12

Due South: Learning from the Tropical Experience

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Preface

In following the theme of "reconstructing the past, " I put forward in this chapter ideas for a sustainable environment that are based on reconstruction of a past in which the consequences of the Maya urban experience are considered as factors in environmental change. My archaeological research in Belize at sites in the Stann Creek District, along the coast of Belize at Colson Point and on Ambergris Caye, and at the mainland sites of Negroman-Tipu and Lamanai has provided me with a powerful picture of how the Precolumbian Maya interacted in various ways with their environment. We have a great deal to learn from the Maya, and from other people who have built and managed villages, towns, and cities in the humid tropics. What we have to learn is not only about peopling the past, but also about sustaining people in the future.

The title of this chapter has multiple meanings. First and foremost it is meant to indicate that we should give the South[1] its due, and should be learning from the humid tropical experience rather than bringing ideologies that developed in temperate climate frameworks to the tropics. It is also a play on the title of a television show[2] that became popular in North America in the nineties, about a Canadian Mountie who teamed up with a Chicago detective to fight crime. "Due South" also refers to my direction of travel in the early 1980s, when my husband David Pendergast and I would head south every January to Florida, where we would spend several days with Hal and Alberta Ball before traveling to Belize for a long excavation season. Sometime about mid-season, Hal and Alberta would fly in Hal's twin-engine Apache to Belize to check out what the archaeologists were up to. Hal would land the plane at Hillbank, at the south end of the New River Lagoon, and we would pick him and Alberta up in one of our boats and bring them back to Lamanai, provided that the boat actually made the trip without breaking down.

Hal and Alberta were very much a part of the fabric of those years in Belize. Hal would, I am certain, have been pleased to see my interest in the Maya bear fruit in terms of what Maya prehistory has taught me about how we in the modern world can improve our approaches to safeguarding the environment. Although the field research I planned in the 1990s on long-term environmental change has yet to materialize, as the result of lack of funds, the presentation contained in these pages is evidence of the fact that I have not yet given up my interest in what the Maya have to teach us about environmental management. Hal was always so upbeat that I know he would have told me not to be discouraged.

The publication of this volume is in fact timely, because I hope to pick up in the near future where I left off just before Hal's death in 1984. In anticipation, then, of uniting more traditional archaeological research on the mainland and on the coast with environmental studies of land use, vegetation, and sea

[1] "North" and "South" have come to refer to the socio-economic and political division that separates the wealthy developed countries (The North) from the poorer developing nations (The South). Although most nations that make up the North are located in the northern hemisphere, the divide is not exclusively geographic. Australia, for example, is part of the southern hemisphere, but is a "North" country. "The North" in a sense substitutes for the "West" but is more all encompassing because it accounts for the broader spectrum of nations that have increased their wealth via colonialism or imperialism and have exploited resources in poorer nations. The North-South divide therefore refers to the split between the powerful Northern and the powerless Southern hemisphere. Nearly all of the world's wealth and power is held by the northern half of the globe, which is home to four members of the United Nations Security Council and all of the members of the G8. From: http://en.wikipedia.org/wiki/North-South divide.

[2] http://www.tv.com/due-south/show/

level rise, I present here some of the ideas that drive my interest in environmental research. I dedicate this effort to Hal with gratitude for all the companionship and moral support he and Alberta gave to David and me in our endeavors.

Introduction

My intention is to outline conclusions I have reached, as the result of my research on Maya settlement and its impact, which may help to resolve issues generated by today's concern with the environment (Turner et al. 1990), sustainability (Bennett and Dahlberg 1990: 80; Mougeot and Welsh 1999), and most recently with global warming (Jäger and Barry 1990; Houghton and Skole 1990). The lessons that can be extracted from the Maya setting are, I believe, applicable to a broad range of situations throughout the world.

Field research has taken me to marine, coastal and lowland forest environments over the past three decades and more. In recent years, I have had the opportunity to extend coastal environmental research to Cuba (e.g., Peros, Graham and Davis 2006). The focus of my interest is the environmental transformation brought about by Precolumbian and colonial-period populations, particularly in the context of urban relationships under humid tropical conditions. By this I mean cities, towns, villages and their hinterlands, the interaction among which is structured by the demands of complex societies and civilizations (Bacus and Lucero 1999; Graham 1999a). Research suggests that many transformative processes in Precolumbian America led inadvertently, rather than purposefully, to increases in the extent of cultivable land over the long term.

Even where vegetational succession resulted in greater biodiversity, there is no good evidence that biodiversity was intended. This does not mean that deliberate or intentional attempts to maintain diverse resources were lacking. I have argued elsewhere (Graham 2006) that in an environment in which the enemies of trees (cattle, sheep, Europeans and the grasses they all loved) were not present until Spanish Colonial times (see Melville 1994), diversity of resources was essential to survival. This remains no less true today, but the difficulties of maintaining resource diversity have increased tremendously since the 16th century.

It might seem desirable to emulate the peoples of Precolumbian America in seeking solutions to modern problems, but given that the road to hell is paved with good intentions, a more realistic route to saving the world would be to devote at least as much attention to the potential of inadvertent human activity as we have given to the idea that humans can intentionally work to save the planet. In other publications I have focused on trash accumulation, waste deposition, and the decay products of human occupation in terms of their long-term benefits (Graham 1998, 1999b); here I grapple with a more enigmatic issue: Cultural practices that are effective in conserving resources.

Is conservation the only way?

A core environmental theme in today's world is conservation — the act or process of preserving the environment from loss, damage, or neglect[3] (see, for example, Hendricks 1992; Redford and Padoch 1992). Perhaps rather counter-intuitively, my research has led me to conclude that cultural practices that developed or evolved for reasons completely *outside of* conservation are those that most effectively conserve resources (Graham 1998, 2006). If we recognize that environmental conservation is best effected by approaches that do not explicitly "conserve," how can we complement the recognition in order to strengthen the efforts made by organizations that seek explicitly to conserve?

When we learn something, we can apply that learning both directly and contextually. A case of direct application would be if we learned that the ancient Maya carried out a given sustainable practice and we then set out to apply the practice under modern conditions. For example, we might choose to reconstruct ridged or drained fields along the New River in northern Belize in the area around Lamanai in an attempt to introduce sustainable agriculture to a region now virtually devoid of forests as the result of the spread of cattle pasture. This approach has, in fact, been attempted in some parts of the northern Yucatan Peninsula.

Contextual thinking, on the other hand, is more complicated. Contextual application would mean not only learning from the Maya experience directly but also applying the thinking that has changed as the result of the Maya experience to broader problem-solving. To put this another way, "saving the rainforest" is not simply a matter of learning a new technique or technology to conserve resources more effectively. Efforts to effect a balance between land use and land conservation must be sustained on several levels, not solely on that of technology.

[3] *The American Heritage Dictionary of the English Language*, Third Edition, 1992. Houghton Mifflin, Boston.

Four levels of thought and action

I propose four approaches, all of which have the potential to contribute to sustainable use of resources. The first, conservation or protection, is a single solution that subsumes a wide range of motivations, all connected to perceived rights of resource use. In the United States, "architects of the conservation movement were invariably involved with the national forests" (Steen 1992:3), and forests were one of a number of public spaces that were part of a larger public land system disposed of by Congress (Miller 1992: 69). In England, conservation is also linked to forests, but is rooted in royal appropriation of forests by Norman kings in the 11th century to conserve deer and other animals for hunting, meat, and hides and to protect the woodlands and the natural vegetation on which deer depended (Tubbs 2001: 21-23, 51, 78).

The second approach, based on studies of the past, involves two kinds of solutions. The first entails the construction of alternative priorities based on systems that have worked in the past, in the recognition that it will be necessary to adapt such systems to prevailing modern conditions. The second requires abandonment of the nature/culture dichotomy and examination of past transformations from a perspective that might more rapidly facilitate applications to modern environmental problems. In other words, if we can identify a past land use as sustainable based on the perspective of history, then we need to learn more about the world view that produced the sustainable result. This is true even if the concept of "conservation" — often seen as protecting Nature from humans — or the concept of "sustainability" was never part of the ancient equation.

A third approach would be to alter the priorities of an economic system that is based on what I term "Scrooge capitalism," and hand economic decision-making over to the Fezziwigs (see below). Whether alteration of this sort can be effected in the face of today's economic pressures is bound to be the subject of great debate, but this does not mean that the attempt is not worth making. The fourth approach involves commitment to change not only globally but also locally, which means that we have to define our level of personal responsibility in a world of shrinking resources. What follows is a discussion of these four approaches in greater detail.

Conservation and the creation of reserves

Conservation in the North has been played out most forcefully in modern times through the creation of wilderness forests or wildlife reserves. The concept of conservation has an interesting history because it reflects changing notions of the kinds of resources that should be preserved. In England, forests were indeed set aside in the 11th century by Norman kings to preserve deer for the hunt (although much of the forested land had been held and maintained by manor estates before the Normans), but this specialized resource use proved difficult to sustain, and ultimately forests survived because they became an important common or public resource for pasturing and coppicing (Tubbs 2001: 79-80). In the United States, national forests are part of public land, and although they represent Nature as a source of life and landscape that should be preserved to enrich the human experience, there is also the view that timber, minerals, and wildlife for hunting are part of the resources being preserved (Miller 1992: 69; Reiger 1992).

As the English and United States experiences show, there are two common denominators where conservation areas are concerned. The first is that some resource or group of resources is seen as being preserved; the second is that extensive agriculture is excluded. The picture which is emerging historically — contrary to expectations but in keeping with what I have to say below about alternative frameworks — is that where the agriculturalist is a hunter-farmer, trees remain part of the picture, but where extensive agriculture is a priority, forests are cleared (see, for example, Cochrane 1993: 3-9; Reiger 1992).

Reserves sometimes include cultural resources. The Lamanai Archaeological Reserve in Belize (Fig. 12.1), where I have worked for a number of years, is predominantly focused on ancient Maya structures, but it includes the tracts of forest that surround the ruins and has therefore become a haven for a range of animals and plants whose habitats are being destroyed in areas that border the reserve. In this case the establishment of a reserve seems to be serving as at least one means of halting the advancement of deforestation, although of course the protected area was not envisioned in this way at the time of its creation. Species of animals and plants are able to survive, albeit in greatly reduced numbers, because land clearing for agriculture is not permitted, and the ruins are not subject to looting or to utilization as a source of stone.

The situation was made greatly more complicated during the time when the reserve was being created by the presence of a refugee community within the archaeological site. Despite the fact that the community's existence was not sanctioned by law, issues of human rights versus preservation aims arose and persisted. Eventually the community was moved just outside the reserve, where land was made available by the Belize government. Thus the people problem

Figure 12.1 *The Lamanai Archaeological Reserve, Orange Walk District, Belize, looking southeast over New River Lagoon.*

was solved, but this was only possible because land was not in short supply. In addition, the construction of a hotel just outside the reserve has expanded employment opportunities. In this case the creation of the reserve was not seen as contributing to land scarcity or to economic hardship, as has been the case in some other circumstances. Now the reserve has become a resource of a different kind; it is exploited for its potential in generating tourism. This seems at present to be a good thing; but only time will tell.

Although as an archaeologist I support the protection of Lamanai as an archaeological site, I remain ambivalent about whether the creation of reserves can preserve the environment in the absence of a vision of environment as a resource. English kings, for example, were not trying to preserve wildlife for its own sake; they were using forests as a way to preserve deer for hunting, together with the vegetation on which the deer fed. Commoners saw the forest as a resource as well, and its preservation in one form or another resulted from balancing its value as a resource to the crown and its value to commoners (Tubbs 1992: 78-80).

In a manner similar in some respects to English forest preservation, it may only be the ecotourism potential of some forests elsewhere in the world that saves them. They may not be set aside as wilderness or biodiversity preserves per se, but rather as areas where zones are conserved as resources for the generation of tourist dollars. This may not reflect well on modern priorities, but if it works it should not be discounted as a viable and potentially valuable approach.

Another sort of justification for the creation of forest reserves would be the explicit preservation of diverse species of plants as potential sources of healing drugs. This, however, is a resource realized only over the long term. In a society of quick fixes, where snacking is a response to problem-solving and where mechanized billboards change ads every few seconds, most people have the attention span of gnats and cannot sustain interest in a future any farther away than the coming week. This makes public support of government funding for the creation and maintenance of such reserves unlikely. Pharmaceutical companies are the most likely source of funding for reserves of this type, but the interests of drug companies bring with them another set of problems that even the concept of intellectual property rights cannot solve (Bahuchet et al. 2001: 89-90).

Alternative frameworks

The second approach has been informed by archaeological and related research. Such work has shown that cities in the humid tropics in the Maya area, and also in West Africa, Southeast Asia, and South Asia, did not rest on a conceptual division between the

masonry or "stone" environment — which includes imperishables such as mud brick or plaster in addition to stone — and the "green" environment in the way that characterizes cities of the North (Arensberg 1980; Graham 1999a). The managed environment in the humid tropics does not and indeed cannot, owing to rapid growth and decay cycles, separate stone space from greenspace in the radical and assured manner that is found in the North.

Evidence from Maya sites shows that greenspace was managed as intensively as stone space, from the vegetation within cities to forest biomes (see examples in Graham 1999a). The greenspace within ancient Maya cities was managed in a variety of ways that included horticulture, agriculture, and orchard development, as well as water management and retention of runoff, whereas greenspace management in cities of the North tended and still tends to be dominated by the phenomenon of the lawn. We can learn from the Maya and from other tropical urban traditions by considering both "stone" and "green" as *built* environments, instead of seeing the built environment as a bastion against Nature, or the natural environment as an entity to be subdued in order that cities thrive and expand.

On the other hand, my research has also led me to conclude that the character of tropical forests, and possibly the persistence of such forests and even forest biodiversity, may be the products not so much of deliberate management as of cultural side effects. In the environment of the past there were other forces at work of which neither the Maya nor any other urbanites may have been aware. A wide range of cultural practices, such as the management of waste, the discard of local industry by-products, construction practices, the re-use of construction debris, and the practice of structure abandonment contributed to soil formation processes in such a way as to improve soil quality and soil drainage over the long term and, by way of this improvement, to affect vegetational succession and thereby inadvertently foster tree growth and biodiversity (Graham 1999b, 2006).

As I trust the foregoing discussion demonstrates, we need seriously to consider the importance of Maya cultural practices that developed or evolved for reasons completely outside of notions of conservation or even of environmental management. We need also to consider that such cultural practices may well have been the ones that most effectively conserved resources. Sustainable forests and increasing biodiversity can be as much an inadvertent consequence of the behaviour of a civilization as can deforestation and soil erosion. For some reason, however, probably rooted in the development experience of Northern nations, we seem to want to recognize deforestation as an unplanned consequence of Maya behavior whereas we hold the view that biodiversity or forest sustainability, where they occurred, must have been the result of management and long-range planning (Graham 2006).

Future studies must take into account the importance of the effects of cultural practices that lie outside of any concepts that might exist of either conservation or even forest resource management. Methods of studying this phenomenon must of necessity reject the concept of nature as a force in opposition to culture and clearly separate from it. The chemistry and morphology of the built environment are part of "Nature," just as stands of vegetation or coral reefs should be understood as features to be examined for potential anthropogenic imprint, in which circumstance nature becomes culture (Graham 2006).

What directions might be taken, then, to increase our understanding of the ways in which natural and cultural resource use can be sustained? First, agencies must begin to consider that resource or wildlife conservation as a policy may not be as effective in actually preserving resource availability over the long term as are cultural practices that produce resource conservation as a side-effect. Second, in terms of research directions, we might seek to identify cultural and economic practices past and present that have served to produce conservation of resources or improvements to the environment not as ends in themselves but as unintended or indirect effects of other priorities.

Scrooge v. Fezziwig capitalism

In Dickens' famous tale, *A Christmas Carol in Prose*, it is Fezziwig's business environment and practices that Scrooge at long last admits made a difference: "The happiness he gives, is quite as great as if it cost a fortune" (Dickens 2003:64). Fezziwig balanced the necessity of making a profit with concern not only for his employees but also for the neighborhood in which his business resided (Dickens 2003:62-64). Building on Fezziwig's character as depicted in the original book, Noel Langley's screenplay — in the 1951 version directed by Brian Desmond Hurst with Alastair Sim as Scrooge — has Fezziwig not surprisingly being driven out of business by Scrooge, whose views on profit epitomize millenium capitalism. One does not have to look too far today to see that profit and the business model that generates it have, indeed, become everything.

What do Scrooge and Fezziwig have to do with environmental conservation and diversity? They represent the two models that are at work, and

generally in sharp conflict, in the modern world. In the humid tropics — whether in Belize or in West Africa, Southeast Asia, or South India — hotels with saunas and air conditioning, golf courses, Mediterranean cuisine, and horseback riding in the "jungle" proliferate almost daily. Such things are well within the ambit of Scrooge capitalism, but would at the very least be given serious second thoughts under Fezziwig capitalism. The maintenance of sauna temperatures for hot tubs or of cool air in rooms requires huge amounts of energy; golf courses are simply an extension of the colonial domination-by-lawn with the addition of truckloads of pesticides and massive water consumption; wheat-based cuisines are foreign to the humid tropics, and their spread brings economic as well as environmental problems; and horses are grazing animals which find tropical forest habitats debilitating, and hence require much more care than they do in other climes.

The foregoing points are given sharp focus by an anecdote regarding a friend in the film business in Belize. As production manager, he had to see to it that insecticide was sprayed widely over a section of beach front and adjacent vegetation an hour or so before filming so that the prospective scene of a man and woman making passionate love on the beach could be shot without either of the cast members getting bitten virtually to death by insects. The result of such practices is that cinema-goers feel cheated when, inspired by such romantic films, they visit tropical beaches and discover that sand flies make moonlight love-making on tropical sands the lunacy that it is. The solution for hotel owners, in order to keep profits up, is to use more pesticides in the hope of creating an idealized tropical setting very far removed from the real one.

The point that Fezziwig made to Scrooge was that capitalism must be tempered by other concerns, because greed as a motivating force was likely to have destructive consequences. I suggest that capitalism must be tempered by: 1) Thinking through exactly how our comfort is made possible, and whether the comfort we demand sabotages the very environment we are enjoying as tourists; and 2) Making considered choices to buy from people and organizations that temper profit, including profit from tourism, with beneficial social practices and wise resource use. In other words, as happy as we may have been when Scrooge paid for Tiny Tim's medical expenses, we must remember that he did so because he realized that Fezziwig had been right. It was not too late for Scrooge in the story, but is it too late for us?

On one of Belize's tropical cayes where we have carried out archaeological work, the quest for profit has resulted not only in destruction of local wooden architecture to make way for generic Miami-style luxury condos, but also, in one circumstance, in the replacement of local Maya-style thatch roofs on cabañas by Polynesian-style roofs because tourists think that the Polynesian style looks "more tropical." In ways such as this the generic tropics are born, and in the ultimate irony tourists now dictate, based on marketing brochures, what they think the appearance of the tropics should be even before they get there (Graham 1999c).

Commitment to local change and personal responsibility

The fourth level of the approaches described above involves defining our level of personal responsibility in a world of shrinking resources and in the context of the research that we undertake. This is a controversial and complex topic which I discuss in detail elsewhere (Graham 1999c). For archaeologists in the Maya area, one level of responsibility could be seen as intensifying the commitment we have to the people with whom we interact and to the places in which we work. Although it is the people in these places who are best positioned to comment on how effective we have been in carrying out these responsibilities, I like to think that Maya archaeologists will be found to stand clearly with the Fezziwigs.

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