, and by 1300 polychrome ceramics with the characteristic corrugated decoration assigned to Tupi-speaking groups begin to appear at the ring village sites (Wüst and Barreto 1999:5, 10, 18). The "predatory cosmology" (Viveiros de Castro 1992; Santos-Granero 2002) of the Tupi-speaking groups was an important incentive for their attacks on neighboring groups, but warfare was not the only means by which their language expanded. Acculturation and incorporation of alien groups was also important in the expansion of the Tupian languages and such processes often included the adoption of polychrome pottery with corrugated decoration, leaving visible traces in the archaeological material (Brochado 1984:402f). Another example of the Tupian expansion and the acculturation processes that it involved is the subjugation, described above, of the Arawak-speaking Chané by the Tupian Chiriguano during the 1400s. Previously, the relationship between these two groups had been centered on trade, bringing merchandise from the Chané territory and the Andean highlands to the Chiriguano, but during the 1400s the Chiriguano launched military attacks on the Chané, who quickly surrendered to the aggressive enemy. In the process following this conquest, the Chané underwent a language shift to Chiriguano,[307] only retaining their Arawak language for use in religious ceremonies (Métraux 1948c:467; Landar 1977:455; Adelaar with Muysken 2004:422; Gordon 2005).

[307] In modern linguistic terminology this language is known as Eastern Guaraní (Gordon 2005).

After their defeat of the Chané, the Chiriguano continued their expansion to the west, attacking the Inca fortifications of the eastern Andean slopes. In the same manner as in some Macro-Ge ring village sites and at Río Palacios, the Tupian polychrome pottery with corrugated decoration was left as a testimony to their expansion at the Inca fortress of Cuzcotuyo (Alconini 2004:394).

The Chiriguano contacts with the Incas, although mostly violent, prompted the Chiriguano to adopt many Inca traits (Steward 1948a:510). Some Chiriguano groups were even incorporated as local allies of the Incas in confronting the threat of other hostile groups, just as the Juruies and Lule had been enlisted to defend the Incas against the Chiriguano (Alconini 2004:413).

In summary, it is crucial to acknowledge the role of acculturation and ethnogenesis in the geographical expansion of the Arawak and Tupian languages in southern Amazonia from about AD 1. As noted by Hornborg (2005:598), migration cannot have been the main factor behind the dispersal of these languages. As has been shown in this section, the mechanisms behind language dispersal in southern Amazonia have built on emulation rather than territorial displacement. The central mechanism by which the Arawak cultural matrix expanded was through trade, kinship, prestige, and ceremonialism. In the case of the Tupians, a predatory ethos played a larger role, but the attraction of Tupian identity, language, cosmology, and material culture was still an important factor behind the dispersal of their languages. Not even in a violent meeting such as the one between the Chiriguano and Chané can we be sure that simple force was the main factor behind the language shift, particularly as the Chané outnumbered the Chiriguano by 10 to 1. Similar processes of negotiation and renegotiation of identity constantly occurred in the meeting between lowland and highland cultures in this area, where items of material culture, language, and cosmology were exchanged and transformed among the groups involved.

In the southern part of western Amazonia, we must mention the Kallawaya herbalists, who conducted trade in medicinal plants and hallucinogenic products from the tropical lowlands, mediating the contacts between highland Aymara and Quechua groups and the lowland Tacana- and Arawak-speakers (Rowe 1946:239; Wassén 1972:63; Lathrap 1973:180f; Taylor 1999:199). The Kallawaya had been independent traders, but were later assimilated into the Inca empire as *mitimaes* along the Andean slopes east of Lake Titicaca (Taylor 1999:200). The Kallawaya spoke a mixed language with Quechua and Puquina components, to which Puquina contributed most of the lexicon (Gordon 2005). Puquina appears to have been an Arawak-affiliated language (Torero 2002; Dudley 2009:146).

7.3.3 The middle and lower Amazon

Around AD 900 – 1000 rapid changes visible in the archaeological material were initiated in the middle and lower Amazon region. In this period, the transformation from Barrancoid and Paredão to Guarita swept along the full length of the Amazon River. This was not an entirely

peaceful transition, as indicated by discontinuities in the cultural chronologies. At Hatahara, the archaeological excavations suggest a takeover of the site by a cultural group that transformed the village layout from circular to linear and that apparently did not need the previously constructed defensive fortifications (Rebellato et al. 2009:22, 27).[308] The linear village layout corroborates the observations made by the first Europeans traversing the Amazon that the banks were lined with almost continuous settlements along extended stretches of the river (Roosevelt 1993; Porro 1994; Carneiro 1995, qtd. in Hornborg 2005:590; Hemming 2004[1978];). A reasonable interpretation of these cultural discontinuities is that they reflect the transition from an Arawak to a Tupi ethno-linguistic identity over large parts of Amazonia during late prehistory. This process can be traced in more detail through careful examination of the shifts in material culture associated with the transformation of the Arawak regional exchange system in connection with the Tupian expansion.

One of the incentives behind the Tupi expansion may have been the attractiveness of the *terra preta* settlements with their fertile, dark earths that had been accumulated during the preceding centuries and that now constituted a valuable capital. The formation of *terra preta* and *terra mulata* during the Manacapurú and Paredão periods was based on the use of charcoal and ashes as soil improvements. These soils had transformed the economic base of settlements along the Amazon, as the nutrient-rich dark earths had become valuable assets that permitted their owners to produce higher yields than traditional horticulture, and to grow nutrient-demanding crops such as maize without having to restrict this type of farming to the *várzea*,[309] which was subjected to seasonal inundations and therefore limited the supply of food during some periods of the year.

The smoke produced when burning the charcoal that was the basis for dark earths (and in particular for *terra mulata*, which was produced by low-intensity fire close to the surface [Arroyo-Kalin et al. 2009:119]) was also associated with other essential aspects of Arawak cosmology and culture. Smoke, and the habit of blowing smoke on items or individuals for religious and medicinal purposes, was (and still is) an important component of Arawak ritual, well documented among Arawak shamans in the northwest Amazon (Hill 2009:249, 259; Hill and Chaumeil 2011a).

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[308] If an absence of military threats was not the reason behind the abandonment of defensive structures after the transformation from Paredão to Guarita, an alternative explanation may be that warfare became institutionalized and ritualized in a way that restricted material damage during the encounters (Rebellato et al. 2009, footnote 4).

[309] Besides farming the *várzea*, aquatic resources were also a significant resource base along the major rivers, sometimes more important than farming itself (Petersen et al. 2001:95).

As mentioned, apart from its significance in agriculture and religious ceremonies, ash (in the form of *caraipé*) was also used as a tempering agent in various ceramic complexes including both Barrancoid and Guarita pottery. By mixing *caraipé* into the ceramics, high-quality wares such as the various phases of the Amazonian Polychrome tradition could be produced. Its most prominent artifacts, the anthropomorphic burial urns, were made for storing the ashes and other remains of deceased ancestors, reflecting the importance of genealogy as the basis for social status in these Arawak societies (Santos-Granero 2002).

Apparently associated with the transition from Barrancoid and Paredão to Guarita and from circular to linear villages is the spread of single trumpets made of two longitudinal wooden halves. These instruments are found almost exclusively among Tupi-speaking groups along the Amazon River, and the few cases where these instruments have been identified among other ethno-linguistic groups can be attributed to close contact with Tupi-speakers. The distribution of these instruments is also correlated with the distribution of pottery belonging to the Amazonian Polychrome tradition, which supports the hypothesis that they were part of a Tupian cultural pattern spreading upriver along the Amazon during the period AD 1000 – 1200.

What can be concluded from these correlations is that certain processes, such as the establishment of the Arawak regional exchange system and the expansion of Tupi-speakers, are visible in the archaeological material. Correlations between prehistoric artefacts, historical and contemporary material culture, and non-material aspects of society such as ritual and myth can be used to formulate and test hypotheses about cultural history. However, the interpretations of these correlations and the implications that they may have for our understanding of prehistoric events vary significantly depending on perspective.

The perspective that is applied here is a non-essentialist approach to the correlation between language, genes, and material culture in the tradition following Schmidt (1917) and Hornborg (2005). This perspective differs substantially from that offered by authors such as Steward and Faron (1959), Meggers (1971), and Lathrap (1970), who tend to conceive of cultural development in Amazonia in terms of demic migrations by linguistic groups with specific elements of material culture. The reconstruction offered focuses primarily on the time period between 1000 BC and AD 1500. Based on empirical material dated before 1000 BC, it is assumed that by this time the middle and lower Amazon region was inhabited by people with knowledge of horticulture and connected through supra-local exchange networks, but that they had not yet developed intensive agriculture, nor achieved the dense population concentrations with elaborate social hierarchies that were observed at the time of contact.

Regarding the linguistic affiliations of the population of the middle and lower Amazon before 1000 BC, we can only speculate. The Carib languages of the Guiana Highlands at one point expanded widely north of the Amazon River, and given the great time depth implied in the

concept of language families (Bellwood 2000), they can be assumed to have existed at 1000 BC.[310] South of the main river were Tupian languages, originating in Rondônia, but detailed accounts of their distribution cannot be offered as far back in time as 1000 BC. Regarding smaller linguistic entities, including unclassified and isolated languages, we may assume that there was a greater linguistic diversity before the expansion of the Arawak, Tupi, and Carib languages between 1000 BC and AD 1500 and the historical expansion of Múra and Tupi after the demographic collapse following the European intrusion. Given also that the middle and lower Amazon was one of the areas most heavily afflicted by Old World microbes, it is only natural that small ethno-linguistic groups would be least represented in this area.

Let us recapitulate our account of the relation between pre-Columbian trade, identity, linguistics, and material culture from a pan-Amazonian perspective. Between 1000 and 500 BC, what has been referred to as the Arawak regional exchange system was beginning to form along the middle and lower Orinoco River. A more extensive list of items included in the cultural matrix associated with this exchange system was presented in section 1.3.2, but most crucial at this point is the emergence of societies based on intensive agriculture with social hierarchies, complex ceremonial systems, and a characteristic material culture in the form of Barrancoid ceramics and ritual wind instruments. In the middle of the first millennium BC, the first signs of the establishment of the Arawak regional exchange system in the middle and lower Amazon are visible in the archaeological material. At this point, there are signs of high-intensity landscape management in the form of *terra preta* soils (associated with the Manacapurú phase of the Barrancoid ceramic tradition) and, later, water management systems on Marajó Island.

At this time, the Arawak regional exchange system had thus begun to expand, but what were the means of this expansion? According to the perspectives of cultural ecology (Steward and Faron 1959) and the farming-language hypothesis (Bellwood and Renfrew 2002) the expansion of Arawak culture should be explained through the migration of a population with a superior agricultural technology, permitting them to increase their population and military strength, replacing previous populations, who would be eradicated or pushed into marginal areas. There are no signs of an expansion of this kind in the archaeological material from this region, and there is nothing in our knowledge of Arawak societies that suggests this type of

[310] Although the main geographical extension of the Carib languages historically has been in the Guiana Highlands, they are also represented in the upper Xingu region by e.g. the Kuikúro, Kalapalo, Nahukwá, Matipuhy, and Bakairí, and the now extinct Tsuva and Naravúte (Seki 1999:419), and along the upper Guaporé River by the now extinct Palmellas (Campbell 1997:203). Given the great time depths involved, there is presently no way of determining the point of origin of the Carib languages. More relevant to the present study is to observe that it is north of the Amazon River that they achieved their widest geographical distribution.

expansion. Rather, there are many indications that the expansion was of a different type, where emphasis was not on demic migration and warfare, but rather on the assimilation of new groups in the exchange system by offering an attractive socio-religious identity to neighboring groups.

There are many indications of such a socio-religious pattern, both from the prehistoric material and from historical observations on the various remains of the Arawak regional exchange system that survived into the period of written documentation. A central theme discussed throughout the concluding sections of this investigation is the various uses of ashes and charcoal associated with the concept of burning. The earliest indication that the concept of burning was gaining importance beyond obvious fields of application such as cooking, heating, and forest clearance, is the increased importance of *terra preta* farming documented in the Orinoco region around 900 BC and on the middle and lower Amazon from about 400 BC. This use of charcoal was later accompanied by the use of *caraipé* temper (tree-bark-ash) in the ceramic material representing the transformation from the Barrancoid Açutuba to Manacapurú phases around AD 300. The combination of deposition of ash, production of *caraipé*, and decomposition of pottery as an important factor in the formation of *terra preta* has been highlighted in recent archaeological publications (Arroyo-Kalin 2009:53; Arroyo-Kalin et al. 2009:119).

AD 300 also marks the initiation of the Marajoara phase, the first documented phase of the Amazonian Polychrome tradition in the middle and lower Amazon. *Caraipé* temper was used in the manufacture of this pottery. The Amazonian Polychrome tradition introduced yet another item on the list of pyrogenic by-products, viz. the anthropomorphic secondary burial urns. Pottery manufactured with the help of ashes was now also used to store the ashes of the ancestors.

The smoke produced in these processes had a symbolic significance, and the importance of blowing smoke has been documented by anthropologists working with contemporary Arawak societies. Blowing was not only important as a way of applying smoke by shamans, but the smoke was also used to visualize the act of blowing itself. The importance of blowing recurs in the use of various sacred wind instruments that were of central importance in rituals (Hill and Chaumeil 2011a; see also Beaudet 1997; Hill and Chaumeil 2011b). Contemporary versions of these rituals also include extensive chanting of place names referring to the ancestral territories of the Arawak societies of the northwest Amazon. These place names were associated with travels along the trade networks of the regional exchange system, illustrating the connection between material and non-material culture. The importance of Arawak ceremonial life, not least among neighboring non-Arawak, has been extensively documented in various places in Amazonia, e.g. among the Carib-speaking Bakairí of the upper Xingu, who have been "Arawakized" in the sense of adopting Arawak ceremonial life and material culture while keeping their Carib language intact.

The Arawak regional exchange system encompassed the middle and lower Amazon region from about 400 BC and continued to expand and develop, incorporating new groups as its communication routes reached further and further in all directions. By AD 500 it had expanded over much of northern lowland South America, incorporating an increasing number of groups in a vast interaction sphere. How then, did this expansion actually take place? What were the means by which the Arawak regional exchange system could continue to expand? As has been mentioned above, there is nothing that suggests demic migration and warfare as means of violently displacing or converting neighboring ethno-linguistic groups (Schmidt 1917 (7):1). On the contrary, there are many indications that neighboring populations were attracted by the various attributes of the Arawak matrix and that they voluntarily chose to adopt them. Some groups adopted the Arawak matrix more or less completely, shifting their language and transforming their ceremonial life and socio-economic base to comply with the Arawak template, while others picked up certain items, e.g. transforming their material culture while retaining non-material aspects of their societies. The concept of language shift is well documented from various cases in Amazonia, and at the advent of European colonization, when the Arawak regional exchange system had been in decline for several centuries, some language shifts involving Arawak-speakers were documented. At this point in time, language shifts from Arawak, and influences on Arawak languages through areal diffusion from neighboring languages, is the most common observation (Aikhenvald 1999:74). For example, as described in section 3.3, the Arawak Chané shifted their everyday language to Tupian Chiriguano, but their original Arawak tongue remained in use in religious ceremonies, highlighting the importance of the Arawak language for their ceremonial life. Similar conditions have been documented from the Arawak Tariana of the Vaupés River, whose language is being replaced by Tucano (Schmidt 1917 (1):9; Aikhenvald 1999:72), and from the case of the Island Carib, where the Arawak Iñeri were conquered by Carib-speakers, creating an Arawak-Carib pidgin surviving into the 1600s (Allaire 1980; Aikhenvald 1999:75). Cases of areal diffusion involving Arawak languages have been documented from the Yanesha (Amuesha), who were influenced by Quechua, from the Resígaro, who were influenced by Bora and Ocaina of the Witoto family, and from the pre-Andine Arawak languages of eastern Peru, which show structural similarities to neighboring non-Arawak languages (Aikhenvald 1999:74). Finally, if the extinct language Puquina was indeed Arawak, its ritual retention among the Inca and the Kallawaya is yet another illustration of the prestige of Arawak languages in ritual contexts, even where there has been a shift to other languages for everyday use.

All these cases illustrate the fluidity of language use throughout Amazonia and the ability of groups to shift their language as a result of different kinds of interaction with neighboring groups. The linguistic mechanisms of areal diffusion and language shift were undoubtedly

equally important in the prehistoric context and are keys to understanding the linguistic dimension of the Arawak regional exchange system.

The Arawak regional exchange network probably reached its maximal territorial extension in Amazonia between AD 500 and 1000 (fig. 7.2.1). At this time, the interaction sphere encompassed most major river systems in Amazonia, incorporating geographically widely separated groups into an abstract community based on the exchange of material and non-material values that formed the source of a collective meta-identity. The cultural content of this identity was continuously negotiated as additional groups were incorporated into the network. The expansion of the network and the incorporation of new groups and cultural elements increased the diversity of the system, while at the same time the sense of collective identity served to counteract the centrifugal effects of the expansion (Schmidt 1917 (6):8).

Around AD 900 – 1000, however, there are signs that parts of the network were beginning to decline, particularly in the middle and lower Amazon region. Discontinuities in the cultural chronologies, such as the replacement of Barrancoid and Paredão ceramics with Guarita pottery of the Amazonian Polychrome tradition, were accompanied by a shift from circular to linear villages (Rebellato et al. 2009:22, 27). This period has been characterized as marked by warfare and conflict (Neves et al. 2004:133), perhaps over the accumulations of *terra preta* and *terra mulata* at large sites along the Amazon. These anthropogenic soils had become an attractive capital that prompted Tupi-speakers to expand into the region, conquering the settlements traditionally engaged in the Arawak regional exchange system (Rebellato et al. 2009:27). Given that this account is realistic in terms of the superior military power of the Tupians, we need to consider a few theoretical and practical questions in regard to the following events:

a) the language shift from Arawak to Tupi,
b) the transformation of material culture, e.g. the shift from Barrancoid and Paredão ceramics to Guarita, and
c) the transformation of non-material aspects of society, such as ceremonial life, political structures, and social hierarchies.

As has been argued above, the means of expansion of the Arawak regional exchange system was mainly through peaceful incorporation of new groups into the system. There are no indications of displacement of previous inhabitants by demic migration and warfare. Even the Tupian expansion in late prehistory appears not to have been a question of completely replacing previous populations by warfare and migration. In the case of the Tupian Chiriguano "conquering" the Arawak Chané, only 10% of the resultant population were ethnic Tupians, while 90% were previous Arawak-speakers who had shifted to the Tupi language. Considering that the Arawak language was maintained in religious ceremonies, we can conclude that Arawak speech was still seen as powerful and important in the new, hybrid

society (Métraux 1948c:467; Adelaar with Muysken 2004:422). Another case is the extensive shift from Arawak to *Língua Geral*[311] around AD 1900 in the Río Negro region, which up until then was still dominated by Arawak languages (Aikhenvald 1999:72). A third illustrative case is the expansion of the Tupian Omagua, Cocama, and Cocamilla languages into the upper Amazon around AD 1200. This part of the Tupian expansion has long been viewed as an upriver migration of Tupian warriors, carrying with them polychrome ceramics while conquering and replacing the previous inhabitants (Lathrap 1970:150f; Meggers 1971:122-130). Recently, it has been proposed that the spread of these languages along the upper parts of the Amazon did not result from an upriver migration of large groups of Tupi-speakers replacing the previous inhabitants, but from a contact situation in which small groups of migrating Tupinambá were incorporated into other ethno-linguistic groups, perhaps provoked by an initial military attack similar to the encounter between the Chiriguano and Chané (Adelaar with Muysken 2004:432). Recent linguistic work on Omagua and Cocama has revealed that these two languages lack a genetic relationship, which means that they are not related through a common parent language (Cabral 1995; Michael n.d.:7f). It has also been suggested that the original language of this area was Arawak (Cabral 1995), but this claim has not been possible to corroborate through comparative linguistic work (Michael n.d.:8).

It has long been assumed that there was a clear correlation between language and material culture in the case of the Tupi languages of the upper Amazon, specifically that the polychrome ceramics in the region were transported to the area through an upriver migration of Tupi-speakers and was intrinsically connected to the Tupian identity (Lathrap 1970; Meggers 1971). However, contemporary manufacturers of polychrome ceramics in the upper Amazon are the Pano-speaking Shipibo-Conibo, who acquired this ceramic technology during co-existence with the Tupians at European mission stations. Today there are no Tupi-speakers manufacturing polychrome ceramics in the upper Amazon, while Panoans are famous for this type of pottery. This example illustrates how easily features of material culture can cross ethno-linguistic boundaries.

There are many similar examples of the fluid relation between identity, material culture, and language, particularly in relation to the pottery of the Amazonian Polychrome tradition, which emerged at a time in Amazonian history when the societies of the region had developed into complex social constellations with great cultural diversity, continuously reshaped by the dynamics of regional exchange. Highly relevant in this context is the great stylistic similarity between the Marajoara and Napo complexes of the Amazonian Polychrome tradition, which has been identified (and very differently interpreted) by Betty Meggers (Meggers and Evans

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[311] *Lingua Geral* (also known as Nheengatú) is a contemporary pan-Amazonian *lingua franca* with roots in Tupinambá (Dixon and Aikhenvald 1999b:7).

1957). These two complexes are separated by vast distances in space, and the Marajoara phase began long before the Napo ceramics, yet their late prehistoric appearance is strikingly similar. The Marajoara phase was an important component of the Arawak regional exchange system, and Arawak-speakers remained on Marajó Island at the time of contact. These Arawaks, the Aruã, were still manufacturing an undecorated variant of the Marajoara phase, labeled the Aruã phase, when they were encountered by the Europeans (Brochado and Lathrap 1982:53). At the time of contact, both Arawak- and Tupi-speakers were manufacturing polychrome ceramics. In the upper Amazon, the Tupi-speaking Omagua, Cocama, and Cocamilla had incorporated it into their identity, and downstream from them the Aisuari were also famous for their polychrome ware (Porro 1994:84). Along the Río Negro, polychrome Guarita-like ceramics were manufactured by Arawaks into the 1800s (Boomert 2004:261), while Tupians seem to have controlled at least some of the manufacture of polychrome ceramics along the course of the Amazon. Further south, connections between historically documented Arawak-speakers and polychrome pottery can be found among the Guaná of the Pantanal and among the Mojo of the Llanos de Mojos (Métraux 1948b:411; Brochado and Lathrap 1982:53).

At the same time, other historically documented Arawaks of the middle and lower Amazon region had pottery classified as belonging to the Incised Punctated tradition. The ceramics of the powerful Manao of the Manaus region belonged to this tradition (Myers 1999:36f), while north of the mouth of the Amazon, the Palikúr were using pottery of the Aristé phase of the Amazonian Polychrome tradition, closely related to the Koriabo phase of the Incised Punctated tradition (Guapindaia 2001:171; Boomert 2004:257).[312] Given the connections between Amazonian Polychrome and Incised Punctated demonstrated by Boomert (2004), it is not surprising to discover these hybridizations of material culture among Arawak- and Tupi-speakers at the time of contact. To visualize the transformation from Barrancoid and Paredão to Polychrome and further on to Incised Punctated ceramic styles, we have to consider the various mechanisms of integration and exchange mentioned previously in this study. An important aspect is the gendered division of labor and the importance of marriage customs in the formation and expansion of the Arawak regional exchange system. As ethnographically

[312] Brochado and Lathrap (1982:56) offer another interpretation, viz. that Aristé and the closely related Mazagão phase were associated with Tupi-speakers. However, the fact that the distribution of sites of the Aristé phase is almost completely within the territory occupied by the Arawak Palikúr at the time of contact strongly contradicts such a hypothesis. Furthermore, Brochado (1984:344) suggests continuity between Marajoara and Tupinambá, a claim that would have been supported by the close stylistic relationship between Marajoara and Aristé (Brochado and Lathrap 1982:56) if Aristé could be shown to have been manufactured by Tupi-speakers. As discussed above, such a proposal cannot be supported, based on the historical distribution of Tupi- and Arawak-speakers in the region, and it is further contradicted by the affinity between the Aruã and Marajoara ceramic phases and our knowledge of the Arawak Aruã ethnic group that inhabited the northern part of Marajó Island at the time of contact (Brochado and Lathrap 1982:53; Kaufman 2007).

documented in the upper Xingu, Arawak women were the ceramic manufacturers, and given the exchange relations and the intensive "Arawakization" established in the region, these female Arawaks provided the whole upper Xingu area with pottery (Lévi-Strauss 1948:333). As noted by Schmidt (1917 (3):5), exogamy and marriage by capture were central institutions with great significance for the expansion of Arawak exchange relations. Given that the mother's ethno-linguistic identity is significant to children in Arawak societies (Schmidt 1917 (3):13), it is important to understand the role of women in the transfer of identity, whether expressed through material aspects, such as ceramic styles, or non-material aspects, such as ethno-linguistic affiliation. Taking these circumstances into consideration, one can imagine several plausible processes in the transformations of material culture and language use in the middle and lower Amazon from about AD 900. For example, it is possible that Tupian warfare, including marriage by capture, the killing of Arawak warriors, and the occupation of their *terra preta* settlements, had a central role in these processes, as it was probably the women who manufactured the pottery and transferred ceramic styles to the next generation.

7.3.4 The Orinoco-Guiana area

At the time of the Barrancas phase a new wave of agricultural intensification had begun. At the site of Barrancas, *terra preta* soils have been dated to 900 BC, indicating that new agricultural techniques were now in place on the lower Orinoco. The establishment of the Saladoid and Barrancoid series along particular reaches of the Orinoco River and in adjacent regions from 900 BC[313] should be interpreted as a sign of increasing social complexity and a growing urge to express ethnic specificity vis-à-vis neighboring groups. As indicated in late prehistoric archaeological material and from historical sources, the use, manufacture, and trade of various items of material culture manifested, communicated, and diffused ethnic identity to neighboring groups through trade goods circulated in the wider Orinoco-Guiana region. An observation that may account for the fact that the upper and lower reaches of the Orinoco were dominated by Barrancoid pottery while the middle Orinoco was dominated by ceramics of the Saladoid series is that the ethno-linguistic pattern at the time of contact was very similar: Arawak groups dominated the upper Orinoco and the region around Aruacay on the lower part of the river, while other groups such as the Otomac[314] controlled the middle parts of the river, including the junction between the Apure and Orinoco.

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[313] Although the Saladoid series appeared in the middle Orinoco area well before the Barrancoid series, perhaps as early as 2400 BC, it is not until 900 BC that agricultural intensification is indicated by the occurrence of *terra preta*.

[314] The Otomac language remains unclassified, but bears imprints of contact with Arawak and Carib languages (see section 5.4).

During the millennium between 800 BC and AD 200, the regional exchange system not only expanded across Amazonia, but also appears to have become more culturally integrated, despite the geographical expansion. Judging from the indications of landscape modification in the form of earthworks and early accumulation of *terra preta* soils along the middle and lower Amazon and from southern Amazonia, and from the fact that *terra preta* has been dated to 900 BC along the lower Orinoco, we may conclude that agricultural intensification in the form of landscape modification played an important role in the expansion of the exchange network between 800 BC and AD 200.[315] The C^{14} samples from Kurupukari Falls and nearby Errol's Landing date to the first millennium BC. At Kurupukari Falls and Errol's Landing, ceramic material interpreted as both Saladoid and Barrancoid (Williams 2003:314) and Amazonian Polychrome (Plew 2005a:58) has been dated to 2910±80 BP (Beta-76247), 2660±70 BP (Beta-76854), and 2080±70 BP (Beta-76246), suggesting advanced ceramic production at these sites beginning about 1000 BC (Williams 2003:308; Plew 2005a:7, 55).[316] The date of 2660±70 BP (ca. 700 – 800 BC) probably reflects the early establishment in interior Guiana of an offshoot of the Saladero and Barrancas phases of the lower Orinoco, correlating well in time with the establishment of the Mabaruma Phase at Hosororo in the Guiana Littoral. The location of Kurupukari Falls and Errol's Landing suggests a connection point, transmitting ceramic traits between the middle and lower Orinoco, the Guiana Littoral, and the middle and lower Amazon, which could be reached by crossing the Pirara Portage, connecting the Orinoco and Branco Rivers. Its strategic position made Kurupukari Falls a key site in the regional exchange system, representing a connection point between northern Arawak groups such as the Lokono, the Wapishana of interior Guiana, and lower Branco groups such as the Manao. The sites of Barrancas and Los Barrancos, located close to each

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[315] Although *terra preta* has been discovered at a few sites in the Orinoco-Guiana region such as Barrancas on the Orinoco and at Kurupukari Falls and nearby Errol's Landing and Makari Falls on the middle Essequibo, the predominant form of landscape modification in the region was the construction of raised fields. This should not be considered as a cultural distinction separating the raised-field agriculturalists of Guiana from the *terra preta* farmers of the lower Orinoco and middle Amazon, but as two adaptations to local environments within a culturally fairly uniform regional exchange system. (The different adaptation strategies of the agriculturalists of the llanos and the Orinoco River mentioned earlier in this chapter constitutes a similar example.) In addition to *terra preta*, Errol's Landing also contained ceramics tempered by *caraipé*, which is diagnostic of the Arawak regional exchange system in other parts of Amazonia. The ceramic inventory at Errol's Landing has been associated with both Saladoid and Barrancoid material (Williams 2003:314), as well as with the Amazonian Polychrome tradition (Plew 2005a:58). In addition, some of the Saladoid sherds from Kurupukari Falls contained Zoned-Hachured decoration on suspected burial urns (Williams 2003:307), which obviously suggests a connection with Marajó Island.

[316] Plew (2005a:7, 55) seems to confuse the dates of Beta-76247 and Beta-76854 in his table 1 and 13. The original location of the samples (Kurupukari Falls or Errol's Landing) is also lost in his reproduction of these C^{14} dates.

other on the lower Orinoco, represent another prehistoric connection point, controlling cultural flows between the Orinoco Valley and the Antilles and the Guiana Littoral, while the middle Orinoco counterpart may have been La Gruta or one of the Saladoid sites close to it.

Around AD 200 the regional exchange system was sufficiently integrated to inspire the use of the same *adornos* to decorate ceramics a far apart as the Antilles and the middle Amazon (Petersen et al. 2004:16). Between AD 200 and 400 the expansion continued into southern Amazonia, as well as in the Orinoco-Guiana area. Barrancoid material now also spread to Trinidad, Tobago, and into the Lesser Antilles, ending the dominance of Saladoid material in this region (Hofman et al. 2007:252). Along the Guiana Littoral, the Barrancoid series had been represented by the Mabaruma phase since about 800 BC, but at AD 300, a new era of agricultural intensification and territorial expansion is visible in the material from the Buckleburg Mounds (Rostain and Versteeg 2004:234; Rostain 2008b:284). These mounds were a new feature among the groups of the littoral, combining elevated settlements with surrounding areas of raised fields in the swampy coastal lowlands. The almost simultaneous appearance of elevated settlements and raised-fields agriculture in regions as widely separated as the Guiana Littoral, Marajó Island, Llanos de Mojos, and the llanos of Venezuela and Colombia indicates that the regional exchange system was now integrated to a point where new inventions rapidly diffused over vast distances. AD 300 also marks the transition between the Barrancoid Açutuba and Manacapurú phases in the middle Amazon, correlating with the increasing use of ash in ceramic production (in the form of *caraipé* temper) as well as for soil improvements (*terra preta*).

The large-scale investments of labor time represented by the earthworks along the Guiana Littoral indicates a population with a sedentary lifestyle that had made substantial long-term investments in the landscape they inhabited, which they would not readily abandon. Thus, the area of these earthworks was one of the sections of the Arawak regional exchange system that remained intact the longest. The Lokono-Spanish pact represented a final manifestation of this powerful branch of the Arawak network that had been in place in the region since AD 300.

All the areas mentioned as locations of intensified mound agriculture around AD 300 were traditional territories of Arawak-speakers at the time of contact, indicating that the Arawak regional exchange system[317] diffused material as well as non-material (e.g., linguistic) cultural practices. As elsewhere in the world, investments in earthworks (as in *terra preta*, another form of "landesque capital"; cf. Widgren 2007) constituted valuable assets that the inhabitants were

[317] Although several specialists have argued that the Barrancoid potters spoke proto-Arawak languages, it is impossible to determine the linguistic composition of the exchange system as early as 900 BC. The various cultural features associated with the Arawak regional exchange system were probably integrated one by one, Barrancoid ceramics being one of the first. By AD 300 it is more safe to assume that Arawak languages dominated the system.

not willing to give up. It seems that once the system became manifested in the landscape in the form of earthworks, rock art, toponyms, and trade routes, its durability increased, yielding to outer pressure only in extreme situations such as the violent invasions of Tupians or Europeans.

The agricultural settlements of the Barrancoid Buckleburg Mounds at AD 300 had their closest counterparts in the Marajoara culture at the mouth of the Amazon (and perhaps also in the mound settlements of the llanos), which also emerged around AD 300. The Guiana Littoral and Marajó Island had been connected since the early archaic and would continue to be so into the historical period. The interaction between the two areas was dominated by Lokono long-distance traders from the Guiana Littoral and their linguistic relatives the Aruã, who maintained a strategic position at the mouth of the main river, both groups being connected through the Arawak-speaking Palikúr, north of the Aruã, and by Carib-speaking intermediaries such as the Kaliña and Galibí to the west of the Lokono. Judging from the close synchronization of the rise of advanced agricultural settlements in the Guiana Littoral and Marajó around AD 300, one might get the impression that the simultaneous development of these areas was the consequence of an Arawak-mediated regional exchange system that was only now being established. However, it is important to keep in mind that these areas had been integrated by long-distance exchange since the early archaic period, and that the synchronization of such developments was in fact an aspect of the long-term emergence of a more inclusive and tightly integrated regional system. The Arawak regional exchange system thus grew out of older exchange relations, integrating a more inclusive pan-Amazonian exchange network by articulating traditional interaction spheres with each other.

Between AD 600 and 700, what had been a fairly homogenous Barrancoid style throughout Amazonia was beginning to lose its internal stylistic uniformity. This may have been due to the incorporation of new influences on material culture through the wider regional exchange system that was now emerging. In the Orinoco-Guiana region, this process is visible in the development of the Arauquinoid[318] ceramic series along the Orinoco River at around AD 600 (Roosevelt 1980; Oliver 1989; Boomert 2000). The development from Barrancoid into Arauquinoid in the northern part of the exchange system coincided with a new agricultural development: the initiation of large-scale maize farming on the raised fields and *terras pretas* of the Orinoco-Guiana area. Originating about AD 700 at the Parmana site in the Orinoco Valley (Roosevelt 1980, qtd. in Rostain and Versteeg 2004:235), the introduction of maize farming appears to have been associated with profound transformations of indigenous societies, not only in terms of food production, but also in terms of a shift in the experience and inclusiveness of collective identity, reflected in the transformation from Barrancoid to

[318] As previously mentioned, the Arauquinoid tradition is also known as Incised Punctated.

Arauquinoid pottery. Considering the importance of maize and maize beer in ceremonial contexts throughout indigenous South America, this connection between agricultural practices and ethnicity should not be surprising. The long-distance interaction between the mound-builders of the Guiana Littoral and those of Marajó Island continued during Arauquinoid times.[319] Satellite communities were now being established around major mound sites such as Hertenrits in the Guianas and Camutins on Marajó (Versteeg 2008:312; Schaan 2008), indicating increasingly complex social hierarchies. Site hierarchies also emerged in the upper Xingu area (Heckenberger et al. 2008) and in the llanos at sites such as El Cedral (Spencer 1998; Redmond et al. 1999). The occurrence of Barrancoid-derived pottery in the upper Xingu has been dated to AD 500, i.e. more or less coeval with the establishment of Arauquinoid settlements in the Guianas from AD 600 – 700.

During the Arauquinoid period, the ceramic inventory of the Guianas underwent a diversification, splitting into a number of phases, but still united by some overarching technical and stylistic elements. This diversification also manifested itself through craft specialization between different Arauquinoid sites of the littoral, some sites specializing in particular kinds of manufacture, others as trading centers, while yet others developed into purely ceremonial centers (Rostain and Versteeg 2004:236; Rostain 2008a:226; Versteeg 2008:312). The internal specialization among subsystems of the Arawak regional exchange system suggests increasing social complexity, and the concept of "chiefdoms" is often applied to societies established along the Guiana Littoral (Petersen et al. 2004:29; Rostain 2008:231; Versteeg 2008:312).[320] An indication of increased social complexity and stratification is the

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[319] In the interaction between the Guianas and Marajó Island, differences in ethnic identity were in part manifested through pottery, the inhabitants of Marajó clinging to their Marajoara phase complex established at AD 300, while the societies of the Guiana Littoral identified with Arauquinoid pottery. Depending on the nature of social organization and interaction, stylistic conservatism can be as plausible an outcome of intense interaction as homogenization.

[320] Neves (2008:370, citing Rostain and Versteeg 2004:239) is of a different opinion regarding the scale of the sites and the level of social complexity of coastal Arauquinoid societies in Guiana. However, the opinion expressed by Rostain and Versteeg (cited by Neves) constitutes an exception (even within their own text) to the general view of the mound-builders of the Guiana Littoral. These Arauquinoid settlements show clear indications of political centralization such as roads, settlement hierarchies, and labor specialization, as noted by Neves (2008:370). Causeways were being built to facilitate transportation (Rostain 2008a:227), settlement hierarchies were manifested in the form of satellite communities (Versteeg 2008:312), and labor specialization occurred, e.g. at Kwatta-phase sites (Rostain 2008b:292). Specialization is also evident in the construction of earthworks at various sites, as summarized by Rostain (2008a:230): "[C]onstruction, maintenance, and cultivation of raised fields require well-organized communal work. Furthermore, specialized groups probably carried out such labor under the leadership of a central authority because the management of hydrological work requires precise planning." In sum, there are no indications that late prehistoric societies of the Guiana Littoral were any less complex than their counterparts along the Amazon or Orinoco; they were all part of the

type of human representations found on Arauquinoid vessels at Corozal, suggesting an ancestor cult (Roosevelt 1997, qtd. in Rostain and Versteeg 2004:236f). Given the attractiveness and prestige of the regional system, manifested in its wide sphere of influence and conspicuous cultural attributes, it became crucial for each group to maintain its position in the interaction network through the sharing of common elements of identity such as material culture, language, mythology, and ritual, but also, at another level, to maintain its specificity or uniqueness. In adopting key elements of the wider system such as a prestigious language, particular forms of material culture, and significant religious ceremonies, new groups were incorporated into the system, which thus expanded through emulation and assimilation rather than through violent territorial expansion.[321]

In other parts of the regional exchange system, major changes took place between AD 500 and 1000. Along the middle Amazon, the Barrancoid series was being replaced by the Amazonian Polychrome tradition, marking a new way of expressing ethnic identity, much as the Arauquinoid pottery replaced Barrancoid ceramics in the Guianas. Along the main river, warfare intensified during this period, culminating in the takeover of riverside *terra preta* settlements, established during Barrancoid times, by Tupian groups launching their expansion across Amazonia (Neves et al. 2004:133). The violent conflicts between Arawaks and the encroaching Tupians, obvious in the archaeological material in the middle Amazon area, do not seem to have characterized the Orinoco-Guiana area at this time.[322] Judging from the important role that Arawak groups such as the Lokono acquired shortly after the Spanish arrival, and the fertile and strategic territory along the coastline that they still occupied at the time of contact, they may have represented the northern remains of a pan-Amazonian, Arawak regional exchange system that to a large extent had disintegrated a few centuries before the Spanish arrival. Other segments of this Arawak system that remained more or less intact up until contact include the mouth of the Amazon, the northwest Amazon, and the Llanos de Mojos.

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same cultural tradition within the Arawak regional exchange system, although it manifested itself differently in different environments.

[321] In this respect the expansion of the Arawak regional exchange system may have operated differently from the Tupian expansion beginning around AD 1200, in which violence and subjugation, manifested in a predatory cosmology, was often a key element (Santos-Granero 2002).

[322] One exception may be the Tupian penetration into southwestern Guiana, here represented by the Wayampi, expanding into the region east of the Río Jari during the late prehistoric and early historic periods. It is also possible that most, or even all, of this expansion took place in the wake of the first epidemics introduced by Europeans, opening up huge tracts of land available for expansion.

Between 1150 and 1250 the Arauquinoid complexes Hertenrits, Barbakoeba, and Kwatta ceased to exist, leaving Thémire and Camoruco as the remaining Arauquinoid phases of the Guiana Littoral and the Orinoco Valley, respectively (fig. 5.2.2). The period up until colonization is characterized by hybrid ceramic complexes such as Mazagão, Aristé, and Koriabo, which have been attributed to the Arauquinoid tradition by some authors and to the Amazonian Polychrome tradition by others (see discussion in Boomert 2004). These complexes may represent the effects of the disintegration of the Arawak regional exchange system on ceramic production, which now became fragmented due to the lack of an overarching technical and stylistic ideal. Thémire, Mazagão, and Aristé continued to exist up until the 1600s – 1700s, representing the final traces of pre-Columbian indigenous ceramic production along the Guiana coastline. In the highlands, the Wai Wai, Tarumá, and Rupununi phases survived even longer (Plew 2005b). Closely associated with particular ethnic groups, these localized phases contrast with the overarching ceramic similarities that previously had prevailed in the wider Orinoco-Guiana region and in Amazonia as a whole.

Cultural development in the Orinoco-Guiana area has been characterized by interaction and exchange among indigenous groups since the archaic period. In the agricultural period, exchange intensified, and social organization became more complex. Around 900 – 800 BC, the first signs of regional integration appear, evident in widely shared subsistence strategies, ceramic decoration, and socio-economic organization.

During the centuries between 900 and 400 BC, Barrancoid ceramics and a subsistence strategy based on *terra preta* farming developed and expanded out of the Orinoco Basin, reaching the middle Amazon area by 400 BC. By AD 300, a new form of mound-building societies based on raised-field farming emerged along the Guiana Littoral. This new subsistence strategy had much in common with the coeval Marajoara culture at the mouth of the Amazon. By this time, an Arawak regional exchange system can be detected, founded on elaborate social hierarchies, a focus on descent, and rituals based on a coherent and contagious cultural repertoire including a prestigious language, sacred wind instruments, and shamanic performance.

Around AD 700 the ceramics of the northern part of the Arawak regional network were transformed from Barrancoid to Arauquinoid, a transition that also occurred among many groups along the Amazon. At the same time large-scale maize cultivation was established along the Orinoco and the Guiana Littoral, encouraging the expansion of raised-field farming in the latter area.

By AD 1250 the Arawak regional exchange network began to decline in the Orinoco-Guiana area, a process that had begun a few centuries earlier along the Amazon River, following the violent expansion of Tupi-speaking groups. However, much of the system remained intact in the Orinoco-Guiana region, as indicated by the strategic positions occupied by Arawak-

speaking groups such as the Lokono at the time of contact. A couple of centuries after European contact the last remains of the Arawak regional exchange system disintegrated under the pressure of Spanish demand for slaves, fragmenting into smaller trade networks such as those documented during the late historic period (cf. Butt-Colson 1973).

7.3.5 The northwest Amazon

The societies that domesticated their landscapes and manufactured elaborate ceramics in northern Amazonia around 900 BC had evidently developed a new matrix for both material and non-material culture. The substantial investments in time represented by the construction of earthworks made the groups more sedentary, establishing more long-term relations to the landscape than had been the case with semi-nomadic societies. But sedentism was not only a consequence of new agricultural techniques, it was promoted by a cultural urge to establish a close relationship to the landscape. Exemplified by what Santos-Granero (1998) calls "topographic writing", this urge is widely recognized as characteristic of Arawak groups. By inscribing meaning into the landscape through material practices such as the construction of earthworks or the carving of petroglyphs, and through travel, myths, and ceremonies, Arawak groups have maintained close connections to their landscapes.

As pointed out by Emberling (1997:311) in a study on prehistoric ethnicity, it is important to distinguish when manifestations of material culture serve as markers of ethnic identity and when they do not. When considering particular archaeological materials such as those discussed in this study, e.g. various forms of earthworks and new types of ceramics with elaborate decoration such as Barrancoid *adornos* and Saladoid white-on-red painting clearly distinguishing them from previous and neighboring pottery styles, it seems evident that these artefacts have been manufactured in order to communicate ethnic distinctness. Similarly, the Arawak propensity to inscribe meaning into the landscape through topographic writing, which arguably includes the construction of earthworks, place-naming, and ceremonial chanting, should be seen as a way of reproducing ethnic identity as a sense of distinctness vis-à-vis neighboring groups.

From about 900 BC the first markers of Arawak distinctiveness – earthworks and elaborate ceramics – begin to spread through the regional exchange system. Given the connection between the makers of Osoid ceramics of the llanos and the groups of the Orinoco Valley, it is reasonable to suggest that the exchange between these two populations was conducted via the east-flowing rivers of the llanos that empty into the Orinoco. Given what we know about the dominance of Arawak-speakers among the agricultural groups of the llanos we can suggest that the establishment of the regional exchange system in this part of the northwest Amazon implicated language as a crucial component, and that the traditional territories of the northwest Amazon Arawaks were probably established already by the beginning of the first millennium BC. Although horticultural groups had existed in Amazonia for several millennia,

and manioc may have been domesticated already at 7000 BC (Oliver 2008:208), it is not until the latter half of the first millennium BC that agricultural intensification in the form of earthworks and anthropogenic soils becomes widespread in Amazonia. The Barrancoid series, closely associated with many of these agricultural societies, was by this point established not only in the Orinoco Valley, but also in the Guianas, and along the upper and middle Amazon. Earthworks related to this new type of agricultural technology were being constructed as far south as the Llanos de Mojos. Around 400 BC the Barrancoid tradition in the form of the Manacapurú phase became established at the site of Manacapurú in the middle Amazon area. Almost simultaneously, the first agricultural earthworks were constructed in the Llanos de Mojos. It is now clear that much of the cultural development during this period in various parts of Amazonia was interconnected. Again by 400 BC, the Iboa phase, the first component of Zucchi's (1991) Parallel Lines tradition, was established in the upper Orinoco area. The Parallel Lines tradition, surviving into the historical period through its final phase, Garza, and ending around AD 1600, has been attributed to Arawak-speakers (Zucchi 2002). Given the ceramic continuity between late prehistoric ceramics and pottery manufactured after European colonization in the upper Orinoco/Río Negro area (Neves 2001:274f), it is relatively unproblematic to relate late prehistoric ceramics of the area to historical Arawak-speaking groups. The many stylistic and technological similarities between the different manifestations of the Parallel Lines tradition noted by Zucchi (2002:213) should be interpreted as a consequence of the unifying influence of the Arawak regional exchange system established in this area between 800 and 400 BC.[323] The extension of the regional exchange system at 800 BC probably did not reach much further up the Orinoco than the site of Rabo de Cochino and the Atures rapids, but by 400 BC, diagnostic features such as high-intensity landscape management were established as far south as the Llanos de Mojos, and Barrancoid ceramics had by this time spread to the middle Amazon area.

The Arawak regional exchange system became established from the upper Orinoco to the Río Negro during the first half of the final millennium BC and may have involved the use of Parallel Lines ceramics instead of Barrancoid pottery, while embracing other typical components of the Arawak matrix such as rock art and high-intensity landscape management in the form of various types of elaborate fish trap systems (Hill 2007:16), also indicated in some petroglyph motifs (Greer 1995, 2001; Pereira 2001).

The Arawak matrix also exerted profound cultural influence on non-Arawak groups through the regional exchange system. Around AD 200 – 300, disruptions in the archaeological

[323] This emergence of ceramic uniformity very much resembles the strong internal similarities later established within the Barrancoid tradition across Amazonia, particularly between AD 200 and 600 (Petersen et al. 2004:16).

chronologies occur at several Amazonian sites, including the cultures of the northwest Amazon. The Iboa phase, the initial component of the Parallel Lines tradition, ceased to exist around AD 200 and was replaced by the Carutico phase, whose type site was located further south, on the upper Río Negro. Around the same time (AD 250), agricultural intensification is indicated at Camani phase sites in the Araracuara area, a development that was probably related to the influence of the Arawak regional exchange system along the Caquetá River, an hypothesis supported by the fact that Camani phase potters were using *caraipé* to temper their ceramics (Eden et al. 1984:135). The first *terra preta* soils at nearby Peña Roja also dates to AD 250, and similar indications of agricultural intensification have been retrieved from several sites in the upper Río Negro area at this time.

When the Arawak matrix first began to exert cultural influence along the Caquetá River, similar disruptions were taking place at other nodes in the exchange system. In the middle Amazon, the Itacoatiara phase of the Barrancoid series came to an end at AD 300, an event correlated in time with the birth of the Manacapurú phase of the Manacapurú tradition, which replaced the Iranduba and Açutuba components. Simultaneously, the Marajoara phase of the Amazonian Polychrome tradition emerged on Marajó Island. Given the profound cultural influence that the polychrome tradition would come to have along the Amazon and Caquetá Rivers during the remaining part of the first millennium and the first half of the second millennium AD, we may propose that Amazonia was now becoming culturally interconnected from the mouth of the Amazon to the Andes.

While the southern part of the northwest Amazon was being influenced by the Arawak matrix, cultural complexity grew throughout the region. In the Araracuara area, settlement sizes had been growing since AD 1, and the evidence of cultural development in the area has been interpreted as reflecting the first occurrence of chiefdoms in Amazonia (Herrera et al. 1992:98; Mora 2003:205). Further north, increasing cultural complexity is also evident in the llanos, which saw the growth of chiefdom societies associated with the La Betania period (AD 650 – 1250). Between the Araracuara area and the llanos are also several sites with anthropogenic soils and *caraipé*-tempered ceramics such as Ariarí, Guayabero, San José de Ocuné, CC2, and Maporita. At Maporita, the occupation associated with anthropogenic soils has been dated to AD 300, while a similar component at CC2 has been placed at AD 500, chronologically matching the development of similar features along the Caquetá and in the llanos (Alarcón and Segura 1998:100f, 120, qtd. in Gassón 2002:248). The development of hierarchical societies in the llanos paralleled that in the Orinoco Valley, where it had been underway for a couple of centuries, associated e.g. with the Arauquinoid ceramic tradition beginning around AD 500. During the La Betania phase, the variety of earthworks in the llanos, previously focused on habitation mounds (during the Caño del Oso phase), was expanded to include agricultural mounds, raised fields, and causeways (Spencer and Redmond 1998). This development can be seen as an expression of the general Arawak trend to domesticate the local

landscape, whether through the creation of anthropogenic soils, the construction of earthworks, or other cultural expressions.[324]

By AD 500, Barrancoid ceramics had reached the Caquetá River. The Arawak regional exchange system had by then probably exerted strong cultural influence in the Araracuara area for between 200 and 500 years, as suggested by the development of *terra preta* soils, population growth, and the increase in social stratification from around AD 1 (Eden et al. 1984; Herrera et al. 1992; Mora 2003). The history of Barrancoid ceramics along the Caquetá River is very different from that of the Orinoco or Amazon Rivers. While along the Orinoco and Amazon, the Barrancoid series emerges out of a long historic development through several ceramic phases, in the Caquetá Basin it almost immediately shows signs of strong influence from downriver complexes ultimately deriving from the Marajoara phase of the Amazonian Polychrome tradition. The Barrancoid ceramics of the Caquetá River were thus rapidly hybridized with the Amazonian Polychrome ware, eventually developing into the Guarita and Nofurei phases.

Along the Caquetá River we see the gradual replacement of an independent local culture, including a distinct ceramic style and subsistence strategy, by the Arawak matrix. Beginning with the adoption of *terra preta* technology, the development continued with the integration of Barrancoid ceramics and eventually also Nofurei phase ceramics. In adopting Nofurei pottery, Caquetá societies also appear to have subscribed to the elaborate burial rituals associated with the funerary urns characteristic of this tradition, and by implication also to the Arawak symbolic system, strongly focused on ancestry and social hierarchies (see Santos-Granero 2002). Around AD 800, the inhabitants of the Araracuara area further increased agricultural productivity by manuring their fields with river algae, indicating a typically Arawak emphasis on high-yielding agriculture.

Elaborate burial urns have been discovered at many archaeological sites in the northwest Amazon, particularly along rivers draining into the Río Negro and Amazon. Their most refined forms are to be found among the different varieties of the Amazonian Polychrome tradition, but they have also been discovered at sites not clearly associated with this ceramic complex, such as Anuyá Iuitéra, Cerro do Carmo, and Atures (fig. 6.2.2). These funerary urns,

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[324] The Witoto-speaking groups of the northwest Amazon, known to have been in close socio-cultural contact with their Arawak-speaking neighbors, are also reported to have constructed earthworks in the form of ditches surrounding their villages (Steward 1948b:756). Similar constructions are also reported from the Vaupés-Caquetá Basin by Goldman (1948:776). Such features have much in common with earthworks reported from areas historically dominated by Arawak-speakers such as Acre (Saunaluoma 2010) and the upper Xingu (Heckenberger et al. 2008). Together with the use of sacred bark trumpets, ceremonial gatherings similar to the *Yuruparí* feasts, the custom of ritual blowing, and the considerable areal affinities reported between Witoto and Arawak languages, this indicates that the Arawak matrix was very influential in the area between the Caquetá and Putumayo Rivers.

used for secondary burials in parts of Amazonia during late prehistory, are strongly associated with several central components of the Arawak ethos, such as a focus on descent as the basis of social life, the inclination to view ancestry as an important consideration in determining political leadership, and the emphasis on religion and ritual as important elements of society (Santos-Granero 2002). However, there seems to have been no incentive to manufacture identical funerary urns among the various groups associated with the Arawak matrix. On the contrary, the Amazonian Polychrome tradition was divided into many different varieties, each with its own specific style and decoration signaling local group identity, while at the same time they followed an overarching stylistic codex common to the whole tradition. As indicated by the finds of burial urns in the lowlands not belonging to the Amazonian Polychrome tradition, it was possible to be inspired by the Arawak matrix without following the codex of this ceramic tradition. Some groups, historically associated with the territory of the Achagua, manufactured other types of burial urns (such as the ones unearthed from the Arauquinoid level of the Caño Caroní site in the llanos), while clearly adopting other components of the Arawak matrix such as high-intensity landscape management. This should not be taken to indicate that they were not fully included in the Arawak regional exchange system, but that they represent local manifestations of ethnic identities among particular groups within the system.

Closely associated with the use of burial urns for storing the remains of ancestors is the custom of keeping various forms of idols, symbolizing the ancestors, that has to be fed and taken care of. This custom has been documented among several Arawak-speaking groups in Amazonia, and the mythological context of these idols is remarkably similar in different groups. In the extreme north, the Taino of Hispaniola had their *ciba* stones, but they also possessed a type of ancestor figurines called *cemi*. Both the *cemi* figurines and the *ciba* stones had to be fed in order to maintain a group's link to the ancestors, and they also served as the basis for political leadership (Steverlynck 2008:574, 576). On the northern coast of the mainland, the Arawak-speaking Lokono had similar figurines that also required feeding in order to maintain the social order. This is also reported for the Arawaks of the Lesser Antilles, i.e. the Island Carib (Chaumeil 2007:260). In the traditional territory of the Lokono, around the mouth of the Corentyne River, ceramic figurines associated with late Hertenrits material suggest a pre-Columbian instance of such idols. Further south, the *Yuruparí* flutes represented the link to the ancestors and ultimately to the mythological creator, *Kúwai*. These ancestral instruments, so characteristic of the northwest Amazon Arawaks, were also fed in order to maintain their creative power (ibid., 269). Chaumeil (1997, qtd. in Steverlynck 2008:579) notes the similarity between the Taino figurines and the *Yuruparí* flutes in terms of the belief in their ability to prevent illness, increase agricultural production, and facilitate childbirth. Furthermore, Chaumeil (2007:269) notes that societies utilizing sacred flutes often practice secondary urn burial or endo-cannibalism as a means of establishing links to the ancestors.

Given the continuities in terms of ceramic manufacture in the northwest Amazon and the similarity between late pre-Columbian and historical figurines in the traditional territory of the Lokono, it is likely that the historically documented feeding of various types of idols representing ancestral power is rooted in the Arawak matrix that was established throughout the area through the regional exchange system. Chaumeil (2007:272) discusses the connection between sacred flutes, the conservation of the physical remains of the ancestors, the memory of the dead, and the establishment of lineages, the latter being a crucial foundation for social hierarchies and political power in Arawak societies (cf. Santos-Granero 2002).

At the end of the first millennium AD, regional centers such as El Gaván in the llanos were being fortified, attacked and finally destroyed by hostile neighbors, and similar events have been documented from sites on the middle Amazon at this time. The Araracuara area suffered from similar socio-cultural disruptions as the societies occupying the *terra preta* sites along the main river, and the formation of anthropogenic soils ceased at Araracuara by AD 1200. In searching for the causes of this development, it is natural to look toward the main river, where violent encounters between Tupi-speakers and other indigenous groups (most notably Arawaks) are well-known from AD 1200 – 1600. However, there is little to indicate that Tupi-speaking groups were ever established as far up the Caquetá as the Araracuara area. The closest historically known Tupi-speaking group in the area was Pariana, an Omagua-speaking group that lived on the northern shore of the Putumayo River.[325] Rather than focusing on the interaction between Arawak- and Tupi-speakers as causing the abandonment of intensive agriculture of the Araracuara area, we may need to consider the establishment of the Carib-speaking Carijona in the region. At the time of contact, the Arawak-speaking Yucuna were still living in the Araracuara area, their settlements being located on the south shore of the Caquetá. Further downriver lived the Arawak-speaking Resígaro, who were separated from the Yucuna by a group of Witoto-speaking Muinane. East of the Yucuna lived the Andoque, who spoke a language genetically distinct from those of their neighbors. On the northern shore of the Caquetá, however, lived a large population of Carijona,[326] Carib-speakers with a language closely related to Trio of the Guiana Highlands, suggesting a fairly recent separation between these linguistic groups (Sergio Meira, pers. com., May 2010). This part of the northwest Amazon is today well-known for its multilingualism, and not far from the Araracuara area lives several groups practicing linguistic exogamy, e.g. the Arawak-speaking Tariana and their Eastern Tucano-speaking neighbors (Aikhenvald 1996). In fact, at the time of contact, in just

[325] Although the Tupi-speaking groups of the Amazon River may never have been permanently established in the northwest Amazon, they seem to have exerted some influence on the region, not least by prompting systems of fortification in the area (Goldman 1948:767).

[326] The block of Carijona here includes the Capitona, a relatively unknown ethno-linguistic group whose name is probably simply a variant of Carijona.

a day or two of paddling one could encounter as many as five separate linguistic groups (Andoque, Arawak, Carib, Witoto,[327] and Eastern Tucano) along this part of the Caquetá. As previously argued, the establishment of Carijona may be the result of a language shift, perhaps initiated by a group of Carijona (or rather Trio) traders making their way west along the Guaviare River. Another indication that Carib-speaking groups of the Guianas were well aware of the geography west of the Orinoco is the fact that they quickly assumed control over much of the previously Arawak-dominated trade networks in this area after 1730. Whether the establishment of the Carijona language in this part of the Colombian Amazon was the result of a migration, a language shift, or some other factor, it must certainly have affected all the groups in the area. The turbulence of the Araracuara area in late prehistory should thus probably be attributed to local ethnogenetic processes involving the Carijona, rather than to the Tupian expansion generating similar disruptions along the main river.

The linguistic phenomena of areal diffusion and language shifts are relatively well documented from the northwest Amazon. The most well-known example is that of the Tariana, who are presently shifting from their original Arawak language to that of their neighbors the Eastern Tucano, with whom they live in close cultural interaction, e.g. through linguistic exogamy (Aikhenvald 1996).[328] Another example of a language shift involving Arawak-speakers in the northwest Amazon comes from the Kaua,[329] who also shifted to a Tucano tongue due to contact with the Cubeo, but later shifted back to an Arawak language after extensive intermarriage with their Arawak neighbors, the Siusí. Furthermore, one of the Cubeo phratries was apparently once Arawak-speaking (Goldman 1948:781; Hill 1996a:142). The Ticuna, a linguistic isolate living between the Putumayo and Amazon Rivers, borrowed a number of lexical items from their Arawak neighbors (Nimuendajú 1948c:713), such as the Pasé.

In general, areal diffusion resulting from language contact appears to have been very common in the northwest Amazon. Such phenomena have caused much debate within the field of historical linguistics, particularly over larger groupings that have been labeled "Arawakan" or "Macro-Arawak" (see discussion in section 1.2). Much of the data on which certain linguists had based the "Arawakan" grouping came from incomplete wordlists, several of which derived from languages of the northwest Amazon whose correspondences were the result of areal diffusion rather than genetic relatedness. However, the rejection of the "Arawakan" grouping

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[327] South of the block of Witoto-speakers lived the Yagua of the Peba-Yaguan family, another small language family in this area.

[328] Schmidt (1917 (1):9) observed that the Tariana language had retreated to ceremonial use, while Tucano was used for daily conversation. This situation is similar to that of the relationship between Chané and Chiriguano, where the Arawak Chané language was also restricted to ceremonial events.

[329] According to Schmidt (1917 (4):4f) the Kaua (Káua) were originally Arawak-speakers living on the Içana River.

conceived as a genetically related linguistic family does not mean that the similarities between these languages do not have an interesting story to tell about areal diffusion through social contacts between speakers of genetically distinct languages.

Languages of the northwest Amazon that have been included in the "Arawakan" grouping include Guamo (Dixon and Aikhenvald 1999b:14) and the Guahibo family (Kaufman 1990, qtd. in Campbell 1997:178). The Guahibo groups were interspersed in pockets between clusters of Arawak-speakers, generally Achagua, and the lively trade relations[330] in the llanos brought these two linguistic groups together and generated the areal similarities that prompted some linguists to posit a genetic relationship between Guahibo and Arawak languages. Adelaar and Muysken (2004:162) confirm areal diffusion between Guahibo and neighboring Arawak languages. In the case of the Guamo, a close relationship with Arawak-speakers has also been documented. Kirchhoff (1948b:465) writes of the Guamo that "their settlements were intermingled with those of the Caquetío, who seem to have been their overlords, and these tribes carried on an active exchange of their respective products."[331] The close relationship between the Caquetío and Guamo was apparently the basis of areal diffusion between the languages. Given the hierarchical character of the relationship indicated by Kirchhoff, it is not surprising that the transfer of linguistic elements was primarily from the Caquetío to the Guamo.

Besides the geographical analysis of possible areas of language contact, which can be enhanced by data from archaeology and ethnohistory, it is also possible to illuminate the cultural mechanisms operating in the area by considering data on the ceremonial lives of Arawak groups in the northwest Amazon. The network of *Kúwai* routes, which had ritual as well as secular, commercial aspects, generated numerous zones of linguistic contact, also known as language areas (see e.g. Aikhenvald and Dixon 2001:11ff). Furthermore, there is a close connection between *Kúwai* and *Yuruparí*, the latter being both the name of the cultural hero in Nheengatú, the Tupi-based lingua franca, and the word designating the sacred flutes and their associated festivals. The *Yuruparí* flutes are a widespread phenomenon, with close counterparts even among the Apuriña on the Purús River. If we consider the widespread distribution of the sacred flutes complex as a whole (see Chaumeil 2007), it is clear that the complex comprises numerous variations on the same theme, and that the affinities between myths, performances, and the physical design of the flutes suggest a vast arena for cultural and linguistic contact. An illustration of the latter is the role of the *Yuruparí* festivals in

[330] The Guahibo exported *cunama* palm oil, palm thread, palm-thread hammocks, calabash products, and slaves to the Achagua (Kirchhoff 1948b:452).

[331] The Guamo also had a close relationship to the Otomac (Steward 1948d:36; Kirchhoff 1948b:463-468), whose language remains unclassified, but show signs of Arawak influence (Alberta Zucchi, pers. com., January 2007).

maintaining social order, including the principle of linguistic exogamy, among groups of the northwest Amazon (Steverlynck 2008:581). A crucial conclusion must thus be the role of ceremonial life in establishing language contact situations, and in ranking languages according to their ceremonial importance. As noted in section 6.4, Arawak languages were attributed central importance in the sacred flutes complex. Besides establishing arenas for language contact and the ranking of languages according to ceremonial importance, the sacred flutes complex also determined proper modes of linguistic interaction, e.g. through the promotion of cultural practices such as linguistic exogamy.

7.4 General conclusions: The Arawak phenomenon

The point of departure of the present investigation is that the widespread distribution of languages belonging to the Arawak linguistic family signify a genetic relationship, implying that they are the offspring of a single parent language, proto-Arawak, which existed several millennia ago. This affinity between languages and populations separated by vast distances in Amazonia and beyond calls for an explanation of the nature of such a far-reaching expansion. The study also builds on the observation that Arawak-speaking groups of Amazonia are united by a set of cultural features that is also widespread among members of the language family (Santos-Granero 2002). When and how did the groups speaking Arawak languages end up with the particular set of cultural features that have been traced in this study?

Previous chapters have identified and traced the expansion of a number of cultural features typical of the Arawak-speaking groups of lowland South America. The timing of the expansion of these features has been carefully examined, region by region (see chapters 2-6), and is summarized in section 7.4.1 below. A theoretical framework proposing to explain the expansion of these features has been outlined in section 1.3 and is recapitulated in section 7.4.2.

Our review of the data has also identified a number of cultural and linguistic features found among speakers of non-Arawak languages in Amazonia. It has also discussed time periods much earlier than our indications of an Arawak cultural complex. These concluding sections will summarize the cultural development of the Arawak language family beginning around 1000 BC, leaving aside earlier time periods as well as the cultural history of non-Arawak groups. Readers interested in issues relating to the time period before 1000 BC or to non-Arawak groups are therefore advised to consult the relevant regional chapters or the Index at the end of this book.

7.4.1 The expansion of the Arawak regional exchange system

The first cultural features to spread through the early nodes of the Arawak regional exchange system around 900 BC were high-intensity landscape management strategies in the form of

terra preta farming and ceramic artefacts associated with the Barrancoid series. It appears that these features originated along the lower Orinoco River and initially expanded along the Orinoco, the Guiana coastline, and the Essequibo River (see chapter 5). A cultural complex emphasizing the activity of burning, ash, charcoal, *terra preta* soils, *caraipé* temper, and elaborately decorated adornos of the Barrancoid ware, the latter suggesting a rich ceremonial life, appears to have crystallized in the northwestern part of the continent by around 900 BC.

Half a millennium later, at 400 BC, these features were all established in the middle Amazon region, where Barrancoid ceramics of the Manacapurú phase were manufactured by populations living in settlements on the high bluffs along the main river (see chapter 4). In this part of Amazonia, it was possible to combine *terra preta* agriculture with farming on the nutrient-rich *várzea* along the river as well as exploitation of the rich aquatic resources. Like other Arawak-speaking groups of Amazonia, these groups preferred to settle close to major rivers in order to facilitate rapid transportation. The middle Amazon thus became one of the important segments of the Arawak regional exchange system. The richness of the habitat also made it a resource coveted by non-Arawak neighbors, which contributed to the fact that this was one of the first parts of the Arawak regional system that was targeted by the military expansion of Tupi-speaking groups some 1300 years later.

Given the similarities between various features of the Arawak matrix occurring at different locations in the system, a continuous interaction must have characterized the regional exchange system already at this point. The exchange system mediated not only features relating to subsistence (e.g. *terra preta*) but to a large extent also cultural codes and cosmological/ceremonial elements. The tendency of the system to distribute stylistic features, e.g. ceramic decoration, suggests that ceremonial aspects expressed as stylistic details in pottery were part of a coherent package (the "Arawak matrix"; cf. Santos-Granero 2002) including other cultural features of more perishable nature such as shamanic paraphernalia, musical instruments, songs, and myths, which are difficult to trace in archaeological remains.

Once established in the area of the confluence of major rivers such as the Río Negro, Amazon, and Madeira, the further expansion of the Arawak matrix was rapid. By 400 BC the first mounds and raised fields of the Llanos de Mojos were being constructed, marking the establishment of the first high-intensity landscape management system in this area (see chapter 3). By 200 BC Barrancoid ceramics were being manufactured at Hupa-iya on the Ucayali River, indicating the expansion of the Arawak regional system into the upper Amazon. Soon thereafter, by 100 BC, the construction of earthworks expanded out of the flooded savannas of the Llanos de Mojos to the upper Beni River and into the *terra firme* of present-day Acre.

The earthworks on the *terra firme* northwest of the Llanos de Mojos lack the obvious agricultural functions of the mounds and raised fields on the flooded savannas. Besides the use of ditches and walls for fortification purposes, probably more important in the later history of

these earthworks, much of the earth-moving conducted in Acre around AD 1 is likely to have had symbolic purposes. In physically transforming their environment, these Amazonians created a landscape ordered according to symbolic principles central to the Arawak matrix. Similar types of landscape modification were later to appear in the upper Xingu area, where the early inhabitants built settlements surrounded by ditches and roads[332] forming the landscape according to geometrical principles (Heckenberger et al. 2008; see chapter 3). In the area between Acre/Llanos de Mojos and upper Xingu, the Arawak-speaking Parecís of the historical period maintained similar roads, presenting a link between the various instances of ceremonial landscape management in southern Amazonia. Investigations of the earthworks in the llanos of Venezuela, traditionally interpreted as purely related to subsistence activities, have revealed that many of them also lack obvious agricultural purposes. The landscape management of Arawak-speakers appears ubiquitously to have incorporated ceremonial aspects.

In areas where no remains of earthworks have been recovered, other types of landscape management strategies have been attributed to Arawak-speaking populations. Extensive systems of fish traps have been found in the Llanos de Mojos (Walker 2008), on Marajó Island (Schaan et al. 2009), and on the upper Río Negro (Hill 2007), all important nodes in the Arawak regional exchange system. Apart from such landscape management for subsistence purposes, Arawak groups developed other modes of structuring the landscape. Among the Yanesha of the eastern Andean slopes, and among the northwest Amazon Arawaks, the landscape was ordered through complex systems of topographic writing and place-naming, which inscribed meaning into it based on elaborate symbolic frameworks (Santos-Granero 1998; Hill 2007). Whether physically tracing geometric earthworks into the soil or ritually chanting place names along major rivers, native Amazonians inhabiting the region affected by the Arawak matrix developed various ways of establishing close relationships to the landscape and to express this through ceremonial practices.[333]

During the centuries following AD 1, the Arawak regional exchange system expanded further in Amazonia and was now beginning to reach its maximal distribution. Around AD 300, the Marajoara phase of the Amazonian Polychrome tradition was established on Marajó Island, the traditional territory of the Arawak-speaking Aruã, who continued to manufacture an

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[332] For a general summary of the indigenous construction of roads and causeways for transportation in lowland South America, see Denevan 1991.

[333] Apart from the obvious alterations of the environment described in this section, native Amazonians generally exerted strong influence on the ecology of the basin. Balée's (1993:231) observation that 12% of "pristine" Amazonian forests are the result of anthropogenic modification is only one example of such conclusions from research in historical ecology (for further examples see e.g. Balée and Erickson 2006).

undecorated version of this pottery style at the time of contact (Brochado and Lathrap 1982:53; see chapter 4). In the upper Xingu area, another traditional territory of Arawak-speakers, occupations established around AD 500 are associated with the Barrancoid series. From historical sources we know that it was the Arawak-speaking groups, more precisely women from the Kustenau, Mehinaku, and Waurá that were responsible for ceramic production (Steinen 1894; Quain ms., qtd. in Lévi-Strauss 1948:339). This gendered division of labor had great importance for the spread of ceramic styles, as female exogamy and marriage by capture were common in many areas of Amazonia, and Schmidt (1917 (3):5) attributes great importance to these customs in explaining the expansion of Arawak languages. Given that it was primarily the mother's ethno-linguistic identity that was transferred to children (ibid., (3):13), female potters of Arawak-speaking societies are likely to have had a crucial role in the spread of both ceramic traditions and languages.

Between AD 200 and 600 the internal homogeneity of the ceramics used within the Arawak regional system was at its highest. Throughout the vast, Arawak-mediated interaction sphere, Barrancoid earthenware now shared similarities down to the level of individual *adornos* (Petersen et al. 2004). This was apparently a period of intense communication within the Arawak regional exchange system, and the meetings between people with different cultural and ethno-linguistic identities influenced the composition of the Arawak matrix. Such meetings between people with different ethnic identities resulted in continuous renegotiations of their respective identities and the emergence of new ethnic identities, a process referred to as ethnogenesis. Such processes are apparent in the genesis of the Guarita subtradition of the Amazonian Polychrome tradition, which developed out of Barrancoid ceramics in the middle Amazon region. While there are continuities in vessel shapes, tempering, and some decorative traits between these two ceramic phases (Lathrap 1970:155-157; Petersen et al. 2004:9f), Guarita is clearly different in decoration and developed a much more elaborate set of burial urns depicting seated figurines, indicating a different set of cultural ideals among the people producing this new type of pottery. Such transformative processes become increasingly common along the main river between AD 500 and 1500, generating a set of cross-related pottery styles belonging to two major ceramic traditions, Amazonian Polychrome and Incised Punctated (see chapter 4).

It has been observed that the initial development of the Amazonian Polychrome tradition and more particularly the Guarita subtradition the middle Amazon, the Río Negro, and Marajó Island occurred in areas traditionally inhabited by Arawak-speaking populations,[334] while much of the later history of the series can be attributed to Tupi-speaking populations. A likely

[334] It is also likely that the lower Madeira River, an area where many finds of Guarita pottery have been made, was part of the Arawak regional exchange system until late prehistory (see fig. 7.2.1).

explanation for this development lies in ethnogenetic processes involving meetings between Arawak- and Tupi-speaking populations across much of central Amazonia in late prehistory. The complex relationship between speakers of Tupian and Arawak languages was already well established by this time. Originating in Rondônia, east of the upper Madeira River (Rodrigues 1964), the Tupi-speaking groups had experienced the expansion of Arawak-speakers into Acre and the Llanos the Mojos on the opposite side of the Madeira at least from 100 BC. While most of the Tupian languages remained confined to Rondônia until the expansion of the Tupi-Guarani branch,[335] Arawak-speakers had expanded across much of Amazonia and come into contact with Tupians along the Madeira. As there are no indications that Tupi-speakers from Rondônia crossed the Madeira and intermingled with the Arawaks on the opposite shore, there appears to have been little interaction between Tupi- and Arawak-speakers until the end of the first millennium AD. However, beginning around AD 900 – 1000 the Tupi-Guarani branch expanded across much of eastern Amazonia and began to affect the ethno-linguistic groups along the upper and middle Amazon.

In central Amazonia, Arawak-speaking populations had established circular villages surrounded by *terra preta* fields since around 400 BC. During 1300 – 1400 years of occupation many villages had grown to form extensive settlements surrounded by some of the richest soils in Amazonia. These settlements formed strategic resources within the regional exchange system. Based on the observation by Rebellato et al. (2009:22, 27) that the period around AD 900 – 1000 in the middle Amazon is characterized by discontinuities in the archaeological material and a shift in settlement layout from circular to linear villages, we can suggest that the Tupian expansion substantially affected the ethno-linguistic composition of the middle Amazon around this time. Parallel to archaeological discoveries indicating abrupt changes affecting the societies in central Amazonia at this point in time, historical linguistics also provides clues regarding the expansion of Tupian groups along the Amazon.

It has generally been assumed that the Tupian languages encountered along the upper Amazon at the time of contact, i.e. Omagua, Cocama, and Cocamilla, were established through military expansion during late prehistory. This suggestion was partly based on the fact that Tupi-speakers along the upper Amazon were still launching annual war expeditions along major tributaries at the time of European contact, a habit that the Europeans were quick to exploit by enlisting the Tupians as slave hunters. The occurrence of polychrome pottery in the upper Amazon area, in combination with the warlike nature of the Tupians, was thought by several scholars (e.g. Lathrap 1970) to indicate a demic upstream migration of Tupians bringing pottery originally found along the middle and lower Amazon and establishing large settlements of Tupians along the upper parts of the main river. However, recent research in

[335] Most of the Tupian languages are still only spoken within this region (Rodrigues 1999).

historical linguistics (Cabral 1995; Epps 2009; Michael n.d.) has revealed that the Tupian languages of the Omagua, Cocama, and Cocamilla are not genetically related to each other, i.e. do not result from diversification from a single parent language, and furthermore that a lack of consistency between grammar and lexicon indicates that these languages were established in the area through a language shift, leaving traces of the (unknown) language originally spoken by these populations in their Tupi tongue.

Thus, rather than assuming that the expansion of Tupi languages along the upper Amazon was based on a demic migration pushing non-Tupi speakers away from the main river (or exterminating them completely), we may need to account for a process through which the Tupian languages expanded along the river largely through language shifts. We thus face a similar theoretical problem as in our account of the Arawak expansion. The shifts to Tupi languages may well have been enforced by military power exerted by a small number of Tupians, as took place in the meeting between the Arawak-speaking Chané and the Tupi-speaking Chiriguano in the northern Chaco area. The point, however, is that languages in Amazonia appear not to have been carried by biological populations moving about through the landscape, pushing each other aside like in the billiard ball model criticized by Hornborg (2005). Instead, languages in Amazonia are much more fluid indications of ethnic identity. An extended discussion of the relationship between languages, ethnic identities, and biological populations will follow below, but first we should comment on the role of material culture in the meeting between Tupians and Arawaks along the major river. As mentioned above, some of the pottery associated with the Amazonian Polychrome tradition was apparently in use in the traditional territories of Arawak-speaking populations. In southern Amazonia, Tupi-speakers had ceramics with polychrome decoration, often accompanied by corrugated decoration (Howard 1947), and Tupians of the main river also used pottery of the Amazonian Polychrome tradition at the time of contact. Rather than trying to understand the distribution of pottery styles and language families as a one-to-one relationship, an alternative explanation would be to view the relationship as more fluid. Just as people's reasons for shifting language in indigenous Amazonia were based on diverse factors such as linguistic exogamy, military pressure, trade, ethnic identities, status, hierarchical relationships, or cultural preferences,[336] their reasons for shifting ceramic styles would have been influenced by the same kind of forces.

This is not to say that our knowledge about the processes involving shifts of language and material culture in Amazonian prehistory can never be increased because of the complexity of these processes. On the contrary, comparative studies of historical processes have much to tell us about the specific trajectories of native Amazonian groups. However, simplistic explanations

[336] For other examples of language contact situations resulting in language shifts, see e.g. Thomason and Kaufman 1988; Sasse 1992.

and broad generalizations insensitive to the dynamics of identity formation need to be replaced by detailed investigations of the specific processes involving the ethnic groups in question. This study suggests that language, like pottery, has formed an intrinsic part of the identity of participants in the Arawak regional exchange system. The Tupian expansion during late prehistory represented another such cultural complex, based on different cultural ideals. Such Amazonian cultural complexes, involving both language and material culture as central components, variously interacted with each other, continuously renegotiating ethno-linguistic identities through processes of ethnogenesis.

7.4.2 The Arawak matrix and the nature of the Arawak expansion

In section 7.4.1, we outlined the timing of the expansion of the Arawak regional exchange system and that of a particular language family and set of cultural features associated with it. However, important questions regarding the mechanisms of this expansion still remain to be answered. This section attempts to account for those attributes of the Arawak matrix that allowed it to expand across South America and the Antilles, and to suggest some implications of the expansion of the Arawak matrix for research devoted to the expansion of other language families in South America and elsewhere.

In section 1.3.2. we presented the theoretical framework of this investigation, introducing the concept of the Arawak matrix, previously defined as comprising five features of non-material culture described by Santos-Granero (2002:42ff):

- suppression of endo-warfare,
- a tendency to establish socio-political alliances with linguistically related groups,
- a focus on descent and consanguinity as the basis of social life,
- the use of ancestry and inherited rank as the foundation for political leadership, and
- an elaborate set of ritual ceremonies that characterizes personal, social, as well as political life.

In addition to these five elements, the present study has identified four features involving material culture that also appear to be typical of Arawak-speaking societies in Amazonia:

- the use of various types of high-intensity landscape management strategies as the basis for subsistence,
- a tendency to symbolically domesticate local and regional landscapes by the use of such techniques as topographic writing, extensive systems of place naming, and rock art,
- an elaborate set of rituals including a repertoire of sacred musical instruments and extensive sequences of chanting, often performed as part of place-naming rituals,
- a proclivity to establish settlements along major rivers and to organize regional social relations through river transportation.

Together, these nine features form a cultural complex that we have referred to as the Arawak matrix. This matrix is possible to trace through close examination of archaeological and historical materials, permitting us to identify its occurrence among societies that have long ceased to exist. However, the compilation of these features does not explain the mechanisms by which they were transferred to new groups, thus assimilating new groups into the Arawak network. Drawing on the many examples of contact situations among indigenous Amazonians reviewed in previous chapters, this section seeks to outline the mechanisms behind the spread of the Arawak matrix to groups not previously encompassed by the Arawak ethno-linguistic identity.

The history of indigenous languages in South America illustrates very different experiences and conditions of expansion. While current research in linguistics seeks to establish genetic relationships for the many small families and language isolates, the picture so far offered by the historical linguists is one of extraordinary diversity. While the small families and isolates form a patchwork of small groups, the large languages and language families of the continent have expanded over vast areas, encompassing speakers sometimes numbering in the millions (e.g. Aymara, Quechua, and Guaraní).

Linguistic diversity in indigenous Amazonia seems to be the result of several different cultural mechanisms. While cultural practices such as linguistic exogamy – a custom promoting marriage between speakers of different languages – continue to generate multilingualism and linguistic diversity in the northwest Amazon (see e.g. Aikhenvald 2001), other areas of great linguistic diversity such as the Guaporé-Mamoré[337] and upper Xingu areas instead appear to owe their extraordinary linguistic diversity to identity processes geared to the intensity of economic and other interaction between groups. Large parts of the areas surrounding the Guaporé-Mamoré area and the upper Xingu are dominated by single language families such as Tupi and Macro-Ge in eastern Brazil, or Aymara and Quechua in the Andes. The Carib language family similarly dominates the Guiana Highlands. In sum, individual histories of language families and isolates are obviously very divergent, some expanding enormously over vast territories while some remained confined to minimal territories and probably never reached significant numbers of speaker.

Merely from considering its distribution at the time of contact, it is obvious that the Arawak matrix must have contained some elements that contributed to its expansion. It includes

[337] A recent summary of linguistic diversity in the Guaporé-Mamoré area on the border between Brazil and Bolivia (Crevels and van der Voort 2008) lists 55 different languages representing at least 20 different genetic groupings.

several features, e.g. high-intensity landscape management and certain ceremonial practices,[338] that have also spread to groups speaking non-Arawak languages and that were obviously attractive in the eyes of neighboring groups. Since there are no indications that the expansion of the Arawak languages was accomplished by military means, a more likely explanation is that the spread of Arawak languages accompanied the spread of an attractive cultural identity across Amazonia. Since the 1980's, much has been written about the prospects of correlating the expansion of language families with that of cultural attributes, particularly various aspects of agriculture (Renfrew 1987; Bellwood and Renfrew 2002). Lathrap (1970) suggested that the expansion of Arawak and Tupi languages in the Amazon Basin was based on their cultivation of manioc. Not only does this interpretation disagree with the prehistory of horticulture in Amazonia, but it also mistakenly assumes that agriculture is primarily about subsistence. It is becoming increasingly clear, on the contrary, that crop cultivation is generally merely a component in a cultural constellation of features the foundation of which is not geared to subsistence requirements but to those of social cosmology, symbolism, and ceremonial life. While the farming-language dispersal model may be more relevant in some cases, as perhaps the expansion of Indo-European languages in Europe, it thus seems less applicable to Amazonia.[339]

The two most important crops in pre-Columbian Amazonia, maize and manioc, had already been domesticated and dispersed for thousands of years at the time of the expansion of the major language families (including Arawak) in the region.[340] While some non-Arawak-speaking groups were attracted by the agricultural landscapes managed by the Arawaks, the incentive to acquire the agricultural technology could conceivably have been singled out by non-Arawaks[341] without implicating the rest of the Arawak matrix. Furthermore, for many Arawak-speaking groups food production is not as central a concern, provided that there is no immediate shortage of food, as ceremonial aspects of the relationship to the landscape. This is

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[338] Examples include the invasion of Arawak territories with established high-intensity landscape management systems by Tupi-speakers during late prehistory (see section 7.4.1), and the "Arawakization" of non-Arawak-speakers, e.g. the Carib-speaking Bakairí of the upper Xingu area (Heckenberger 2005).

[339] As pointed out by Beresford-Jones and Heggarty (2011), the farming-language dispersal model also fails to account for the distribution of language families in areas where farming is impossible due to the nature of the climate, e.g. in the Arctic. Such examples show that other mechanisms can be responsible for the dispersal of language families over large areas (see also Heggarty and Beresford-Jones 2010).

[340] Maize pollen occurred at various places in Amazonia already by 5000 BP, and manioc had been in use since 8000 BP (Bush and Colinvaux 1988; Piperno and Pearsall 1998:258; Oliver 2008:204, 208).

[341] This probably occurred in a number of cases, e.g. where some of the raised fields in the Llanos de Mojos are found within traditional territories of non-Arawak-speaking groups, such as the Cayubaba (Walker 1999:230).

evident among the pre-Andine Arawaks (see chapter 2), as well as Arawaks in the northwest Amazon (see chapter 6) and the upper Xingu (see chapter 3).

Judging from the internal coherence of the Arawak matrix, and the historical significance of its non-material aspects, it is apparent that neighboring groups were attracted to Arawak societies by more subtle things than tools or food. Using an example from contemporary Arawak-speaking groups in the northwest Amazon, Zucchi (2002:201ff) shows how the establishment of new settlements in territories associated with other ethno-linguistic groups can be negotiated. The process begins with mythical as well as physical journeys to the new territory, where negotiations with the present owners of the land are conducted. Once the negotiations have been successful and the settlements in the new lands established, a complex process of adjustment to the new social and environmental context ensues. The new lands have to be ritually transformed into Arawak territory, a process requiring the ceremonial mediation of Arawak shamans.

While many of the shorter migrations into neighboring territories that are documented by Zucchi probably have little to do with the initial dispersal of the Arawak language family, some contemporary mechanisms of dispersal may still be relevant to examine in order to understand the linguistic dispersal. The processes of contact and negotiation, as well as the ceremonial practices through which new lands are ritually transformed into Arawak territory are without doubt important mechanisms of expansion in Arawak societies. It is likely that first contacts with non-Arawak-speaking groups were initiated by traders or shamans, two categories of travelers who were of great importance in Arawak societies. They would have been well oriented in Arawak culture and language, and their physical journeys would have brought them into contact with non-Arawak-speakers. These two categories of people were also equipped with some of the material items associated with Arawaks, e.g. trade goods or shamanic paraphernalia.

Over time, non-Arawak-speakers would have learned about the various ingredients of the Arawak matrix from people at the edge of the Arawak regional exchange system, e.g. the traders and shamans travelling into foreign territories. By conducting journeys into unknown territories and integrating them into the Arawak sphere of influence, traders and shamans facilitated the incorporation of new groups into the Arawak network. It is likely that the incorporation of new territories into the Arawak regional exchange system conferred prestige on the societies being incorporated, given that they were now becoming nodes in an ancient system with deep mythological ties to spiritual powers. In this way, ceremonial practices and "topographic writing" conducted by Arawak shamans were undoubtedly of crucial importance in the expansion of the Arawak matrix.

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