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Louis C. Forline  
*University of Nevada, Reno*

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## CRIB NOTES

## Putting History Back into Historical Ecology: Some Perspectives on the Recent Human Ecology of the Amazon Basin

LOUIS C. FORLINE

### Introduction and Overview

Historical ecology examines the way humans and their natural surroundings mutually influence one another. In recent years, new issues have been incorporated in this area of study and have implications for management, ethnohistory, interdisciplinary studies and land rights. In terms of management regimes, recent studies raise the distinct possibility that indigenous peoples are competent managers of natural resources. Traditional peoples are not merely adapting and responding to selective pressures of nature, but also thoughtfully creating areas purposefully designed for their own benefit (Balée 2006). Not only are plants encouraged, directed and manipulated (Alcorn 1981), they are also planted and protected to form new landscapes favoring the growth and regrowth of economic species.

Similarly, even from the alternative view that indigenous peoples are not as conscientious as some observers would argue, peoples' activities over the course of human history have certainly left a distinct footprint (Balée 1994). Even if merely regarded as "ecosystem people" (Dasmann 1988), perceived as but one more biological organism in a myriad of species, human agency would still create noteworthy landscapes.

While many works on indigenous human ecosystems are laudable in their effort to elevate the status of indigenous peoples and their knowledge of natural resources, what is often left out of the equation is the time-depth of observed landscapes and the complex series of interactions between societies vis-à-vis their environment. While there is little doubt

that anthropogenic areas are gaining recognition as an artifact of past human activity, one omission has been to assess the time scale of these transformed areas. This oversight has led some scholars to incorporate areas that were transformed within the last 500 years. What this implies is that the speed, velocity and intensity of globalization have left their mark during the last half millennium leaving in its wake other distinct areas often confused with "indigenous" areas. Yet indigenous areas have indeed created the basis for European settlements and, often, incoming European colonists and their descendents displaced many indigenous groups by settling on land already occupied and transformed by them.

In light of these reflections, I examine a few instances in the Historical ecology of the Brazilian Amazon and recommend a few approaches that could help fine tune this area of research.

### A Closer Look at Some Scenarios in the Brazilian Amazon

#### *The Guajá*

To better illustrate some of these points, I briefly turn to the Guajá Indians of the eastern Amazon region, where I have worked since 1990. The Guajá refer to themselves as **Awá** and were foragers until contacted by Brazil's Indian Service (FUNAI) in 1973. The Guajá were settled into four different semi-nucleated communities and have embraced swidden horticulture since coming into contact. The Guajá perhaps practiced agriculture in the past, but

the encroaching frontier and local conflicts forced them to flee and disperse. As would-be wreckages of an erstwhile agricultural society, observers speculate whether the Guajá retained any or some of their former knowledge of cultivated plants (Balée 1994; Gomes 1988). Linguistic evidence would indicate that they are knowledgeable to some degree about domesticates as they share similar words with neighboring indigenous communities. Yet these cognates do not necessarily indicate that the Guajá practiced agriculture in the past. We cannot discount the possibility that other indigenous groups may have loaned this vocabulary, nor underplay the fact that the government's Indian Service agents could have passed this nomenclature to them while introducing swidden agriculture to the Guajá. As such, the Guajá may have been a satellite group of foragers raiding the fallows or horticultural plots of their Tupí-Guaraní neighbors. Whether relations with neighboring groups were hostile or symbiotic, or both, is still an open question, but in either case knowledge would have been exchanged and familiarity with cultivated plants would have transpired.

One of the resources frequently used by the Guajá is the **babaçu** palm (*Attalea speciosa*). This palm serves a multitude of uses for the Guajá and regional peasants and its presence in the eastern Amazon and elsewhere is remarkable (Forline 2000). Babaçu and others of the *Attalea* alliance are widespread in the eastern and north-central Amazon, and the large stands encountered in this region appear primarily in the wake of human disturbance. In times past, indigenous peoples of the eastern Amazon utilized babaçu for fuel, food and fiber (Anderson 1983).

Balée (1989) estimated that approximately 12 percent of Brazil's Amazon region is occupied by anthropogenic landscapes. Topping the list of this figure is an area corresponding to the presence of babaçu. Over half of the babaçu stands are located in Maranhão state, roughly equivalent to the U.S. state of Virginia, or 103,035 km<sup>2</sup> (Hecht et al 1988). While this figure is impressive one key fact has been left out of this calculation; that is, the presence of babaçu is mainly the result of activities which occurred during the last 500 years. Most babaçu stands developed primarily in response to swidden

cultivation and, later, in the 20<sup>th</sup> century, to cattle ranching and big development projects such as the Carajás Railway. Thus, babaçu forests are primarily an artifact of recent migration and settlement and must be viewed more in terms of recent history (Anthony Anderson: personal communication).

Other claims about the Guajá utilization of resources must be reassessed too. Cormier (2006), for example, claims that the Guajá rely more on the anthropogenic areas created by other indigenous groups and that they currently exhibit a preference for hunting. However, time allocation studies and dietary data reveal a different scenario (Forline 1997, and recent fieldwork). While Guajá men, indeed, engage more of their productive activities in hunting, the bulk of the Guajá diet now comes from their crops. Thus, nearly 60 percent of their caloric intake stems from food sources grown on their swidden plots and orchards.

The story of two Guajá men is also illustrative. In 1978, Karapiru Guajá and his family were foraging near a farm in the vicinity of Porto Franco, Maranhão. They were spotted by the estate's security personnel (**jagunços**) and, in turn, were ambushed. Karapiru fled and was isolated for 10 years, heading southwards towards the state of Bahia. His relative, Yakarechim, wandered even farther and was encountered in the south-central Brazilian state of Minas Gerais. Both were eventually repatriated to their people and currently reside on the Caru Indian Reserve of Maranhão state.

These brief accounts show that indigenous peoples can adapt to a series of variegated ecosystems and habitats. Their odyssey also raises the possibility that indigenous peoples of the Amazon trekked and migrated over long distances and perhaps were inter-linked in a series of intricate trails and networks, be it through conflict, resource acquisition strategies or political and ideological reasons. In the wake of these activities they would have invariably left a distinct mark on landscapes. Yet we still have to be mindful that while Karapiru's and Yakarechim's experience can mimic dispersals of the past, their journeys must also be examined in a modern context, more within the confines of indigenous groups vis-à-vis state players.

### *The Kayapó and the Apêtê*

Another factor which must also be pointed out is that many of the anthropogenic areas of the Amazon have been created by actors other than their present occupants. A case in point would be the forest islands that Posey (1985) and others claimed to have been created by the Kayapó. These forest islands, called **apêtê** in Kayapó, are generated in the course of their treks, once termed by Posey as “nomadic agriculture.” The presence of apêtês is remarkable, yet what most observers overlook is that some of these areas can contain pottery and other artifacts from previous occupations. The Kayapó traditionally did not make pottery or manioc graters, implements they acquired recently through neo-Brazilians or by raiding settlements and other indigenous groups (Fisher 2000). Thus, many areas presently occupied by them could have been acquired through conflicts or settlement on abandoned sites.

### *Brazil's upper Xingu Region*

Another similar scenario occurs in the upper Xingu region of Brazil which suffered a large demographic decline in the shadow of the expanding Portuguese empire. Heckenberger et al. (2003) reveal that the Xinguanos were compressed into an area presently delimited as the Parque Indígena do Xingu. An extensive network of trails leading out to other settlements reveals a long history of occupation and an adaptation to local environments. Many of these areas reconstruct to a time that could have reached out far wider than their present day occupation. Yet other groups were also drawn into this area, such as some Gê and Tupian groups, newcomers to the upper Xingu, revealing a recent history of contraction and interethnic contact. Similarly, what was left out in this analysis is that the establishment of the indigenous park brought newer groups into the fold of Xinguanos culture. In the first instance, direct and indirect contact established by colonial encroachment, forced Xinguanos to begin retreating to their current locations. Later, Brazil's moving frontier also pushed both the Xinguanos and their new neighbors definitively into this new area. With the establishment of Parque Indígena do Xingu these groups were brought under the tutelage of the federal Indian Service. The

Indian Service also fostered marriages between communities, thus these recent interactions also influence the socioecological dynamics of the region.

### *Brazil's rubber booms and urban landscapes*

Time compression of history has also made some observers remiss in assessing other details of historical ecology. For one, the impacts of globalization have reached far and wide during the last 500 years. Brazil experienced many boom-bust cycles which transformed many ecosystems. During the rubber booms of the 19<sup>th</sup> and 20<sup>th</sup> centuries, many indigenous communities were forced to succumb to new political-economic regimes and this venture ushered large-scale migrations into the Amazon and miscegenation with local populations. In addition to rubber tapping, this emerging class of mixed-blood peasants (**caboclos**) created and intensified existing and newly formed land-use schemes. Swidden agriculture spread as did the introduction of new crops into these areas. Links to local, regional and international markets were instituted and the flow of goods and services intensified with the introduction of new technology and expanding populations. As these rubber ventures waxed and waned, new landscapes emerged.

Undoubtedly, many areas occupied by colonial regimes effectively removed the original inhabitants from their land, or forcibly assimilated them, replacing them with other land use schemes. Many Amazonian cities, for example, were born from missions and trading posts that were established on or near indigenous settlements. While ecologists formerly refrained from examining cities from an ecological perspective, many now regard these areas as ecosystems in their own right. The flow of goods and services in and out of urban areas extends to them the same parameters of ecological imports and exports, thus attributing to them the same mechanisms encountered in “natural ecosystems.”

### **Untangling the Past**

In view of the foregoing, a few more final considerations can illuminate some directions that can be taken in the study of historical ecology. This brief reappraisal does not intend to diminish the percep-

tive findings of scholars engaged in historical ecology in the Amazon. Yet to untangle the past we have to integrate and synthesize a number of theoretical and methodological approaches to evaluate past and present activities. New goals and research priorities can be established to determine which objectives research should strive to obtain. Were historical ecology in the New World to prioritize activities prior to 1492, then much information will be lost in understanding the historical forces transpiring during the last half-millennium. Also, current ethnographic fieldwork gives us shreds and patches of the past, but in order to reconstruct past practices and understand landscape signatures, the gap of the last 500 years should be examined in light of interethnic contact, expanding states and nation building.

First, this approach requires a fine-grained approach to ethnohistory and archaeology. Second, researchers should endeavor to examine historical records thoroughly to inform themselves about the recent past. Third, myth analysis should be incorporated in ethnographic fieldwork, as it helps raise questions about migration routes, interethnic contact and the origins of the indigenous players and their descendents. As Bruce Albert (2002) points out, indigenous narratives of contact should be fleshed out and not subordinated to the historical themes of mainstream society. This approach, coupled with text analysis (Bernard and Ryan 2000) can help identify themes to fine tune questions of historical ecology and build models that would help integrate contact history, creation of landscapes, and time scale. A fine toothed comb should be run through indigenous narratives not only to double check on correct language reconstruction but to also incorporate their own narratives into the processes surrounding historical ecology. These narratives, of course, should be couched in the context of environmental issues, which would better help in retracing the formation, use and meaning of landscapes.

Fourth, these techniques can be better framed within the parameters of language and environment (Maffi 2001). Similarly, some techniques that examine farming and language dispersal may help build better models for archaeologists and linguists attempting to explore links between the near and distant past (Bellwood and Renfrew 2002). Or a

fine-tuned approach to linguistic studies in examining migration routes and land management regimes would be coupled with studies in physical anthropology. Linguistic analysis should also reexamine some of the assumptions used in reconstructing languages to elicit would-be protowords for plants that would serve as "cultivars." Sociolinguistics should also be incorporated in these analyses as many of the words are borrowings from other groups and state agents. Not only are the iffy cognates introduced, in many instances some would-be cognates are transformed in the process of contact. Indigenous pronunciations and words may yield to impositions of mainstream actors, thus undermining the assumptions made by linguists in reconstructing protolanguages. Moreover, linguists inadvertently fall into the same trap encountered in DNA studies that attempt to trace human origins. That is, both studies work best with *live* populations. As many indigenous groups perished in the wake of first encounters, little was recorded of their languages, leaving few written records, save for the efforts established by Jesuits in crafting the colonial *Lingua Geral*, which is itself based on a transformed version of Tupi. Invariably, many studies which reconstruct to times past can often be based on an attenuated version of the *Lingua Geral*. As borrowings crisscrossed, new words were incorporated in indigenous languages, often creating false cognates. Additionally, new words could indicate more recent usage in resources among some groups.

Fifth, an important dynamic for those engaged in studies among indigenous and peasant groups is to review the history of land use schemes established by mainstream actors. Land areas set aside for rural peasants and indigenous groups often have a management agenda set out for them whereby these actors are oriented in terms of managing resources. Thus, in addition to attending to their own subsistence needs, indigenous players are often tasked to engage in other types of resource utilization by coercion, manipulation and patron-client relations.

Finally, historical ecology ought to be engaged by scholars before they head to the field. As it happens, many of the findings fleshed out by historical ecology are accidental and often subordinated to other research agendas.

Ultimately, it would also be incumbent upon funding organizations to support long term research. Most funding only embraces short term periods that can only piece together fragments of space and time. Many of the anthropogenic areas in question, for example, are not as apparent and require a greater investment in time to uncover the details of their genesis and formation. Funding agencies would then need to prioritize multi-year projects and more longitudinal studies and be mindful of the lengthy procedures in unearthing the dynamics of historical ecology, as would be the case in examining all socio-ecological dynamics and processes.

Much debate has been generated about pristine management regimes, and scholars are still groping for a definitive definition of management, properly speaking. The loci of those engaged in historical ecology should embrace a multi-pronged definition

of history and emphasize land transformations vis-à-vis cultures in contact. While studying the remote past should stay on course, it is equally important to ascertain the origin and signatures of anthropogenic landscapes as a way of assessing ownership, land rights and cultural-historical heritages (Forline 2004). With the assistance and guidance of local indigenous peoples, researchers working in the area of historical ecology could also lobby local governments to commission more work in this direction. Yet for present purposes, teasing out the intermeshing of times past and present remains our biggest challenge. This will enable us to better understand historical processes and accurately portray land use regimes in motion.

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Louis Forline, Department of Anthropology,  
University of Nevada, Reno, forline@unr.edu

### References Cited

- ALBERT, B.  
2002 "O ouro cannibal e a queda do céu: Uma crítica xamânica da economia política da natureza (Yanomami)," in *Pacificando o Branco: Cosmologias do contato no Norte-Amazônico*. Edited by B. Albert and A. Ramos, pp. 239-274. São Paulo, Editora UNESP.
- ALCORN, J.B.  
1981 Huastec noncrop resource management: Implications for prehistoric rain forest management. *Human Ecology* 9:395-417.
- ANDERSON, A.  
1983 The biology of *Orbignya martiana* (Palmae), a tropical dry forest dominant in Brazil. Ph.D.diss., University of Florida, Gainesville.
- BALÉE, W.  
1994 *Footprints in the forest: Ka'apor Ethnobotany – the historical ecology of plant utilization by an Amazonian people*. New York: Columbia University Press.
- BALÉE, W.  
1989 "Cultura na vegetação da Amazônia Brasileira," in *Biologia e ecologia humana na Amazônia: Avaliação e perspectivas*. Edited by W. Neves, pp. 95-109. Belém: Museu Paraense Emílio Goeldi.
- BALÉE, W.  
2006 The research program of historical ecology. *Annual Review of Anthropology*. 35:75–98.
- BELLWOOD, P., AND C. RENFREW.  
2002 *Examining the farming/language dispersal hypothesis*. Cambridge: McDonald Institute for Archaeological Research.
- BERNARD, H.R., AND G. RYAN.  
2000 "Text analysis: Qualitative and quantitative methods," in *Handbook of methods in cultural anthropology*. Edited by H. R. Bernard, pp. 595-646. Walnut Creek, CA: Altamira Press.

- CORMIER, L.  
2006 "Between the ship and the bulldozer: Historical ecology of Guajá subsistence, sociality, and symbolism after 1500," in *Time and complexity in historical ecology*. Edited by W. Balée and C. Erikson, pp. 341-363. New York: Columbia University Press.
- DASMANN, R.F.  
1988 "Towards a biosphere consciousness," in *The ends of the earth : Perspective on modern environmental history*. Edited by D. Worster, pp. 177-188. Cambridge: Cambridge University Press.
- FISHER, W.  
2000 *Rainforest exchanges: Industry and community on an Amazonian frontier*. Washington, DC: Smithsonian University Press.
- FORLINE, L.  
1997 The persistence and cultural transformation of the Guajá Indians: Foragers of Maranhão state, Brazil. Ph.D. diss., University of Florida, Gainesville.
- FORLINE, L.  
2000 Using and sustaining resources: The Guajá Indians and the babaçu palm (*Attalea speciosa*). *Indigenous Knowledge and Development Monitor* 8(3):3-7.
- FORLINE, L.  
2004 Estudo e levantamento prévio de identificação e delimitação da Terra Indígena Tavaquara. Report prepared for Brazil's Indian Service. Brasília: FUNAI.
- GOMES, M.  
1988 *Os índios e o Brasil*. Petrópolis: Editora Vozes.
- HECHT, S., A. ANDERSON, AND P. MAY.  
1988 The subsidy from nature: Shifting cultivation, successional palm forests, and rural development. *Human Organization* 47(1):25-35.
- HECKENBERGER M., A. KUIKURO, U. KUIKURO, J.C. RUSSELL, M. SCHMIDT, C. FAUSTO, B. FRANCHETTO.  
2003 Amazonia 1492: Pristine forest or cultural parkland? *Science* 301(5640):1710-14.
- MAFFI, L.  
2001 "Linking language and environment: A coevolutionary perspective," in *New Directions in Anthropology and Environment*. Edited by C. Crumley, pp. 24-48. Walnut Creek, CA: Altamira Press.
- POSEY, D.  
1985 Indigenous management of tropical forest ecosystems: The case of the Kayapó Indians of the Brazilian Amazon. *Agroforestry Systems* 3:139-158.