

Historicizing Foraging in South Asia: Power, History, and Ecology of Holocene Hunting and Gathering

Kathleen D. Morrison

From the sparsely-populated worlds of the Palaeolithic when all humans relied on gathering and hunting for their sole subsistence, to the contemporary postcolonial world in which a small but significant number of people still gather wild plants and hunt wild animals as part of shifting and diverse regimes of production, foraging strategies have had a continuing salience across much of Asia, as elsewhere. Why have hunting and gathering, along with the apparently simple extractive technologies they employ, had such an enduring significance in Asia, especially South and Southeast Asia? We should also consider the long-term importance of this phenomenon – is the existence of Holocene hunter-gatherers simply a curiosity, or might it instead imply something more fundamental about the trajectory of both foragers and their neighbors? Although a complete answer to these questions is beyond the scope of this chapter, I will suggest here that far from representing the rather exotic activity of a series of marginal peoples, gathering in particular has played a far greater role in the development of several South and Southeast Asian states than is generally acknowledged.

This chapter addresses some aspects of the complex history of foraging in Asia, focusing on the South Asian Holocene and the integration of foraging strategies with agriculture, wage labor, trade and tribute relations, and pastoralism. Rather than adopting the widespread but problematic view of Holocene hunter-gatherers as enduring remnants of more ancient groups or as representatives of pre-agricultural lifeways, I contextualize hunting and gathering in terms of its historical political ecologies. Gathering, fishing, and hunting involve particular relations of humans to the natural world; at the same time, those who deploy these strategies are virtually always involved in relations of power, affect, and sometimes interdependence with others. Although the contexts of foraging – here I use the term foraging as a general gloss for all gathering, fishing, and hunting activities without any necessary assumptions about the goals, strategies, or constraints of those activities – have, in places, changed radically since the advent of agriculture, hunting and gathering have

never died out but remain important strategies of resource acquisition and of social and political action. Using three examples from South Asia, this chapter works to extract hunting and gathering from their traditional roles as place markers within a presumed cultural evolutionary sequence, analyzing them instead in terms of historically-situated tactics deployed within contexts of specific local ecologies, polities, exchange networks, and cultural frameworks.

Perspectives on Agriculture and Foraging

In early archaeological views of agriculture that saw agriculture as a self-evident good, both the initial development of plant domestication and cultivation and its subsequent expansion could easily be accommodated as inevitable outcomes of the growth of knowledge. In this view, the existence of peoples who, for one reason or another, failed to adopt agriculture constituted a puzzle. Whether noble or depraved, those who continued to hunt and gather evidently failed to progress in some fundamental way. Hunting and gathering, in this perspective, were identified with an early stage in cultural evolution and the continuing existence of these extractive strategies could only be viewed in terms of persistence of earlier forms or of "reversion" to such forms in an episteme that equates "early" with "simple" and hunting and gathering with both. Once the knowledge of agriculture came into being, foragers verging on the brink of subsistence disaster were free to expand their populations, begin to discriminate among categories of people, and ultimately to develop social "complexity" and civilization.

With the destruction of the Hobbesian view of hunter-gatherers in the late 1960s, foragers lost some of their negative taint, if not their academically marginal status among scholars, becoming, conversely, easy-going egalitarians enjoying a life of relative ease. Instead of wondering why domestication and agriculture had not been "invented" before, the transition to the arduous life of an agriculturalist now became the puzzle to be solved. A key work in this intellectual transition was Boserup (1965), which posited that population growth leads to the intensification of agricultural production and thus to increases in overall production rather than, following Malthus, increased production itself allowing population growth. Although Boserup did not consider hunting and gathering, extending her model to the beginnings of agriculture constituted only a short intellectual leap (e.g. Cohen 1977).

Even though this shift – from poor foragers and rich farmers to leisured foragers and harried farmers – was enormous, in many ways the basic scaffolding supporting views of change continued to be one of step-wise progressive cultural evolution in which the stages of change, though usually defined politically, continued to be powerfully associated with modal economic strategies. Thus, band societies were seen to be built on a base of hunting and gathering, tribes on simple agriculture, and chiefdoms and states on more intensive forms of agriculture. The simple power of these associations has meant that, even now, it may seem contrarian to suggest that in some parts of Asia, state economies required the existence of foraging as

well as agriculture; at some times and in some places hunter-gatherers were critical to state formation, specialization, and even colonial expansion.

Although, at this time, the ethnographic literature on hunter-gatherers was dominated by several "classic" ethnographic cases of small, mobile, egalitarian groups, archaeological examples of non-agriculturalists with large populations, sedentary lifestyles, or stratified social organization were disconcertingly common. The rumblings in the archaeological literature found voice in the "complex hunter-gatherer" concept. Price and Brown (1985:8) defined this complexity in terms of "increases in societal size, scale, and organization," with indices such as new technology, specialized production, occupational and status differentiation, sedentism, and low mobility (1985:10-12) playing a key role in marking complexity archaeologically. In some respects, I would suggest that their delineation of the realm of complex hunter-gatherers did not go far enough, partly because of its focus on within-group dynamics. Many apparently egalitarian groups are, in fact, enmeshed in relationships of unequal power when seen in regional context, a situation probably not uncommon for much of the Holocene. Within these larger (and longer) frames, then, even small-scale groups might usefully be characterized as "complex," enmeshed with (and within) larger polities, economies, and cultural orders. The conceptual problem here is certainly one of scale and is complicated by difficulties in drawing boundaries between cultural groups, but where foragers have had long histories of interaction with differently-organized others it seems shortsighted at best to excise those others from general considerations of their organization.

Why Foraging?

Why have hunting and gathering persisted and, at times, even replaced agriculture not only as basic strategies for survival but also, for some groups, as culturallycentral activities? Anthropologists from the 1970s onward developed what we may call the basic energetic argument: this view grew out of a demographic perspective combined with least-cost assumptions and suggests that hunting and gathering is easier and more reliable than agriculture. Thus, people will always cling to foraging if they can. Certainly, this insight is critical and continues to have much analytical value. However, it is also clear that human subsistence strategies can be considerably more complex than such models assume. First of all, they may involve what are, from the perspective of economic efficiency, seemingly perverse cultural logics that make least-cost assumptions problematic. In addition, as Price and Brown (1985) implicitly recognized and I emphasize here, the answer to this question does not lie solely within the realm of internal-group dynamics, but requires a larger and longer view. Questions about the persistence or (re)emergence of hunting and gathering require supra-regional and at times even global answers. For much of the later Holocene and up to the present, many groups did not have the luxury of selecting subsistence activities without any reference to outsiders. Post-Palaeolithic hunting, gathering, agriculture, craft production, and other activities all took place within widely varying regional relations of power. Even among egalitarian societies, external relationships may involve degrees of coercion, allure, and even downright oppression so that ignoring power relations in the study of huntergatherers seems seriously misguided.

Here the insights of the revisionists (see Morrison 2002a) are particularly germane to the study of Holocene foraging in Asia where so many groups have long been involved with agriculturalists, states, and even world markets – we might consider the many degrees of engagement between Asian foragers and differently-organized others as so many more modes of complex hunting and gathering. In fact, the view from Asia places the early revisionist assertion of a qualitative break between archaeology and ethnography (that is, the argument that because of the long histories of engagement of foraging groups with the rest of the world, the ethnographic record is of dubious utility for archaeological reconstruction) in a rather ironic light. On the contrary, the ethnographic record of this region is extremely helpful for seeing how people might hunt and gather in and around a world of agriculture, states, markets, and money, and how foragers might conceive of and organize those activities.

But why have hunting and gathering remained so important, especially in South and Southeast Asia? There seem to be many reasons and I make no claims to a full account here. However, three of the salient factors needed to explain this situation involve aspects of occupational history, geography, and resources. I take up each of these in turn, though a general account would require more elaboration and empirical support than can be provided in the brief case studies presented here. In general, it is possible to isolate conditions more favorable to what might be called "classic" forms of foraging (self-sufficient subsistence extraction) as well as those conducive to the development and maintenance of what I have termed "foragertrader" forms (Morrison and Junker 2002). Although these are by no means mutually exclusive modes of existence, the point I want to make here is that the relative importance of hunting and gathering across much of tropical and monsoon Asia (even after the development of agriculture) cannot be understood without reference to both "modes" of hunting and gathering. Although individuals and groups could and did shift between subsistence foraging and foraging for exchange, the conditions allowing forager-traders to exist are somewhat different than those facilitating "classic" gathering and hunting and it may be that more "commercial" forms of extraction worked to underwrite the continued existence of subsistence foraging

Occupational History: Irrigated Lowlands, Forested Uplands, and Bevond

Differential occupational histories not only build on local and regional ecological contexts and possibilities, but they also create historical consequences, some more easily reversible than others. To take a simple example, the extension of intensive agricultural practices such as the construction of irrigated, terraced rice fields and the

massive translocations of soil, vegetation, wildlife habitat, and water that such constructions entail, would require substantial changes in foraging practices of people who use a landscape containing such transformed contexts. To be sure, not all anthropogenic environments involve such stark modifications of flora, fauna, topography, and hydrology, but even more modest changes alter the possibilities for hunting and gathering. This can be seen either in a more conventional way, where the extension of agriculture, animal husbandry, urbanism, and/or industry destroy the conditions necessary for subsistence foraging or in a more opportunistic light in which the expansion of specialized economies makes forager-trader strategies possible.

This first factor, then, relates to the oft-cited fact that contemporary huntergatherers typically live in environments that are less than hospitable to agriculture. I would add an historical dimension, however, in insisting that occupational history, more than simply raw potentiality, is at issue. For example, in parts of island Southeast Asia, large-scale landscape transformation of the sort that seems to have happened quite early in comparable parts of the west coast of India took place relatively recently (e.g. Boomgaard et al. 1997). In some regions of southwest Borneo (Knapen 2001), and elsewhere in Indonesia (Boomgaard 1997:16), even swidden agriculture faced recurrent problems and the scale and scope of agriculture and thus of anthropogenic landscape transformation appears to have been slight until New World crops such as maize (Zea mays) became available. Perhaps it is not surprising, then, that hunter-gatherers, albeit ones oriented toward exchange as well as subsistence foraging, have been able to maintain themselves in these places, in light of these occupational histories.

In general, the scope and historical precociousness of landscape change in the large deltas of South and East Asia have indeed meant that hunting and gathering, both as strategy and identity, have tended to disappear through time. In India, areas with the longest histories of agriculture, especially intensive agriculture, tend to have the fewest foragers and it is certainly no accident that contemporary "tribal" groups who practice at least some hunting and gathering are differentially concentrated in the tropical northeast, the uplands of the semi-tropical southwest, and the hilly regions of central India where dense deciduous monsoonal forests still exist. For "classic" hunter-gatherers it is perhaps sufficient that landscapes that are forested, hilly, poorly-drained, or otherwise hostile to agriculture may have few others competing for space, but for foragers adjusted to exchange it is also necessary that such locations contain resources desired by outsiders.

Thus, both competition and cooperation with differently-organized others as well as the material constraints of altered conditions of biota, territorial freedom and mobility, and perhaps even cultural understandings of the world consonant with variable ways of making a living (cf. Barnard 2002), work to shape the possibilities of different places and different times. One advantage of insisting on the importance of occupational history rather than simply environmental context is that it highlights the role of human action, not only in making physical environments (and making them meaningful), but also in terms of the regional power dynamics. The occupational histories that impinge on the lives of foragers are not only their own, but also those of expanding agriculturalists, miners, prospectors, royal courts,

foresters, and others. As I illustrate below, these histories create both problems and opportunities for foraging peoples; the continued importance of hunting and gathering in tropical and monsoonal Asia represents, in part, evidence of widespread response to these opportunities.

Geography: islands, narrow mountain chains, and transport by land and water

To a certain extent, the continuing importance of hunting and gathering in parts of Asia has required a fine balance of proximity and distance between foragers and others. Although one tends to think of hunter-gatherers as being isolated people living far from the fields of agriculturalists and the seats of political power (and indeed this is sometimes the case), the long occupational histories and flexible environmental possibilities of much of Asia have led to many situations where true remoteness is rare. Where desired resources (below) are clustered, especially in areas of difficult access and perhaps less hospitable to agriculture, and where their exploitation requires developed local knowledge, it may not be too surprising that specialists in resource extraction emerge. If these specialists are able to survive (even periodically) away from a regular supply chain, so much the better. As I have discussed elsewhere (Morrison 2002c), the real difficulty is convincing locally knowledgeable people to commit to regular exchange relations, especially when those relations create conditions of insecurity related to, for example, global market shifts; this is often achieved through coercion as well as local desires for exotic goods.

Although exceptions to this pattern certainly exist, many of the ethnographically and historically-known forager-trader groups of Asia live either on islands or in relatively narrow mountain chains surrounded by state-level agricultural societies. Thus, while there are real possibilities of communication between differently organized others, these others also face some difficulty of access. Too far away, and regular relationships cannot be maintained, too close and foragers are threatened by land-scape transformation and competition from other would-be gatherers.

Resources: Forest Products, Manufactures, and Cultigens

Although the known range of human subsistence strategies is large and many foraging groups are able to subsist under very harsh conditions, it is clear that some environments are more conducive to human survival than others. There exists some controversy about the viability of subsistence foraging in tropical forest environments (Bailey et al. 1989; see discussion by Junker 2002a), and while there is evidence suggesting that Bailey et al.'s formulation is too absolute and that subsistence foragers have, in some cases, managed to exist in tropical forest settings, at the same time, the small number of such exceptions does point to the difficulty of foraging-based subsistence in these kinds of environments. In fact, the co-occurrence of both classic subsistence foraging and forager-traders forms in Holocene South and Southeast Asia may be seen as highlighting the salience of resource distributions

for hunter-gatherer lifeways. On the one hand, foraging-based subsistence might have been difficult in certain forest environments as well as in many of the anthropogenic environments of Asia. At the same time, critically, many of these forests were also home to plant, animal, and mineral resources desired by outsiders. It was the existence of these latter resources, along with the incentive for reciprocal exchange, which made forager-trader lifestyles possible.

It hardly needs to be noted that resources, as such, are always culturally defined. Historically, we see major shifts in the resources exploited by hunter-gatherers for the use of others - metal ores, for example, had no utility whatsoever before the development of smelting technology, and even afterwards the effective exploitation of metal ores required not only knowledge of their presence and distribution, but also the means to extract and transport them to processing locales. This is illustrated graphically in the case of Bangka (Sumatra); on this island forest products such as rattans and a scented wood obtained from diseased Gonstylus bancanus trees had long been involved, somewhat sporadically, in international trade networks, but neither local upland groups nor the coastal Orang Laut, famed as ocean-going raiders (Andaya 1993; Virunha 2002) mined or used Bangka's rich tin deposits. Tin mining here began only in 1710 (Colombijn 1997:316), after the takeover of Bangka by the Palembang state and, not coincidentally, along with declining revenues from the environmentally-degrading production of pepper (Andaya 1993). Extraction of lucrative tin ores, traded to the Dutch, was initially small in scale, but the migration of skilled Chinese miners (only partially state-sanctioned) quickly led to the adoption of more efficient extraction techniques. In the subsequent boom, both mining and charcoal production for smelting led to dramatic deforestation and environmental degradation (Colombijn 1997).

Similarly, sappan wood (also known as Brazil-wood, Caesalpinia sappan), which grows across much of tropical South and Southeast Asia, was much in demand in Europe and Asia until the late nineteenth century. Sappan harvesting between the 14th and 19th centuries on the island of Sumbawa, Indonesia (de Jong Boers 1997) led to dramatic reductions in the local occurrence of this species. This, along with the development of artificial substitutes for the red dye obtained from this wood caused the collection of sappan wood from Sumbawa to cease entirely (de Jong Boers 1997:267). Similar accounts could be given for other forest products, many of which were not used locally at all or which had very limited utility to local people. The list of such items is very long, including bird's nests, sea slugs, bird of paradise feathers, benzoin gum (Styrax sp.), camphor (Dryobalanops sp.), sandalwood (Santalum album), and many of the other aromatics, gums, dyes, and resins obtained from upland forests (Cooper 2002; Cribb 1997; Potter 1997). Other products, such as hunted animals, honey, and medicinal plants and spices were potentially more useful to their gatherers, but in any case local people would have needed only a tiny fraction of the quantities actually harvested for exchange.

In other cases, plants once under the primary control of local forest peoples became so important that they were transplanted to other contexts. Many of the spices such as pepper, cardamom, ginger, cinnamon, clove, and nutmeg, which were among the most important forest products traded out of and across South and

Southeast Asia, originated in specific locales as gathered wild plants. Pepper in southwest India, cinnamon in Sri Lanka, cloves and nutmeg in Maluku – although these spices were traded outside their areas of origin for centuries, most of this commerce involved the exploitation of wild stands. While this gathering activity continued well into the 19th century, these same plants were increasingly grown in gardens and swidden fields and thus the organization of their production shifted dramatically along with the transition from wild plant to cultigen (Morrison 2002c).

All the examples above relate to forest products desired by outside groups—indeed I would suggest that this external interest, along with a concomitant organizational ability to mobilize and exchange these resources, is central to the development and maintenance of relationships between hunter-gatherers and others. Boomgaard (1989:378) goes so far as to suggest that state structure (to mobilize gathering) was necessary in order to attract foreign merchants, who needed reliable flows of goods. While this may be true for the larger-scale forms of extraction and exchange characteristic of both southwest India and island Southeast Asia after the sixteenth century, it is also clear from the examples of the Harappan borderlands and the Andaman Islands (see below) that commercial exchange can thrive even in the absence of state structures on both sides.

Beyond the important issue of political control, it is also worth considering what goods were traded back into the forests as these resources, too, had to be culturally defined as desirable in order to lubricate trade relations. Briefly, forager-traders and others involved in the exploitation of wild forest products were virtually always the recipients of significant quantities of foodstuffs, usually grains such as rice. The development of a taste for rice and a cultural preference for rice over more energetically-efficient foods such as sago is a critical and little-studied component of the historical development of the trade in forest products across South and Southeast Asia (cf. Knapen 2001:214–26) and, concomitantly, of the persistence of hunting and gathering in these same regions. Other products obtained by forager-traders often include textiles and tools (Morrison 2002c) as well as sumptuary goods including, in Southeast Asia, Chinese porcelains (Bellwood 1985:141; Junker 2002b) and other exotica.

Holocene Foraging in South Asia

The long Palaeolithic record of Asia lies beyond the scope of this paper, though it should be noted that in many areas occupational histories map the record of both modern and premodern humans, creating a record of astonishing depth. In other areas, human occupation is relatively recent. Agricultural histories are similarly variable, and clearly these have influenced the extent to which foraging remained a viable possibility. Allied changes such as the differential development of social and political inequality, state formation, and forms of economic specialization also created both opportunities and constraints for would-be foragers. Although all these conditions varied from place to place across Asia, there are some common features of the cases discussed in this chapter, most notably their participation in long-

distance exchange networks that, prior to European colonization, eventually reached as far as the Mediterranean and East Asia and, afterwards, encompassed nearly the entire globe. In all the three cases considered here – the Indus valley and its peripheries, southwest India, and the Andamans – people identified as huntergatherers not only have long histories, but these groups (or others like them) also still exist, pointing to the contemporary salience of historical analyses.

Curiously, the non-arctic peoples of Asia who gather and hunt have had only a small impact on the anthropological literature. In his foreword to a reader on hunter-gatherers, Lee (1998:xi-xii), for example, writes, "Hunter-gatherers in recent history have been surprisingly persistent. As recently as A.D. 1500, hunters occupied fully one-third of the globe, including all of Australia and most of North America, as well as large tracts of South America, Africa, and northeast Asia." Lee must have known that both South and Southeast Asia boast numerous huntergatherer groups (Lee and Daly eds. 2000), yet somehow these groups (and a vast stretch of the earth's surface) disappeared in his enumeration. As I have argued before (Morrison 2002a), this invisibility seems to stem from the complex entanglements of South and Southeast Asian hunter-gatherers in worlds outside the forest - while other foragers have only recently been "exposed" as being more connected and less isolated than previously presumed, many South and Southeast Asian groups have clearly long maintained foraging lifeways in the face of substantial interaction with others. The degree and nature of this interaction varied substantially, as did, presumably, the ability of foraging groups to persist as cultural groups increasingly surrounded by farmers, traders, and others. In spite of this and although connections between foragers and others were (and are) often marked by deep ambivalence, even exploitation, non-foragers, from colonial governments to local elites, were not always bent on assimilating hunter-gatherers. On the contrary, the products of Asian forests often constituted critical state resources and their exploitation often required considerable local expertise. One of the many ways in which this exploitation was effected historically was through relationships with foraging groups; thus we cannot fully account for many state economies and polities without reference to hunting and gathering.

The following sections consider Holocene foraging in three places, each with different occupational histories: I begin with what is now northwestern India and Pakistan, where human histories are extremely long and where agriculture was adopted early in the Holocene, looking at interaction between hunter-gatherers and others on the fringes of the Indus civilization in the semi-arid environment of western India. Moving then to peninsular India, where a long record of hunting and gathering in low-lying areas is matched with a relatively late adoption of agriculture, I consider the regional context of the Western Ghat Mountains. These steep peaks are cloaked in tropical and semi-tropical forests that presented both challenges to and opportunities for human subsistence. Finally, I consider the Andaman Islands, with their relatively brief record of human habitation. Prior to the establishment of a British penal colony in the late 19th century, the Andamans could boast both tropical evergreen and monsoonal deciduous forest cover and were occupied only by hunting and gathering groups. All of these areas, while evincing

complex local histories, were integrated to some extent by international networks of exchange from at least the first few centuries A.D. and all felt the effects of European colonial expansion from the 16th century onward. The degree to which local people were integrated into larger worlds and the importance of hunting and gathering for local or colonial states also varied tremendously. In all cases, however, it is possible both to point to the importance of external forces on the changing strategies and identities of local foraging groups and to consider the importance of foragers and of gathered products for those external groups.

There are a large number of different hunting and gathering groups in South Asia today, a situation mirrored throughout the Holocene. Although particular ethnic groups may have moved in and out of foraging, have expanded or contracted in size, or have reformed their boundaries, it is clear that foraging has been important on the subcontinent from the beginnings of human history. The earliest written records mention gathering and hunting groups - inscriptions commissioned by the North Indian Mauryan emperor Ashoka during the third century B.C. note the presence of undefeated forest "tribes" on the borders of the state in Central India (Kulke and Rothermund 1990) while other Mauryan texts mention the existence of taxes on both timber and on hunters "who maintained a livelihood from the animals of the forest" (Thapar 1997:118) - suggesting state interest in forest products as well as the presence of distinct categories of people incorporated into that polity. Later inscriptional records from South India make references to hill peoples and note their role in the specialized procurement of forest products such as spices, gums and resins, honey, and medicinal and aromatic plants. Many of these gathering and hunting peoples in southwest India had regular tribute relationships with lowland rulers, supplying them with gathered and hunted forest products. While historical notices of foragers are consistently present, if sporadic and brief before the 16th century A.D., they become abundant by the nineteenth century A.D., with the advent of European record-keeping. Around this time it becomes possible to identify by name particular foraging groups, many of whom still exist today.

Harappan cities, traders, and hunter-gatherers

In South Asia, the rich archaeological record of the Paleolithic gives way around the beginning of the Holocene to assemblages usually labeled Mesolithic (Korisettar and Rajaguru 2002). Early Holocene lithic assemblages are generally based on a microlithic flake-blade technology (while still including larger tool types) and are thus characterized as "microlithic." While Mesolithic assemblages do typically contain microliths, microliths did not disappear with agriculture and are associated (Misra 1976:45) with Chalcolithic, Early Historic, and finally Gupta ceramics (fourth to seventh centuries A.D.). Late use of flaked stone and glass tools has also been documented into the 16th century A.D. in southern India (Lycett and Morrison 1989). Malik (1959:50), too, found a core chipped from the base of a molded beer-bottle near Mahabaleswar in the Western Ghats. Cooper (2002:93) notes that such containers were not made until the 17th or 18th century A.D., citing

Malik's conclusion (1959:50) that this find indicates the late survival of a "microlithic" industry. In the "Mesolithic" site of Adamgarh Cave, too, microliths of bottle glass were found alongside specimens made on chalcedony, jasper, and other fine-grained lithic material (Khatri 1964:759). Cooper (2002:83) notes that in this case, "No pottery was found in association with the microliths, thus confirming the existence of a foraging economy in isolated areas, contemporaneous with urban settlements in the adjoining valleys."

Although some scholars in South Asia use terms like Mesolithic and microlithic to describe contemporary peoples, despite their lack of stone tools, microlithic or otherwise, such terms obscure more than they illuminate. Here I use the term Mesolithic only to refer to a time period that begins with the Holocene and ends (somewhat arbitrarily) as early as the seventh millennium B.C. in the northwest and as late as the beginning of the third in the south, when local Neolithic periods began (Korisettar et al. 2002). I use the term microlithic to refer only to a miniature blade-based lithic technology (and see Morrison 2000).

All this terminological confusion means that the specifically archaeological evidence for Holocene hunting and gathering is difficult to assess. In the absence of absolute dates, many temporal assignments in the literature based solely on lithic technology must be considered suspect. Clearly, many archaeological sites described as "Mesolithic" were formed during the later Holocene, and if the distributions of published radiocarbon dates for sites with (what are called) microlithic artifacts are plotted, the results show a very broad range of dates with a distribution across the entire Holocene, a pattern not evident for the Neolithic or Chalcolithic (Lycett and Morrison 1989).

Despite the small body of research on subsistence and mobility during the Mesolithic, it is clear that there was significant regional variation across the subcontinent. Although many foraging groups were small and mobile, others were sedentary or semi-sedentary, particularly along the southern coasts where they engaged in fishing as well as gathering and hunting terrestrial game. Many of the major excavated caves and rock shelters of Central and Western India occupied during the early Holocene (Bagor, Langhnaj, Adamgarh, Bhimbetka) were exploited only seasonally, some filling with aeolian sand in the dry season. Both Adamgarh and Bhimbetka contain faunal remains of domesticated animals, suggesting that they were occupied by people not totally dependent upon wild taxa. Langhnaj is discussed below.

Evidence for interaction between hunter-gatherers and state societies in South Asia begins during the Chalcolithic, almost as early as states themselves. As is well known, the Indus Valley, a broad alluvial plain with five major rivers fed by both monsoon rains and Himalayan snowmelt, was the home of the one of the world's first urban societies. By the middle of the third millennium B.C., the so-called Mature Phase of the Indus boasted several large cities with well-planned streets and drainage, complex differentiation of space and public architecture, systems of weights and writing, and a high degree of occupational specialization (Kenoyer 1997). Even before this period, in the Early Harappan, there is considerable evidence for large, fortified settlements, writing or record-keeping, specialized

production, and other indications of a politically and socially stratified society. Mature Phase Indus cities, towns, and villages were integrated into an as-yet poorly understood political structure consisting of either a single state or, perhaps more likely, a series of smaller polities linked by extensive and well-organized trade networks.

The rich floodplains of the Indus and its tributaries were friendly to agricultural production, supporting large nucleated population centers. However, like Mesopotamia, resources such as water, silt, and clay, while useful for ceramic production, construction, and farming, did not meet local needs for tools, groundstone, ornaments, and the raw material needed to make specialized objects such as seals and weights. Although some of these materials were obtained more locally the Indus cultural sphere was extremely large, more than one million square kilometers (Possehl 1999); thus even what I am calling local exchange might involve significant distances - raw materials and some finished goods clearly flowed into the Indus heartland from great distances. The organization of long-distance trade followed a variety of strategies, including what seems to be direct procurement by Harappans moving into culturally and politically alien terrain. For example, the settlement of Shortugai in what is now Afghanistan appears in most respects to be a standard Harappan town; only its location, far from the Indus plain and near sources of lapis lazuli indicates its possible role as an outpost for trading and/or extraction of this valued stone. Other goods were obtained through exchange relations with other urbanized groups, for example, those in the Gulf region and Mesopotamia (Ratnagar 1981).

It is also clear, however, that there were regular, well-organized exchanges between Harappan urbanites and peninsular pastoralists and hunter-gatherers. The evidence for this relationship was first discussed by Possehl (1976, 2002; Possehl and Kennedy 1979), and both recent excavations and bioarchaeological research (Lukacs 1990, 2002) have expanded the picture somewhat. Archaeological evidence of these connections comes from both sides of the relationship, from specialized Harappan towns such as Lothal and Kuntasi, both located on or beyond the southeastern margins of the Indus world in what is now Gujarat, India, to "Mesolithic" sites such as Langhnaj which show evidence of both local and exotic artifacts in the context of an occupation history that appears to be both small-scale and intermittent. The open-air site of Langhnaj, in Gujarat, was excavated for more nearly twenty years by Sankalia (1965). Lying some 160 kilometers north of the Harappan city of Lothal, it appears to have been occupied by small, semi-mobile groups of people in contact with Harappan peoples, probably those at Lothal itself. Local environments contrasted sharply with those of southwest India discussed below; here semi-arid monsoon forests and dry scrub associations provided both opportunities and challenges to farming and foraging. Pastoralism was an important economic strategy and forest resources other than wood seem not to have been of great interest to outsiders.

Sankalia (1965) identified three discrete occupational phases at Langhnaj, all containing some ceramics, though sherds in the lower two levels were highly fragmented, apparently the result of being poorly fired (Possehl 2002:71). In addition to these fragmentary ceramics, Phase I contained microliths, bones of wild animals

including wild cattle (Bos indicus) and water buffalo (Bubalis bubalis), groundstone fragments, and dentalium shell beads. Phase II deposits also contained microliths and had a faunal assemblage similar to that of Phase I. In addition, however, a quartzite ringstone, steatite disk beads, two miniature ground schist axes, and a long copper knife were recovered in Phase II. The only radiocarbon date for Langhnaj comes from mixed Phase I/II deposits; this date (2440-2160 B.C. [calibrated], Possehl 2002:71) is contemporaneous with the Mature Harappan. The copper knife is morphologically similar to Harappan forms and was probably obtained in trade from the nearby Kutch Harappans of Gujarat (Possehl 2002:71). Several other sites in this region such as Kanewal (Mehta et al. 1980) and Oriyo Timbo (Rissman and Chitalwala 1990) show what Possehl (2002:70) calls an "interdigitation" of habitation by hunter-gatherers and Harappans - alternating strata that indicate the contemporaneity of distinct modes of existence. In these sites, the hunter-gatherers appear to be represented by strata with microliths, no architecture, and either no or very few ceramics. Certainly it is possible that these artifact associations represent special-purpose locales made by settled farmers, though if this were the case we might expect to see more overlap in lithic technology (cf. Selvakumar In press). Given the broad range of dates for "Mesolithic" sites in India, the notion that foragers and Harappans were interacting is not difficult to accept.

Although the presence of technologically sophisticated artifacts such as ceramics and metal, and especially the appearance of domestic animals in "Mesolithic" sites might seem to suggest that local hunter-gatherers were the primary beneficiaries of exchange and were perhaps dependent on city-dwellers, in fact the opposite is probably true. Some of the most valued raw materials in the Indus realm appear to have come from areas primarily occupied by mobile foragers. The modern-day state of Gujarat lies at the far edge of the Harappan sphere and contains both non-Harappan settlements (called Sorath Harappan by Possehl [1992] in recognition of their relationship to Indus urbanism) as well as cities and towns such as Dholavira, Lothal, and (the much smaller) Kuntasi that conform in most ways to the "classic" Harappan pattern and which would not seem out of place in the Indus heartland. As early as 1976, Possehl suggested that the urban site of Lothal was a "gateway community" located to take advantage of the specialized procurement of raw materials by hunter-gatherers for manufacture by urban artisans. Dhavalikar et al. (1995) argue for a similar role for the small Harappan port and manufacturing site of Kuntasi, in Kutch. Both Lothal and Kuntasi have evidence for a high degree of craft specialization, especially bead-making, suggesting that locally-obtained raw materials were being worked into finished or semi-finished goods before being transported north. Among the goods procured by non-Harappan locals were agate, carnelian, rock crystal, steatite, shell, and ivory, along with wood, including teak from the Western Ghats (Possehl 2002:73). If this list is accurate, then there must have been not only connections with local, Gujarat-area hunter-gatherers, but also (perhaps less direct) connections to groups further south and east as well.

Finally, biological evidence also points to sustained connections between hunter-gatherers and others in South Asia. Based on a multivariate analysis of metric variables from skeletal populations, Kennedy at al. (1984) have grouped specimens

from Langhnaj and Lothal together, making the case for substantial gene flow between these two places. Further, Lukacs and Pal (1993, and see Lukacs 2002) have shown that the residents of Langhnaj have a much higher rate of dental caries than other hunter-gatherers, suggesting a diet containing a significant quantity of grain or other carbohydrate. They argue for exchange relationships involving food, a pattern consistent with later historically-known cases from southern India (Morrison 2002c).

Although much more remains to be learned about relationships between non-Harappan foragers and Indus craftspeople, traders, consumers, middlemen, and others, at present there is little reason to see these relationships as stratified or as coercive in any way. Perhaps the fact that Harappan settlements like Lothal and Kuntasi were in some sense on alien ground, distant from the centers of the Indus state(s) is relevant here; it would have been difficult to coerce mobile groups in a sparsely-populated landscape to engage in unwanted exchanges. Perhaps, then, the primary incentive for local foragers and pastoralists was the appeal of exotic manufactures, domesticates, and cultigens. One missing element in this speculative equation is the non-Harappan agriculturalists. The residents of Lothal and other "classic" Harappan settlements were greatly outnumbered by villages and towns only minimally integrated into Indus cultural and political spheres. Evidence for biological relatedness between populations of Lothal and Langhnaj and for a starchy, caries-inducing diet at the latter do suggest that Harappan trade relations with local hunter-gatherers were simply an extension of already-existing and ongoing connections between foragers and others.

Based on regional archaeological patterns, it seems probable that settled farming populations at this time were still sufficiently small so as not to seriously threaten the habitat of foraging peoples and, whatever the nature of the relationships, it is clear that this region supported a range of economic strategies from farming to pastoralism to foraging. The resources desired by urban-dwellers seem to have been high-value and (with the exception of wood) relatively portable materials that were available in only limited contexts and whose exploitation required some local knowledge. Like the other cases discussed here, transportation by sea was an essential component in moving goods collected by hunter-gatherers (and local farmers) to distant consumers; this form of technology as well as the social organization required to exploit regional differences in resources seems to be critical to the maintenance of such relationships. It is impossible at present to know how important the semiprecious stones and other raw materials collected by hunter-gatherers were to the Indus state(s) itself. Certainly, the beads and especially the seals and weights made out of these materials would have been very important economically and socially, but it is too soon to say if Harappan elites depended in any fundamental way on these goods.

The Western Ghats and the trade in forest products

South of the Harappan sphere, the hills of both Central and Eastern India, many still covered in dense dry monsoonal forests, have provided refuge for such

ethnographically-studied groups as the Chenchus. Although this group, and others like them, have been described by anthropologists as isolated, archaic, and primitive, historical data paint a different picture. The assessment of ethnographer von Fürer-Haimendorf (1982:4–5), for example ("Until two or three generations ago, the Jungle Chenchus seem to have persisted in a life-style similar to that of the most archaic Indian tribal populations, and their traditional economy can hardly have been very different from that of forest dwellers of earlier ages."), can be contrasted with the work of Murthy (1994), who used historical documents to describe the wealth of the Chenchus, the existence of Chenchu royalty, and the ways Chenchus served various governments in eastern India from about the fifth century A.D. (and see Guha 1999; Skaria 1999).

In southern India, patterns of rainfall and vegetation are powerfully structured by the Western Ghat range that towers just beyond the west coast of the peninsula. This mountain chain traps a significant part of the southwest monsoon, creating both a narrow high-precipitation coastal strip and a larger rainshadow across the semi-arid peninsula. The orographic effect of the Ghats also accounts for a distinctive vegetation pattern in which upland tropical and semi-tropical forests, with their rich resources, lie relatively close to the west coast while interior vegetation types consist of deciduous monsoon forest and open scrub. Like other tropical forests, the resources of the Ghat uplands are not always those useful to foraging groups, but include products desired by lowland agriculturalists and states, including gums and resins, dyes and aromatics, and herbs and spices (Morrison 2002c). Even though these products may not have been widely used by foraging groups, in many cases their effective exploitation required significant local knowledge. Some tree-derived products, for example, included timber such as sandalwood (Santalum album) and teak (Tectona grandis) which had only to be located, identified, and harvested, while others required locating products derived only from diseased trees or involved extracting substances such as camphor, a crystallization from either Dryobalanops camphora or Cinnamomun camphorum. Both camphor and sandalwood were (and are) widely used for ceremonial purposes in South Asia and thus may be considered essential items of ritual and state.

Of all the forest products of southwest India, the most important historically was pepper (*Piper nigrum*), a vine of mid-elevation forests indigenous to the Malabar coast. Pepper and other forest products were traded far beyond South Asia as early as the first few centuries A.D., and it may be the case that local hunter-gatherers were involved in this exchange (Morrison 2002c). Although little archaeological research has been conducted in the Ghats, at present archaeological (Zagarell 1997, 2002; Noble 1989) and paleobotanical (Caratini et al. 1991) evidence point to the period around the first few centuries A.D. as the time when human impact on upland forests first began to be evident, the period when we also have archaeological and historical evidence for large-scale exchange connecting the Mediterranean, South, and Southeast Asia (Morrison 1997; Ray 2003). Pepper was clearly one of the goods leaving South Asia, movement dramatically represented by the recovery of peppercorns from North Africa (Phillips 1997). That South Asia's role as a node in Indian Ocean trade networks predated even this period seems likely, as indicated by, for example, the occurrence of cloves (a gathered wild plant product) from

Maluku in eastern Indonesia (Reid 1998:112) in the Mesopotamian site of Terqa dated to 1700 B.C. Although Southeast Asian products such as cloves could have been moved overland, perhaps with the assistance of some of the same mobile groups already involved in exchange with Indus urbanites, the presence of cowrie shells from the Maldive Islands (off the west coast of India) in Egypt as early as the late third millennium B.C. (Phillips 1997:424–6) does suggest the presence of very early ocean-going trade.

From as early as we have information, then, forest-dwelling groups of southern India have been integrated into lowland states and empires, usually through periodic payment of tribute and gift exchanges (Morrison 2002c). Even in these early centuries we have evidence that the most important goods moving into the forests were manufactured products such as textiles and iron, as well as cultigens such as rice. These exotic goods may have quickly become basic subsistence items; by the 18th century it is clear that upland groups relied heavily on rice, textiles, and iron tools from the lowlands.

The impetus for developing reciprocal relationships with non-foragers, then, may have related in part to the desire of hunter-gatherers in semi-remote locations for the domesticated and manufactured products available from settled agriculturalists, but it is also clear that, at least since the mid-Holocene, coercion also played a role. In South India not only were taxes or other official obligations sometimes levied on forest groups as well as agriculturalists, but equally importantly, relations of debt were developed which kept foragers perpetually in hock to intermediaries who supplied them with advances of lowland goods and collected from them pepper, cardamom, dyes and resins, honey, and other forest products (Morrison 2002c). Many of these intermediaries were licensed by indigenous and, later, colonial governments in a system of tax farming analogous to forms of extraction also employed against agriculturalists (Morrison 2001). Like upland groups, many South Asian farmers, too, were mired in debt that could last generations, caught in a cycle of repeated loans, high interest rates, and misinformation. Oppression was not reserved only for foragers, nor were its forms entirely unique; the common bonds of consumption and debt that bound farmer and forager alike attest to their shared participation in historically- and culturally-specific forms of power. Thus, in the later Holocene many upland groups in South India with primarily egalitarian social relations were simultaneously caught up in unequal power relations with neighboring farmers, with government-licensed or entrepreneurial brokers, and/or with government officials, relations of inequality that continue to this day (cf. Béteille 1998). Calling such groups egalitarian provides only a partial picture of their lives - at the very least we should employ the label of complex huntergatherer - better yet would be to consider these foragers, too, a "complex society."

The forest products collected by upland groups in southwestern India were clearly essential to the local and international trade of many of the small polities of India's west coast (cf. Boomgaard 1989, in which he argues that gathered forest products were essential to the development of many Southeast Asian trading states), as they also were to Portuguese trade from the 16th century onward (Morrison 2002c). Furthermore, the complex networks of production and exchange that

brought manufactured goods and food crops inland and upland, and pepper and other forest products down to coastal entrepôt cities ensured that forest dwellers, some of whom operated primarily as hunter-gatherers, were critical partners in the development and maintenance of indigenous and colonial states, even when their home territories were not officially part of those polities (Morrison 2002c). Thus, later Holocene hunter-gatherers in South India, far from being isolated people marginal to the development of complex societies or to colonialism, were in fact essential players in that development.

With the massive expansion of the spice trade in the 16th and 17th centuries A.D. and the more direct involvement of Europeans in this trade following Portuguese (and later Dutch and English) colonial expansion into Asia, it becomes much easier to detect the activities of local foragers, agriculturalists, and others in these long-distance networks. In these centuries, we have some evidence that groups who formerly practiced a range of subsistence activities, including agriculture, military service, raiding, and wage labor, may have begun to specialize in the extraction of forest products; these same groups would later appear in the ethnographic literature represented as "timeless" exemplars of an earlier way of life (Morrison 2002b, 2002c). This intellectual history has had the unfortunate consequence of erasing foraging groups from the mainstream political and economic history of South Asia, a position they are only now coming to reclaim.

The Andaman islands

In Chalcolithic Western India, foragers, pastoralists, and other mobile groups had the advantage of occupational histories and local environments that left them room to expand and, if necessary, flee the attentions of urban-dwellers. Given the existence of numerous archaeological sites of the Mesolithic, local monsoon forests clearly provided an adequate resource base for subsistence foraging (though as noted, many of these are difficult to date precisely). In southwestern India, forestdwellers in the tropical and semi-tropical evergreen forests of the Western Ghats had the advantage of local knowledge of this steep and difficult mountain terrain, but throughout the second millennium A.D., they seem to have been increasingly squeezed by the expansion of lowland agriculture (Morrison 2002c) as well as by the desirability of local forest products to nearby agriculturalists and faraway empires alike. Certainly, the differences between these two cases are significant, but in both we see the development of forms of engagement between hunter-gatherers and others that, although marked by inequities, also allowed mobile foragers to maintain their cultural distinctiveness and way of life. In both cases, subsistence foraging and foraging for exchange may have coexisted, with strategies of groups, families, even individuals probably shifting between these modes as well as between other options such as cultivation, wage labor, military service, and banditry (see Morrison 2002c). The Andaman Islands present a rather different situation, one with similarities to parts of island Southeast Asia, where coastal environments with abundant marine resources fringe upland tropical forests and where oceans

both isolate and, through their ease of transport, unite far-distant areas. In the Andamans, where hunting and gathering have, until recently, been the primary mode of subsistence, the islanders were famous for their fierce avoidance of outsiders (Cooper 2002) while at the same time Andaman products circulated in Indian Ocean trade networks.

The Andamans, now part of India, lie to the southeast of the subcontinent only about 300 kilometers from Burma and 120 from the Nicobar chain (Cooper 2002:18), right along a sea route between South and Southeast Asia. Mentions in textual sources as early as the second century A.D. consistently describe the Andaman Islanders as hostile, even as cannibals, a characterization markedly different from that of the Nicobarese, major suppliers of ambergris to the 16th-century port city of Melaka on the Malay peninsula (Cooper 2002:12–14) and where, by this time, the language of commerce was Portuguese. While archaeological finds of Chinese ceramics are reported for the Nicobars, no such evidence has been found in the Andamans where an (undated) excavated shell midden containing several 17th-century Sumatran gold coins is the primary material evidence for long-distance exchange (Cooper 2002:2). In her recent review of Andaman history and report on new archaeological research, Cooper (2002:17–25) describes how Andaman Islanders were consistently victimized by slave raiders, convincingly attributing some of their xenophobia as a reaction to this threat.

At the same time, several local resources drew outside attention, but like many such products, neither was used by local people. Malay, Burmese, and even Chinese ships regularly visited the coastal caves and rockshelters containing nests of the white-nest swiftlet (Collocalia fuciphaga inexpectata), considered a delicacy in China and parts of Southeast Asia. Similarly, sea slugs caught in coastal waters made their way to eastern consumers. Although Cooper notes (2002:22) that in the Mergui archipelago near southern Burma the indigenous Moken people were employed to collect these same products for Malay and Chinese traders, she posits that this was not the case in the Andamans (and see Mann 1883). Although iron objects are consistently found in both lower and upper levels of excavated midden sites, Cooper argues (2002:22–3) that this highly coveted material could have come entirely from shipwrecks. Certainly, with the takeover of the islands by the British and the establishment of a British penal colony there in 1858, islanders were forced to interact with others – their transfer of chipped stone technology to molded bottle glass provides a forceful material record of this engagement.

In contrast to the very long occupational history of the greater Indus region, where hunting and gathering coexisted with agriculture from the early Holocene, and the intermediate-length record of southwest coastal India where the uplands appear to have been occupied year-round only since the first few centuries A.D. while the lowlands show a longer record of settlement, the occupational history of the Andamans is relatively short. Cooper's recent excavations provide the only absolute dates – her earliest radiocarbon assessment (BS-599, 2002:156), from the base of the 4.45-meter deep Chauldhuri midden, dates to between A.D. 162 and 290 (calibrated using Stuiver and Reimer 1993 [version 4.4] with delta R [marine reservoir] value of 7+/34 after Dutta et al. 2000). The presence of both pig (Sus

scrofa) bones and a small number of ceramics from the earliest levels of this site suggest that the Andaman islanders brought some of the accounterments of settled agricultural life with them at the time of initial colonization (Cooper 2002:7, 83–93).

That the earliest dates (at present) for the colonization of the Andamans fall around the same time as the well-documented expansion in Indian Ocean trade in the first few centuries A.D. (Morrison 1997) may be no coincidence. In spite of the well-documented fierceness and aloofness of the Andaman foragers, they have clearly been involved in relationships with others throughout their history. Living on the "stepping stones between Burma and the Nicobars" (Cooper 2002:166), the islanders were not only victims of slave raids and occasional pillagers of shipwrecks and unwary visitors, but they may also have been involved in the gathering of birds' nests and sea slugs for external exchange. Following British colonization, many were forcibly settled and lifeways were radically altered (Cooper 2002; cf. Radcliffe-Brown 1922). In the face of virtual extinction Andaman islanders continued to innovate, adapting lithic technology to manufactured glass and hunting techniques to accommodate newly-introduced domestic dogs. While the income from the pepper and other forest products of the Western Ghats and many of the high islands of Southeast Asia provided critical support to local exchange-oriented polities, the bird nests, sea slugs, and human slaves of the Andamans never propped up a local elite. Still, their value in Malay and Chinese societies is evident in the distance and effort traders were to brave in order to obtain them.

Discussion

Why is the continuing existence of hunting and gathering important? Although agriculture and its concomitant package(s) of landscape change and social and political reorganization were taken up at different times and in different ways across Asia, foraging strategies both persisted and evolved. Far from being an outmoded, primitive, or archaic form of subsistence, foraging has proven to be a resilient (cf. Barnard 2002), appealing, and persistent way of life equally at home (though not always thriving to the same degree) in the context of early territorial states, tradebased states and empires, colonial empires, and modern global capitalism. Asian hunter-gatherers, perhaps more than most, exemplify this flexibility. Historically, we can trace their deployment of both subsistence foraging and forager-trader forms as well as, at times, involvement in agriculture, wage labor, military service, and extra-legal activities such as raiding and piracy. Here the fact that the categories of hunting and gathering, pastoralism, agriculture, and other forms of occupational specialization can not always be analytically separated (Morrison 2002a), far from decreasing the importance of Holocene foraging, actually makes it more compelling. Firstly, cultural strategies this complex and resilient certainly merit our attention as alternate ways of living in the contemporary world. Secondly, all of our ethnographic and historical models and understandings of hunting and gathering are based on the experience of Holocene foragers. If the very categories of, for

example, forager and agriculturalist, seem to be too sharply drawn, to say nothing of more problematic distinctions such as simple and complex, and archaic and modern, then surely we will need to reconsider our delineation and deployment of such categories.

My primary concern in this chapter is not the relevance or irrelevance of the study of recent hunter-gatherers for understanding a world prior to the development of agriculture. Hunter-gatherers have been part of the archaeology and history of Asia from the beginning, and they remain so today. The analysis in this chapter of a few examples of Holocene hunting and gathering in South Asia has shown, not only that foragers in this region have always been "part of history," as proponents of the revisionist camp would have it, but more than this, that they have often been integral parts of regional networks of exchange, political and social forms, and relations of kinship. Although I have stressed the importance of unequal power relations, it is worth pointing out that foragers have not always been at the mercy of their neighbors. Although South Indian foragers have been subjected to debt peonage and Andaman Islanders to slave raiding, displacement, and pauperization, foragers in South and Southeast Asia can not be seen solely as victims of external power relations. Instead, hunting and gathering peoples have also been raiders, warriors, pirates, and (no doubt apocryphally) "cannibals."

In considering the distinct occupational histories, geographies, and resources of South Asia (and Asia in general), it is clear that the continued existence of hunting and gathering represents much more than simply the stubborn cultural conservatism of a few small groups. On the contrary, it is impossible to appreciate the operation of many South and Southeast Asian states without an understanding of the role of local foragers. In many places, particularly the smaller polities of southwest coastal India and island Southeast Asia, gathered forest products constituted the most valuable goods in regional spheres of exchange and were the primary economic support for local states, propping up elite lifestyles and enriching local and foreign traders. Foragers, along with other groups, made possible the dissemination and perpetuation of culturally-valued products in Europe and East Asia, fashion fads such as bird of paradise feathers, exotic spices such as pepper that moved from luxury to necessity and from wild plant to cultigen, and items of elite consumption such as birds' nests, ivory, sandalwood, ebony, and teak. In general, polities built on the labor of hunting and gathering were smaller, trade-oriented states rather than large, land-based agrarian states, but even in some of the latter such as the 14th- to 16th-century A.D. Vijayanagara empire of southern India, trade in forest products was economically significant, with hill peoples also playing important military and cultural roles as buffer communities, members of the armed forces, and royal hunting guides (Guha 1999; Morrison 2002c).

South and Southeast Asian Holocene foragers have been notoriously problematic in hunter-gatherer ethnography, primarily because of their long histories of engagement with others and because such studies have generally been oriented either toward providing models for the Palaeolithic or context-free general models of behavior. If we however discard the possibility of acontextual models of this sort and embrace the complexities of the actual historical trajectories of Asian foragers,

it is then, perhaps paradoxically, this engagement that makes them so interesting and important. Hunting and gathering, sometimes in conjunction with other subsistence forms and sometimes alone, have been part of the workings of many South and Southeast Asian societies since at least the third millennium B.C., societies with and without state-level governance and, in most cases, societies deeply involved in long-distance exchange, specialization, and unequal power relations. Analyses of state formation, trade, and colonialism that leave out gathering and hunting thus leave out key actors and key resources in these processes - Holocene foraging is thus an issue of general concern for the archaeology and history of large parts of Asia rather than the domain of a small group of specialists.

REFERENCES

- Andaya, Barbara Watson 1993 To Live as Brothers: Southeast Sumatra in the Seventeenth and Eighteenth Centuries. Honolulu: University of Hawaii Press.
- Bailey, Richard C., Genevieve Head, Mark Jenike, Bruce Owen, Robert Rechtman, and Elzbieta Zechenter 1989 Hunting and Gathering the Tropical Rainforest: Is it Possible? American Anthropologist 91:59-82.
- Barnard, Alan 2002 The Foraging Mode of Thought. In Self- and Other-Images of Hunter-Gatherers. H. Stewart, A. Barnard, and K. Omura, eds. Pp. 5-24. Senri Ethnological Studies 60. Osaka: National Museum of Ethnology.
- Bellwood, Peter 1985 Prehistory of the Indo-Malaysian Archipelago. Honolulu: University
- Béteille, Andre 1998 The Idea of Indigenous People. Current Anthropology 39(2):187-91. Boomgaard, Peter 1989 The VOC Trade in Forest Products. In Nature and the Orient:
 - The Environmental History of South and Southeast Asia. Richard H. Grove, Vinita Damodaran, and Satpal Sangwan, eds. Delhi: Oxford University Press.
- 1997 Introducing Environmental Histories of Indonesia. In Paper Landscapes: Explorations in the Environmental History of Indonesia. Peter Boomgaard, Freek Columbijn, and David Henley, eds. Pp. 1-26. Leiden: KITLV Press.
- Boomgaard, Peter, Freek Columbijn, and David Henley, eds. 1997 Paper Landscapes: Explorations in the Environmental History of Indonesia. Leiden: KITLV Press.
- Boserup, Esther 1965 The Conditions of Agricultural Growth. Chicago: Aldine.
- Caratini, Claude, Jean-Paul Pascal, Colette Tissot, and G. Rajagopalan 1991 Palynological Reconstruction of a Wet Evergreen Forest in the Western Ghats (India) ca. 1800 to ca. 1400 Years B.P. Journal of Palynology 1990-91:123-37.
- Cohen, Mark N. 1977 The Food Crisis in Prehistory. New Haven: Yale University Press.
- Columbijn, Freek 1997 The Ecological Sustainability of Frontier Societies in Eastern Sumatra. In Paper Landscapes: Explorations in the Environmental History of Indonesia. Peter Boomgaard, Freek Columbijn, and David Henley, eds. Pp. 309-40. Leiden:
- Cooper, Zarine 2002 Archaeology and History: Early Settlements in the Andaman Islands. Delhi: Oxford University Press.
- Cribb, Robert 1997 Birds of Paradise and Environmental Politics in Colonial Indonesia, 1890-1931. In Paper Landscapes: Explorations in the Environmental History of Indonesia.

- Peter Boomgaard, Freek Columbijn, and David Henley, eds. Pp. 379-408. Leiden: KITLV Press.
- Dhavalikar, M. K., M. R. Raval, and Y. M. Chitalwala 1995 Kuntasi: A Harappan Emporium on West Coast. Pune, India: Deccan College Postgraduate and Research Institute.
- Dutta, K., R. Bhushan, and B. L. K. Samayajulu 2001 Delta R Correction Values for the Northern Indian Ocean. Radiocarbon 43:483-8.
- Fürer-Haimendorf, Christophe von 1982 Tribes of India: The Struggle for Survival. Berkeley: University of California Press.
- Guha, Sumit 1999 Environment and Ethnicity in India 1200–1991. Cambridge: Cambridge University Press.
- de Jong Boers, Bernice 1997 Sustainability and Time Perspective in Natural Resource Management: The Exploitation of Sappan Trees in the Forests of Sumbawa, Indonesia, 1500–1875. *In* Paper Landscapes: Explorations in the Environmental History of Indonesia. Peter Boomgaard, Freek Columbijn, and David Henley, eds. Pp. 261–80. Leiden: KITLV Press.
- Junker, Laura L. 2002a Southeast Asia: Introduction. In Forager-Traders in South and Southeast Asia: Long-Term Histories. Kathleen D. Morrison and Laura L. Junker, eds. Pp. 131-66. Cambridge: Cambridge University Press.
- 2002b Economic Specialization and Inter-Ethnic Trade Between Foragers and Farmers in the Prehispanic Philippines. In Forager-Traders in South and Southeast Asia: Long-Term Histories. Kathleen D. Morrison and Laura L. Junker, eds. Pp. 203–41. Cambridge: Cambridge University Press.
- Kennedy, Kenneth A. R., John Chimet, Tod Disotell, and David Meyers 1984 Principal-Components Analysis of Prehistoric South Asian Crania. American Journal of Physical Anthropology 64(2):105–18.
- Kenoyer, Jonathan Mark 1997 Trade and Technology of the Indus Valley: New Insights from Harappa, Pakistan. World Archaeology 29(2):262–80.
- Khatri, A. P. 1964 Rock Paintings of Adamgarh (Central India) and their Age. Anthropos 59:759-71.
- Knapen, Hans 2001 Forests of Fortune? The Environmental History of Southeast Borneo, 1600–1880. Leiden: KITLV Press.
- Korisettar, Ravi, and S. N. Rajaguru 2002 Understanding Man-Land Relationships in Peninsular Deccan: With Special Reference to Karnataka. *In* Indian Archaeology in Retrospect, Volume I: Prehistory. S. Settar and R. Korisettar, eds. Pp. 243–96. Delhi: ICHR and Manohar Press.
- Korisettar, Ravi, P. C. Venkatasubbaiah, and Doreen Q. Fuller 2002 Brahmagiri and Beyond: The Archaeology of the Southern Neolithic. *In* Indian Archaeology in Retrospect, Volume I: Prehistory. S. Settar and Ravi Korisettar, eds. Pp. 151–238. Delhi: ICHR and Manohar Press.
- Kulke, Hermann, and Diethmar Rothermund 1990 History of India. London: Routledge.
- Lee, Richard B. 1998 Foreword. In Limited Wants, Unlimited Means: A Reader on Hunter-Gatherer Economics and the Environment. John M. Gowdy, ed. Pp. ix-xii. Washington DC: Island Press.
- Lee, Richard B., and Richard Daly, eds. 2000 Cambridge Encyclopedia of Hunters and Gatherers. Cambridge: Cambridge University Press.
- Lukacs, John R. 1990 On Hunter-Gatherers and their Neighbors in Prehistoric India: Contact and Pathology. Current Anthropologist 31(2):183-6.
- —— 2002 Hunting and Gathering Strategies in Prehistoric India: A Biocultural Perspective on Trade And Subsistence. In Forager-Traders in South And Southeast Asia: Long-Term

- Histories. Kathleen D. Morrison and Laura L. Junker, eds. Pp. 41-61. Cambridge: Cambridge University Press.
- Lukacs, John R., and J. N. Pal 1993 Mesolithic Subsistence in North India: Inferences from Dental Attributes. Current Anthropology 34(5):745-65.
- Lycett, Mark T., and Kathleen D. Morrison 1989 Persistent Lithics: Post Iron Age Lithic Technology in South India. Paper presented at the Annual Conference on South Asia, Madison, Wisconsin, Nov. 3–5.
- Malik, S. C. 1959 Stone Age Industries of the Bombay and Satara Districts. Baroda: Maharaja Sayajirao University.
- Mann, Edward H. 1883 On the Aboriginal Inhabitants of the Andaman Islands. Journal of the Anthropological Institute of Great Britain and Ireland 12:69–175, 327–434.
- Mehta, R. N., K. N. Momin, and D. R. Shah 1980 Excavation at Kanewal. Baroda: Maharaja Sayajirao University.
- Misra, V. N. 1976 Ecological Adaptations During the Terminal Stone Age in Western and Central India. In Ecological Backgrounds of South Asian Prehistory. K. A. R. Kennedy and G. L. Possehl, eds. Pp. 28-51. Ithaca: South Asia Occasional Papers, Cornell University.
- Morrison, Kathleen D. 1997 Commerce and Culture in South Asia: Perspectives from Archaeology and History. Annual Review of Anthropology 26:87–108.
- 2000 South Asia: Prehistory. In Cambridge Encyclopedia of Hunters and Gatherers.
 R. B. Lee and R. Daly, eds. Pp. 238–42. Cambridge: Cambridge University Press.
- 2001 Coercion, Resistance, and Hierarchy: Local Processes and Imperial Strategies in the Vijayanagara Empire. In Empires: Perspectives from Archaeology and History. Susan Alcock, Terence D'Altroy, Kathleen Morrison, and Carla Sinopoli, eds. Pp. 253–78. Cambridge: Cambridge University Press.
- 2002a General Introduction: Historicizing Adaptation, Adapting to History. In Forager-Traders in South and Southeast Asia: Long-Term Histories. Kathleen D. Morrison and Laura L. Junker, eds. Pp. 1–20. Cambridge: Cambridge University Press.
- 2002b Introduction: South Asia. In Forager-Traders in South and Southeast Asia: Long-Term Histories. Kathleen D. Morrison and Laura L. Junker, eds. Pp. 21–40. Cambridge: Cambridge University Press.
- —— 2002c Pepper in the Hills: Upland-Lowland Exchange and the Intensification of the Spice Trade. *In* Forager-Traders in South and Southeast Asia: Long-Term Histories. Kathleen D. Morrison and Laura L. Junker, eds. Pp. 105–30. Cambridge: Cambridge University Press.
- Morrison, Kathleen D., and Laura L. Junker, eds. 2002 Forager-Traders in South and Southeast Asia: Long-Term Histories. Cambridge: Cambridge University Press.
- Murthy, M. L. K. 1994 Forest Peoples and Historical Traditions in the Eastern Ghats, South India. *In* Living Traditions: Studies in the Ethnoarchaeology of South Asia. Bridget Allchin, ed. Pp. 205–18. New Delhi: Oxford and IBH.
- Noble, William A. 1989 Nilgiri Prehistoric Remains. *In Blue Mountains: The Ethnography and Biogeography of a South Indian Region. P. Hockings*, ed. Pp. 102–32. New Delhi: Oxford University Press.
- Phillips, Jacke 1997 Punt and Aksum: Egypt and the Horn of Africa. The Journal of African History 38(3):423–57.
- Possehl, Gregory L. 1976 Lothal: A Gateway Settlement of the Harappan Civilization. In Ecological Backgrounds of South Asian Prehistory. Kenneth A. R. Kennedy and Gregory L. Possehl, eds. Pp. 118–31. Ithaca: Occasional Papers No. 4: Cornell South Asia Program.

- —— 1992 The Harappan Civilization in Gujarat: The Sorath and Sindhi Harappans. Eastern Anthropologist 45(1–2):117–54.
- —— 1999 Indus Age: The Beginnings. Philadelphia: University of Pennsylvania Press.
- 2002 Harappans and Hunters: Economic Interaction and Specialization in Prehistoric India. In Forager-Traders in South and Southeast Asia: Long-Term Histories. Kathleen D. Morrison and Laura L. Junker, eds. Pp. 62–76. Cambridge: Cambridge University Press.
- Possehl, Gregory L., and Kenneth A. R. Kennedy 1979 Hunter-Gatherer/Agriculturalist Exchange in Prehistory: An Indian Example. Current Anthropology 20(3):592–3.
- Potter, Leslie M. 1997 A Forest Product Out of Control: Gutta Percha in Indonesia and the Wider Malay World. *In* Blue Mountains Revisited: Cultural Studies on the Nilgiri Hills Explorations in the Environmental History of Indonesia. Peter Boomgaard, Freek Columbijn, and David Henley, eds. Pp. 281-308. Leiden: KITLV Press.
- Price, T. Douglas, and James A. Brown, eds. 1985 Prehistoric Hunter-Gatherers: The Emergence of Cultural Complexity. Orlando: Academic Press.
- Radcliffe-Brown, Alfred Reginald 1922 The Andaman Islanders. Cambridge: Cambridge University Press.
- Ratnagar, Shareen 1981 Encounters: The Westerly Trade of the Harappa Civilization. Delhi: Oxford University Press.
- Ray, Himanshu Prabha 2003 The Archaeology of Seafaring in Ancient South Asia. Cambridge: Cambridge University Press.
- Reid, Anthony 1998 Humans and Forests in Pre-Colonial Southeast Asia. In Nature and the Orient: The Environmental History of South and Southeast Asia. Richard H. Grove, Vinita Damodaran, and Satpal Sangwan, eds. Pp. 106–26. Delhi: Oxford University Press.
- Rissman, Paul C., and Y. M. Chitalwala 1990 Harappan Civilization and Oriyo Timbo. New Delhi: Oxford and IBH.
- Sankalia, H. D. 1965 Archaeological Excavations at Langhnaj: 1944–63, Pt. 1. Pune, India: Deccan College Postgraduate and Research Institute.
- Selvakumar, V. In press Hunter-Gatherer-Agropastoralist Interactions During the Iron Age-Early Historic Period in the Upper Gundar Basin, Tamil Nadu. *In* Recent Research on the Archaeology of Southern India. V. V. Rami Reddy and K. D. Morrison, eds. Delhi: Munshiram Manhoharlal.
- Skaria, Ajay 1999 Hybrid Histories: Forests, Frontiers, and Wilderness in Western India. Delhi: Oxford University Press.
- Stuiver, Minze, and Paula J. Reimer 1993 Extended 14C Database and Revised CALIB Radiocarbon Calibration Program. Radiocarbon 35:215-30.
- Thapar, Romila 1997 Asoka and the Decline of the Mauryas. Rev. edition. Delhi: Oxford University Press.
- Virunha, Chuleeporn 2002 Power Relations Between the Orang Laut and the Malay Kingdoms of Melaka and Johor During the Fifteenth to Seventeenth Centuries. *In* Recalling Local Pasts: Autonomous History in Southeast Asia. Sunait Chutintaranond and Chris Baker, eds. Pp. 143–66. Chiang Mai: Silkworm Books.
- Zagarell, Alan 1997 Megalithic Graves of the Nilgiri Hills and the Moyar Ditch. In Blue Mountains Revisited: Cultural Studies on the Nilgiri Hills. Paul Hockings, ed. Pp. 23-73. Delhi: Oxford University Press.
- 2002 Gender and Social Organization in the Reliefs of the Nilgiri Hills. In Forager-Traders in South and Southeast Asia: Long-Term Histories. Kathleen D. Morrison and Laura L. Junker, eds. Pp. 77–104. Cambridge: Cambridge University Press.